The Effect of Media Salience on Parliamentary Speech Behavior

Master's Thesis

submitted by

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Abstract

Research on the effects of media highlights the pivotal function of mass media as a transmitter between political actors and citizens. Mass media informs citizens about politics, but their reporting is subject to economic bias. This thesis contributes to the discussion of the influence of media on politicians' behavior. More specifically, this thesis examines the effects of newspaper coverage on the speaking behavior of politicians in the German Bundestag in two distinct cases. Based on Proksch and Slapin's (2012) model, I extend a formal model to capture the central transmitter function of mass media. Using a novel newspaper data set, I examine the effect of biased media coverage on politicians' behavior in a moderation and a moderated mediation analysis. The nuclear accident in Fukushima and the Russian attack on Ukraine serve as exogenous shocks for the mediation analysis. The results of the moderation analysis show the hypothesized differences in the speakers' selection of salient topics. However, the effect is not robust in the mediation analysis, where no differences and only a weak indirect effect are found.

1 Introduction

The interdependence between political actors and the media has been of great interest in the literature since the end of the First World War (Lasswell 1927). Although media independence has grown over time, political actors' dependence on the media has only deepened. As Habermas (2006, p. 416) asserts: "There are two types of actors without whom no political public sphere could be put to work: professionals of the media system […] and politicians". The study of media is highly relevant, as media serve as pivotal conduit for political responsiveness, informing the public and aiding electoral decision-making (Prat and Strömberg 2013). This reliance of the political sphere on the media is deeply rooted in the media's power, often described as the fourth estate (Schultz 1998), due to its informal authority over agenda-setting, framing, and information filtering (Freedman 2014). For these reasons, examining the influence of the media on the political sphere is crucial for understanding political behavior and the significant power that mass media wield in liberal democracies.

Politicians use parliamentary speeches to signal their political preferences to voters, enabling voters to compare these signals with their political preferences (Bäck, Debus, and Müller 2014). However, voters do not necessarily receive political signals directly but via mass media. The media's selective reporting results in not all speeches in parliament having the same probability of being noticed by voters. Instead, the probability of being perceived by voters depends on the salience of a topic. Parties and members of parliament (MP) are expected to react strategically to differences in media coverage in their speech behavior. I argue that the strategic response behavior of parties can lead to a selection of speakers in parliament. This study examines the behavioral adaptation of political actors to the publication bias in the media in speeches in the German Bundestag. The thesis answers the question of *what influence media attention has on the speaking behavior of politicians in parliament*. I introduce a comparative theory of legislators' responses to media agenda setting that extends Slapin and Proksch's (2012) formal model of legislative speech. The model of this thesis focuses on the central transmission function of the media and thus the influence of mass media (Snow and Altheide 1979). To account for institutional effects, I conduct two case studies examining the impact of exogenous shocks on the political behavior within the German Bundestag. Exogenous shocks like the nuclear catastrophe of Fukushima and the beginning of the invasion of Russia in Ukraine provide an ideal institutional setting for observing changes in the German media agenda.

This thesis contributes to the literature on parliamentary speech behavior, publication bias, and text-as-data methods, especially modern large language model (LLM) classifiers. It also contributes to the *comparative agenda project* (CAP) (Baumgartner, Breunig, and Grossman 2019) in the areas of *media* and *parliamentary behavior* (Vliegenthart et al. 2016). The relevance of this thesis lies in a new delegation model that explains parliamentary speech behavior while holding agent characteristics

constant. While standard delegation models utilize the principal-agent framework, I demonstrate that intra-agent variation in political behavior can be explained by uncovering issue-specific variation (Gehlbach 2021). Beyond that, I empirically test the implications of the formal model by leveraging an innovative causal design within a moderated mediation analysis framework.

The thesis is structured as follows: In the first section, I review the literature on the influence of mass media and media bias on the political and speech behavior of MPs. Based on this literature review, I introduce a formal model of the delegation process of speech behavior in parliament by the transmitting function of media. I test four derived hypotheses with a new dataset which contains all open-access newspaper articles by the major newspaper outlets in Germany over six years. To investigate the moderating effect of MP characteristics, I conduct a moderation analysis at the individual level. Additionally, to explore the mechanisms of the causal framework, I carry out a moderated mediation analysis at the aggregate level. The results of the case studies provide evidence that media attention positively affects intra-party homogeneity in parliamentary speeches and supports the formal model. Furthermore, I find little evidence that the transmitting function of media is dependent on individual MP characteristics.

2 Media Bias and Legislative Speeches

In representative democratic systems, political actors cannot effectively reach the public through direct communication but depend on mass media. Political actors, such as parties, politicians, aim to maximize electoral support and influence policies by strategically garnering voter's attention and approval through public communication (Müller and Strøm 1999; Strom 1990; Van Aelst and Walgrave 2017). According to Schulz (2011), political communication by MPs includes both direct and indirect forms of public communication (Bennett and Manheim 2006; Katz, Lazarsfeld, and Roper 1955). Direct parliamentary communication often becomes ineffective and misses its target audience (Coleman 2006). For example, most Bundestag members have their own Twitter accounts, although their number of followers is relatively small compared to the size of their electorate (Faus and Faus 2022; Sältzer 2022). To reach an audience, political actors depend on the mass media, an indirect mean of communication. However, using mass media over direct communication comes with a trade-off: political actors lose control over the communicated content (Vaccari and Valeriani 2015).

Mass media reporting is not neutral but biased due to economic constraints. The literature discusses several overlapping types of media bias (Lichter 2018). While literature on media also deals with extrinsic ideological bias, the economic literature primarily focuses on structural bias inherent in the news production process (Hamilton 2004). In the economic literature on structural bias, a distinction is made between *supply-driven* and *demand-driven* bias. The supply-driven approach suggests that the

characteristics, incentives, and constraints of news outlets shape media content (Baron 2006). I follow the demand-driven branch of the economic media bias literature. The literature on demand-driven bias is based on the idea that outlets adapt their reporting to the readership due to financial constraints (Hamilton 2004). Readers consume media primarily for entertainment (Prat and Strömberg 2013) and tend to read media press that confirms their opinions (Wason 1968). Newspapers recognize the consumer behavior of readers, which creates economic incentives for prioritizing "interesting news" based on political bias (salient topics) (Mastrorocco, Ornaghi, Pograxha, and Wolton 2023). The resulting publication bias is closely linked to the *News Value Theory* (Galtung and Ruge 1965) and *Media Logic* (Snow and Altheide 1979) discussed in the journalistic literature. For this thesis, the demand-driven bias serves as the underlying micro-mechanism for the rational behavior of journalists and media outlets. Following Baron (2006), I focus on *the ex-ante effects of media bias*. Ex-ante media bias effects are defined as an increase in the likelihood of individuals, such as politicians, acting based on structural news bias (Vliegenthart et al. 2016).

Political actors strategically adapt their behavior to the publication bias of the media to increase their chances of media presence. The mass media's effect on the behavior of political actors is discussed under the keywords *mediatization* and *medialization* in the media literature (Finnemann 2011; Reinemann 2010). The media's publication bias forces political actors to become newsworthy to increase their chances of becoming part of mass media coverage (Mastrorocco, Ornaghi, Pograxha, and Wolton 2023; Strömberg 2004). Political actors can create events or use already salient topics to increase their chances of becoming a part of the news coverage (Meyer, Haselmayer, and Wagner 2020). Significant political events are, for example, the passing of a new law or a press conference. Such events can also be manufactured to strategically exploit the publication bias of the media (pseudo-events) (Dayan and Katz 1992). Another possibility is to comment on an already salient topic in the media (Meyer, Haselmayer, and Wagner 2020). The media pick up on these political communications in the context of already salient topics. For politicians, parliamentary debates are the standard way of communication to get the attention of mass media (Bäck and Debus 2016).

Party leaders must balance the party interests against the interests of individual MPs when deciding who takes the floor in parliament. On the one hand, the parliamentary floor is important for MPs to increase their re-election chances (Finnemann 2011). On the other hand, parties use parliamentary speeches to demonstrate party homogeneity. The MP can either explain their position and voting behavior to the electorate or signal party loyalty to the party leadership (Proksch and Slapin 2014). Proksch and Slapin (2012) show that the signaled political position of MPs is biased. The strength of the bias depends on the institutional system and the ideological position of the party leadership and the MP. Commonly framed as a lack of cohesion within a party, intra-party heterogeneity is typically assumed to harm party goals like maximizing their vote share (Mader and Steiner 2019). Therefore,

parties are expected to aim for party homogeneity (Bailer, Schulz, and Selb 2009; Steenbergen and Scott 2004). In the formal model of Proksch and Slapin (2012), party leadership limits intra-party heterogeneity by preventing dissenters from speaking. In alignment with Kernell (2016), Meyer (2012), and Curto-Grau and Zudenekova (2018), I posit that intra-party heterogeneity does not necessarily imply a lack of party control but rather represents a strategic equilibrium between divergent party interests. Building on Slapin and Proksch's (2012) insights, this thesis contends that speeches reflect these divergent party interests and present a strategic trade-off in the delegation process.

The next section presents a formal model of legislative speech behavior.

3 Introducing an Extended Formal Model of Legislative Speech Behavior

This paper's theoretical model is based on Slapin and Proksch's (2012) delegation game. Aligned with Slapin and Proksch (2012) and Bäck et al. (2016), I argue that party leaders wield complete control over parliamentary floor access. In numerous parliamentary democracies, party leaders regulate floor access based on established parliamentary or internal party rules (Proksch and Slapin 2014). Furthermore, I argue that deviating from the party leader's directives is too costly for MPs. MPs rely on party support for re-election and positions (Müller and Strøm 1999), leading to a minimal discount factor in uncertain re-election scenarios (see Appendix A for details). The model does not account for situations where MPs, in their final legislative term, operate beyond party control due to the complexity involved.

The formal model closely follows Slapin and Proksch's (2012) framework but incorporates media attention concerning specific topics. A parliamentary party consists of n members positioned along a single overarching policy dimension, each party member i with an individual ideal point x_i. For direct candidates, the ideal position x_{Mk} may represent the median voter's ideal position in the district. The party leader, denoted as L, holds an ideal point x_{Lk} (set as 0 for convenience), representing the official party stance. Building on the *Citizen-Candidate* model (Osborne and Slivinski 1996), I assume x_{Lk} also mirrors the median position of party members. The game starts when the party, following procedural rules, is allocated speaking time on a particular topic k from the parliamentary agenda. Initially, a speaker is randomly selected from the non-leader party members, denoted as M, with equal probability P_M. Departing from Slapin's and Proksch's (2012) model, the party leader L observes M's identity and the media's attention to the topic, w_k, where $w_k \in (0,1)$. Subsequently, L decides whether to present the party stance on the topic ($x_{Sk} = x_{Lk}$) or delegate the speech to M, who would deliver a speech positioned between *M*'s and *L*'s ideal points, with $x_{Sk} \in [x_{Mk}, x_{Lk}]$. Following Slapin's and Proksch's (2012) approach, the model distinguishes between the utility function of the party leader and that of the individual MP.

3.1 Utility Functions of Party Leaders and MPs

3.1.1 Utility Function of Party Leaders

Party leaders gain utility U_L in letting other MPs speak by demonstrating party unity while offering backbenchers the chance to gain experience for future office. One effective approach to guarantee party homogeneity could involve having every speech delivered by the party leader. Given that the content of a speech by a party leader aligns with the official party position, there is no utility loss. However, there are costs c_L associated with the leader delivering speeches. c_L considers the constrained time resources of party leaders due to various party responsibilities. Moreover, not delegating speeches contradicts the leader's interest in allowing backbenchers to gain experience by speaking themselves. MPs require this experience to secure future offices and gain public attention for re-election. Yet, if backbenchers gain floor access, proposing a policy position differing from the party's ideal could result in utility loss for the leader.

$$U_L = -\pi_L \times w_k\left(x_{sk}^i - x_{Lk}\right)^2 - c_L + I_{L=D}(c_L + (1-\pi_L)e_L) \quad (1)$$

The party leader's decision is influenced by institutional factors, particularly electoral institutions represented by π. Slapin and Proksch's (2012) study demonstrates the theoretical and empirical differences between electoral institutions, exemplified through Germany and the United Kingdom. Their research underscores the significance of party support for re-election. The dependency on party support is especially evident in closed-list elections. Conversely, when constituency popularity holds greater significance, more speeches tend to be delegated to party members. Thus, closed-list elections result in greater party homogeneity. This trend remains consistent across electoral systems, except for mixed-member systems like in Germany. In mixed-member systems, differentiation between lists and direct candidates is necessary. Additionally, in their study of the effect of mass media on the parliamentary agenda, Vliegenthart et al. (2016) distinguish between different institutional systems.

I contend that the media's salience, denoted as w_k, influences L's decision to delegate speeches. Media salience refers to the likelihood that the topic of a speech is covered in mass media. High-salience media topics are more likely to garner media coverage and voter attention. The model assumes that media topics are exogenously determined, primarily driven by events, and not shaped by parliamentary behavior (Vliegenthart et al. 2016). This assumption is crucial to avoid reverse causality. However, the impact of media salience in the model is limited to party heterogeneity and does not affect an MP's speech experience e_L. It is assumed that delivering a speech on a topic, whether high or low in media salience, yields the same level of experience for an MP.

3.1.2 Utility Function of MPs

If *L* decides to delegate the speech to M, the chosen MP faces a tradeoff between proposing their own ideal position x_{Mk} and the party leader's ideal position x_{Lk}. Due to this tradeoff, the position of the speech lies between the ideal positions of *M* and L. The trade-off represents the MP's possible strategies to improve their prospect of re-election. Party loyalty may lead to rewards from the party leadership such as offices, financial or personal support, or a higher ranking in the next election's party list. Directly elected MPs can increase their re-election chances by aligning their speeches with the median voter's position in their constituency or addressing local issues (Bernhard and Sulkin 2018). MPs also have opportunities to engage with specific organizations or businesses to target constituencies or secure financial support (Grimmer 2013). Following Slapin and Proksch's (2012) approach, M's utility loss equates to the cubic distance between the speech's position and either M or L's ideal position.

$$U_M = -\lambda_M \times w_k\left(x_{sk}^i - x_{Mk}\right)^2 - (1-\lambda_M) \times w_k\left(x_{sk}^i - x_{Lk}\right)^2 \quad (2)$$

The trade-off is influenced by electoral institutional factors, denoted as λ_M, and media priming effects w_k. In electoral systems where parties have significant influence in re-election, MPs tend to align their speeches closely with the party leadership's ideal position. The strategic alignment of speeches fosters party homogeneity at a broader level. Conversely, in electoral systems where re-election relies heavily on constituency support, MPs tend to position their speeches nearer to their ideal stance. Following Down's (1957) Median Voter Theorem assumptions, MPs should adopt the position of the median voter or specific interest groups in their constituency.

3.2 Equilibria and Hypotheses

The described full information game is sequential and solved using backward induction. Initially, a random MP *M* is selected, and then λ_M and w_k are realized by the chosen MP. Subsequently, the selected MP decides the speech position to maximize their utility, delivering a speech x_{sk}^* at the point $\lambda_M x_{Mk}$ (see Appendix A for calculation). As the ideal point of the speech is not dependent on media attention w_k, it cancels out in setting the first derivative to 0. Thus, the ideal point of the speech of *M* remains consistent with the model of Slapin and Proksch (2012). The party leader delegates the speech if, and only if, the utility they receive by delegating surpasses that of delivering the speech themself. When *L* decides to delegate, the speech is held at point $\lambda_M x_{Mk}$, yielding a utility of $-\pi_L \times w_k(\lambda_M x_{Mk})^2 + (1-\pi_L)e_L$ for *L*. Alternatively, if *L* chooses to take the floor, the speech's position is at $x_{Lk} = 0$, resulting in a utility for *L* of $-c_L$. Formally aligning these utility functions results

in the following equilibrium: $U_L = -\pi_L \times w_k(\lambda_M x_{Mk})^2 + (1-\pi_L)\, e_L \geq -c_L$. Rearranging this inequality leads to the following threshold:

$$x_{Mk} \leq \sqrt{\frac{e_L \times (1-\pi_L) - c_L}{\pi_L \times w_k {\lambda_M}^2}} \quad (3)$$

Strictly assuming $0 < w_k < 1$, it is implied that increased media attention diminishes *L*'s willingness to delegate speeches to *M* when *M*'s ideal position deviates further from *L*'s position. As a result, this model infers that media coverage does not directly impact MPs' behavior. An MP's opportunity to speak is rather influenced by the decisions of the party leadership.

This equilibrium offers several empirical implications. High media salience amplifies the importance of party homogeneity to the party leadership and increases the threshold for speech delegation. When media attention is high, party leaders refrain from delegating speeches to MPs whose positions deviate further from their ideal stance. Given equal probabilities for each MP to deliver a speech, the likelihood of party leadership delegating speeches diminishes with increased media salience of a topic, leading to more speeches being delivered by party leaders.

> ***H1***: Media salience positively affects the likelihood that party leaders take the floor.
>
> ***H2***: Media salience negatively affects the likelihood of an MP whose ideal position is further away from the ideal position of the party leader to deliver a speech.

In this thesis, I emphasize the transmitting function of media on parliamentary behavior, exploring how media salience influences the speech-making decisions of MPs, especially in the context of party dynamics. I analyze the assumed causal paths to investigate the underlying mechanisms driving MPs' parliamentary behavior. Path analysis, particularly in complex systems, is a powerful tool to support causal claims by evaluating the relationships between variables along these paths (Imai, Keele, and Tingley 2010). Media salience is likely to be moderated by the individual characteristics of MPs, particularly their roles within the party and their ideological alignment with party leadership. The formal model developed in this thesis underscores the significance of different party roles and ideological stances in shaping observed parliamentary speech behavior. Meanwhile, the utility functions and decision-making processes of party leaders suggest that media salience will have varying effects depending on an MP's position within the party hierarchy. This leads to the following hypotheses:

> ***H3:*** The transmitting effect of media salience is significantly stronger for party leaders compared to backbenchers, reflecting the heightened strategic importance of media coverage in the leadership's decision to take the floor.

H4: The transmitting effect of media salience decreases as the ideological distance between an MP and the party leadership increases, suggesting that MPs who are ideologically further from the leadership are less likely to be delegated to speak when media attention is high.

In the following section, I discuss a proper institutional setting to test the hypotheses.

4 Institutional Setting

The chosen research design aims to establish a relationship between media salience and the adaptive speech behavior of MPs. To reduce possible covariates due to institutional differences, the research design is fitted within the setting of the German Bundestag (Carey and Shugart 1995; Proksch and Slapin 2012; Vliegenthart et al. 2016). The German Bundestag offers an ideal institutional context, primarily due to its mixed electoral system. The German media landscape, characterized as a Democratic Corporatist system, primarily covers privately organized newspapers (Esser 2016; Hallin and Mancini 2004). In this study, I employ newspapers as proxies for media influence in liberal media systems, considering their independence and diverse political orientations (Pürer and Raabe 2007). In contrast, radio and television are partly state-run in Germany. I use two exogenous shocks to investigate the adaptation of the behavior of political actors. The shocks resulting from the Fukushima reactor disaster in 2011 and Russia's war in Ukraine in 2022 serve as temporally and thematically independent events. This approach ensures internal validity in the model's argumentation. The shocks are not predictable by the actors due to their exogeneity, so selection into treatment and reverse causality can be ruled out.

4.1 The German Bundestag

The German Bundestag serves as an ideal case to investigate the proposed hypotheses due to its characteristics: the mixed electoral system, a sizable membership, its role as a platform for speeches, and its stable party system. The Bundestag's mixed-member system comprises of directly elected and list-members (Stratmann and Baur 2002). With a membership of at least 598 individuals and five to six represented parties during the observed period (German Bundestag 2024), there are sufficient individual observations available for analysis. In the German Bundestag, central parliamentary tasks are conducted within committees (Stratmann and Baur 2002). In contrast, parliament functions primarily as a forum for the articulation and signaling of MPs' ideological positions. The function of parliament as a platform for signaling is in line with the theoretical model (Proksch and Slapin 2014; Stratmann and Baur 2002). The party system in Germany is relatively stable due to the 5% threshold (Bräuninger, Debus, Müller, and Stecker 2020). Only the Alternative für Deutschland (AfD) entered the

Bundestag for the first time[1] during the observed period. The stability of the German party system within the Bundestag over the observation period allows for comparisons between different timeframes.

4.2 The German Newspaper Landscape

The German newspaper landscape combines elements from both the Democratic Corporatist and Anglo-Saxon Liberal Models prevalent in European states. Following the categorization of Hallin and Mancini (2004), the Democratic Corporatist system is defined by external pluralism, strong state interventions, and state substitutes. Conversely, the Anglo-Saxon Liberal Model is defined by internal pluralism, non-initialized self-regulation, and market-dominated broadcasting (Hallin and Mancini 2004). The Democratic Corporatist and the Anglo-Saxon models share aspects such as a similar historical development of the media market and the independence of journalists. The types of media systems differ in terms of the parallelism of the media, their political orientations, and government interventions in media policy (Hallin and Mancini 2004). In this paper, I focus on German newspapers as a subset of media. Newspapers retain diverse ideological stances with similar positions as the German parties (Arnold 2010). Since newspapers mostly operate without state financial support, their revenue relies on maximizing readership, leading to structural biases in news production (Galtung and Ruge 1965). Additionally, missing government interventions ensure a smaller possible bias due to reverse causality. I argue that while newspapers are less selective in their coverage of important events because they rely on appealing news compared to polarized-pluralistic systems, they still shape stories based on their ideological leanings.

4.3 Case Selection of Exogenous Shocks

To test the hypotheses derived from the introduced model, I leverage an institutional setting at two different points in time, each featuring a different exogenous shock. This study asserts that an exogenous shock enables the observance of rapid shifts in media attention without parties anticipating the change. Identifying assumptions for these shocks include:

1. *Exogeneity*: Parties or MPs should not anticipate the shock. This is crucial to demonstrate the full effect of the shock and eliminate pre-treatment influence. Anticipated shocks may cause parties or media to adjust their behavior beforehand.

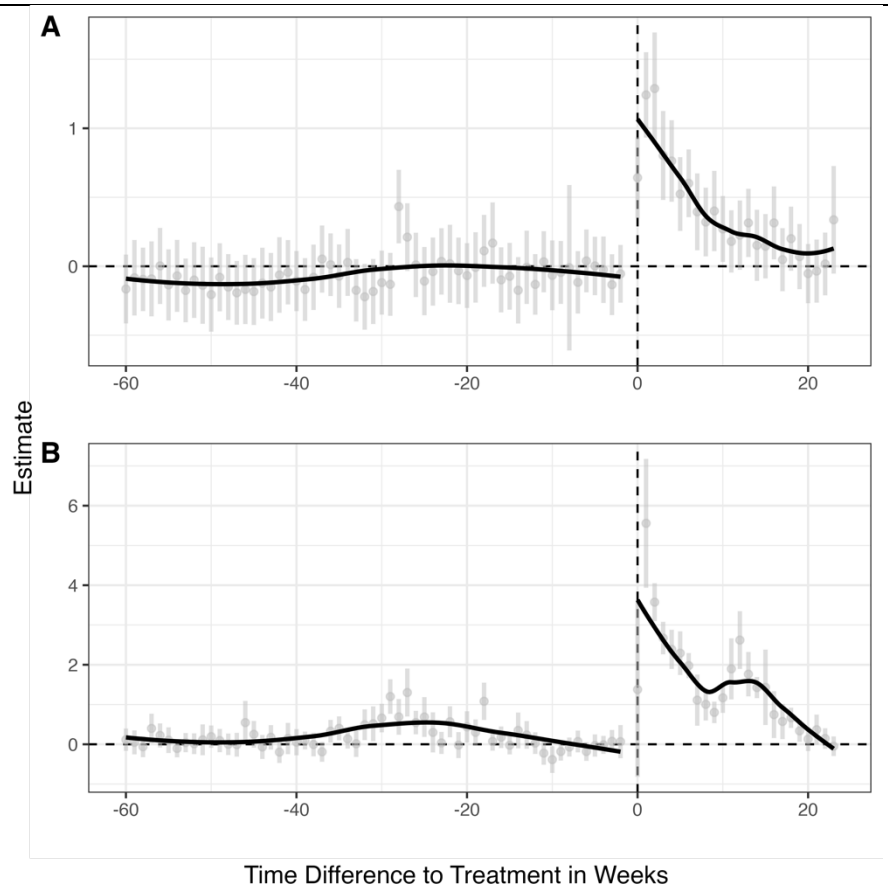
[1] Only parties that were able to form a parliamentary group in accordance with the Rules of Procedure of the German Bundestag are included here. There are exceptions to the 5% threshold, such as the Südschlesischer Wählerverbund, which are not explicitly mentioned.

2. *Relevance*: The shock must be significant enough to impact the agenda. If the media and politics deem a shock irrelevant, they may not adjust their behavior accordingly.
3. *Topic-specific:* The shock should specifically affect individual political issues. Topic-specific shocks ensure differentiation among groups of MPs (i.e. committees) for observation purposes.

4.3.1 The Reactor Disaster of Fukushima

The Fukushima reactor disaster on 11 March 2011, triggered by a tsunami, garnered significant international media attention. A tsunami resulted in severe damage to two reactor units at Japan's Fukushima Daiichi nuclear power plant and the release of radioactive substances (Federal Office for the Safety of Nuclear Waste Management Germany 2022). In Germany, the catastrophe sparked new environmental and energy policy debates that led to the phase-out of nuclear energy (Breunig and Schnatterer 2020; Bundesrat Germany 2011). Despite the geographical distance, the event's magnitude prompted weeks-long media coverage in Germany.

Figure 1 Event Study: Response of Media Salience to Exogenous Shocks



Note: The coefficients are based on a linear regression (OLS) with robust standard errors. The outcome variable are the z-scores of the share of the following topics: Figure B: Defense, International, Foreign and Immigration; Figure A: Energy. The solid line represents the interrupted smoothed trend of the coefficients.

Figure 1 (A) shows the descriptive results of the event study of the reactor disaster in Fukushima. With this event, the topic of energy became significantly more salient in German newspapers. Moreover, the strength of the shock varied over time. It took more than 20 weeks for the topic salience to recover to the same level as before the shock. Figure B.1 in Appendix B covers the effect on the media agenda of all CAP topics. It is assumed that the reactor disaster and media attention significantly impacted the German political agenda, particularly in Energy discourse.

4.3.2 The Russian Invasion of Ukraine

On 21 February 2022, Russia announced the independence of eastern regions under its influence from Ukraine, followed by military attacks against Ukraine on 24 February 2022. This aggression by Russia notably shifted Germany's foreign and defense policies (Scholz 2022). Germany's strong ties with Russia, primarily through significant gas supplies, particularly Nord Stream 2, were a focal point (Russel 2021). Additionally, cultural ties with Russia, especially in eastern Germany, further complicated the situation (Kastner and Hewson 2023). Before Russia invaded Ukraine, defense policy played a subordinate role in Germany. The country had maintained a notably low defense spending relative to its GDP (Gebauer 2019). Moreover, arms exports to conflict zones were viewed critically and opposed by most political factions (Becker et al. 2023). The war initially dominated the media landscape and eventually influenced policy shifts within political parties and the government. Figure 1 (B) shows the strong effect of the exogenous shock on media coverage. However, unlike the reactor catastrophe, the war impacted a range of topics. Initially, foreign, immigration, international, and defense topics held significant importance, but as the conflict progressed, energy and economic policies gained prominence (see Appendix B for details). In comparison to Figure 1 (A), the shock had a greater influence on media salience. Notably, the duration of the effects of the reactor catastrophe and the outbreak of the war are similar, about 20 weeks. Unlike the first case, the exogeneity of this event is less evident. Chancellor Scholz visited Moscow at the beginning of 2022 when the conflict in eastern Ukraine was an ongoing public debate (Marsh 2022). It can be concluded that the outbreak of war was already part of the parliamentary and media discussions before Russia attacked Ukraine. Still, the assumption posited in this thesis asserts that neither political parties nor the media had prior information regarding the timing of Russia's attack on Ukraine. Vice-Chancellor and Minister of Economics, Robert Habeck, mentioned in an interview that he was only made aware of the imminent attack by United States intelligence services on the evening before the assault (Heflik 2023). Therefore, the assumption that this information remained within the closest government circles seems plausible.

5 Data and Operationalization

To test the hypotheses, I create panel data sets on media and speaking behavior in the German Bundestag, respectively, from various data sources. Due to the two temporally different cases, the data sets are interrupted. The result is an observation period of approximately three years for each case (see Appendix B for details). The respective exogenous shock is coded as a binary variable. The variable takes on the value of 1 if the respective topic is assumed to be treated after the exogenous shock and 0 otherwise. The variable takes the value 1 for the following topics: *Energy* for the case of the reactor catastrophe in Fukushima, and *Defense*, *International Affairs (International)*, *Foreign Trade (Foreign),* and *Immigration* for the case of the war outbreak in Ukraine. See Appendix B for detailed information on the variables.

5.1 Media Data

The entire media data set comprises five leading newspaper publishers in Germany over three years per case. Media salience is operationalized using online newspaper articles by German media outlets. I assume that online newspapers serve as a suitable proxy for media salience (Burggraaff and Trilling 2020). Online newspaper outlets usually react faster to exogenous shocks, so the treatment is suspected to be stronger (Burggraaff and Trilling 2020). Furthermore, I assume that online media affect the behavior of all MPs. Due to their publication circulation and quality, the online outlet of the following newspapers is used for the analysis: Der Spiegel, Zeit, Süddeutsche Zeitung (SZ), Welt, and TAZ[2]. The newspapers cover a broad spectrum of political orientations (Eilders 2000). By using a representative sample of newspapers, a possible bias of the readership in the analysis is reduced. The origins of the reports are not differentiated in the further analysis due to statistical power. Differences between the newspaper publications are investigated in appendices B and C.[3]

I scraped all available online articles including metadata from leading German newspapers across the observation period using the statistical software R. After completing the scraping process, I reduced the data to observations with complete metadata. This resulted in a total of 1,925,525 observations. The media data are on a daily level over a three-year time frame for each case (see Appendix B). By including all available online articles from a broader media spectrum, I ensure internal validity and a representative sample of the entire media spectrum. For instance, the small media data corpus of Vliegenthart et al. (2016) is likely to be biased and not representative of the population. Many articles are not fully accessible due to paywalls, but I presume that the article descriptions are sufficient for

[2] It was not possible to scrape articles from the Frankfurter Allgemeine Zeitung with the method used.
[3] The analysis of the political orientation of newspapers and their influence on a certain clientele among MPs is outside the scope of this thesis.

classification by the LLM used. While the small text corpus per article might limit data quality and thus the internal validity of the analysis, I assume that the resulting error is randomly distributed. This error increases the noise in the data but does not lead to a systematic bias. However, the paywall bias is not random across topics (see Appendix B). To operationalize media share in the analysis, I aggregate media article data at the topic level by time. To reduce possible bias and increase the stability of the models, I calculate the rolling mean of the media share.

5.2 Speeches and MP Data

The data on parliamentary speeches combine individual information about members of parliament with the content of each speech in the Bundestag. These speeches from the Bundestag are derived from the published minutes of the German Bundestag and scraped using the code from Open Discourse.[4] The data include the content of the speeches and meta-information about the speech, such as the speaker. I supplement the information on the MPs using data from the *Parliamentary Day-by-Day database* (Turner-Zwinkels et al. 2022). Additionally, I manually create a dataset on the party and parliamentary group offices and merge it with the MPs by name, party membership, and legislative period.

The thesis' operationalization closely follows Proksch and Slapin (2012), but deviates from their definition of *party leadership*. Instead, in this paper, *party leadership* includes the parliamentary party group board, the party board, and the corresponding substitution. Working-group chairs are not considered in the main analysis (see Appendix B for other operationalizations of party leadership). I add the ideological position of every MP based on the survey responses from the 2009, 2017, and 2021 German candidate surveys (GLES 2012, 2018, 2023). Not every MP participated in the German Longitudinal Election Survey (GLES) survey, so the number of observations is reduced in the respective model. Across the legislative periods of 2009, 2017, and 2021, I could match 340 MPs, which reduces the number of observations for the analysis of *H2*. I operationalize the ideological distance of an MP from the party leader by subtracting the party's assumed ideological position from each MP's self-reported ideological position. In the analysis, I treat this variable as metric due to the equal distance between every category level. Each observation in the final dataset corresponds to one speech in the German Bundestag and includes all necessary MP information. In the final step, I removed all speeches by non-parliamentarians, local government, and the presidency from the dataset.

[4] The scraping process of the legislative speeches is based on the project: https://opendiscourse.de/ueber-uns (30 June 2024) and was extended to scrape the 20th legislative period.

5.3 Annotating the Data into CAP Categories

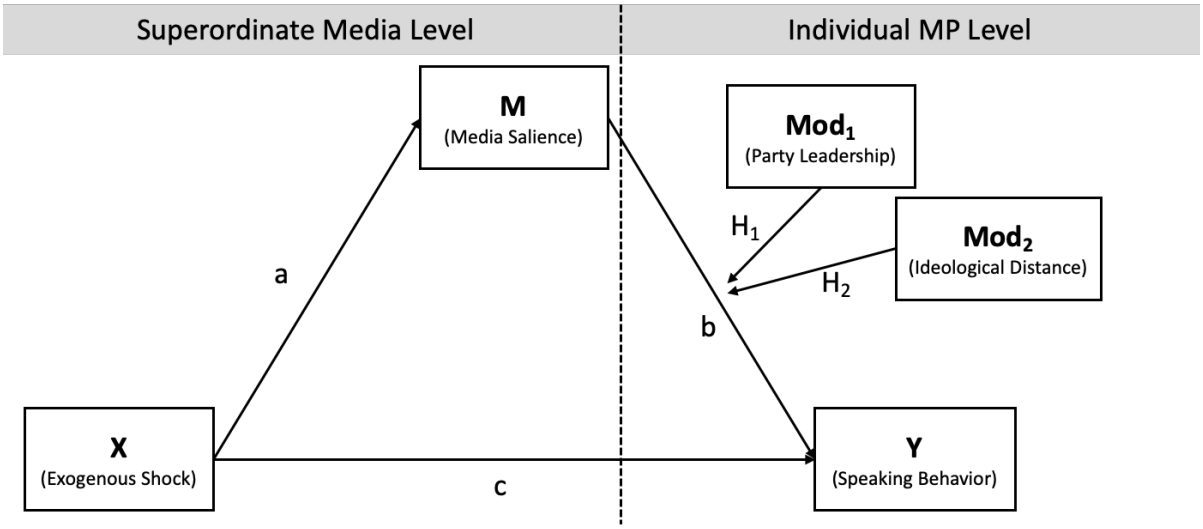
I sort individual speeches and newspaper articles into the CAP categories using the LLM of of Klamm et al. (2022). I use the pre-trained LLMs of Klamm et al. (2022), Sylvester et al. (2022) , and Sebők et al. (2024) to annotate the media and legislative speech data. Gilardi et al. (2023) and Törnerbg (2023) show that modern LLMs like GPT outperform human classifiers. While GPT performance is impressive over different tasks and languages, GPT is inferior to fine-tuned Bert models in classification tasks (Rathje et al. 2024; Wang et al. 2024). Based on the comparison of the different LLMs (see Appendix B for details), I use the model of Klamm et al. (2022) in further analysis. Validation of the models is not possible due to the lack of ground truth data. For reference, I manually code 100 random speeches and media articles from my novel datasets and cross-validate the models (see Appendix B). Klamm et al. (2022) interpellated their model with Breunig and Schnatterer's (2020) dataset of the CAP project. The CAP categories represent a suitable and frequently used framework for examining the political agenda. They also enable a comparison of research in an international context (Vliegenthart et al. 2016).

6 Methods

6.1 Directed Acyclic Graphs

An exogenous shock influences the speech behavior of the MPs via two possible causal paths. Figure 2 serves as Directed Acyclic Graph (DAG) for the model. The treatment (X) is the exogenous shock of the reactor catastrophe in Fukushima or the start of the war in Ukraine, respectively. *X* is a binary variable indicating whether a subject is treated or not. As the design is an observational study, treatment allocation between subjects cannot be controlled. It is assumed that the treatment only influences the topics related to the case: *Energy* for the case of the reactor catastrophe in Fukushima and *Defense*, *International*, *Foreign,* and *Immigration* for the case of the war outbreak in the Ukraine. Nevertheless, spillover effects and Stable Unit Treatment Value Assumption (SUTVA) violations cannot be ruled out by design. The shocks are assumed to be exogenous to all other variables in the model. The outcome in this model is parliamentary speech behavior in the Bundestag (*Y*), specifically the topic of an individual given speech. The treatment directly influences speaking behavior in the Bundestag via path *c*. In addition to the media, political actors have other information channels, which are represented by path *c*. These include direct communication with actors, intelligence reports, personal trips to these places, or social media. Beyond that, as a confounder, path c accounts for any other effect caused by *X* on *Y* (Imai, Keele, and Tingley 2010). Unobserved effects related to the shocks are for example differences in the economic or financial market situation. I assume that speech behavior in the Bundestag reacts directly to exogenous shocks as well as to media coverage.

Figure 2 Directed Acyclic Graph



Note: The DAG shows a moderated mediation analysis, including the labels of the respective variables. In the analysis, only one moderation variable is considered at once.

The treatment influences media salience (*M*) via path *a*. The media report on the exogenous shock reactively and change their agenda. For their report, the mass media use various sources. These sources can include reporters, amateur contributions from social media, statements by officials, or other media reports. Through their reporting, the media influence the MPs' speaking behavior via path *b*. *M* is thus a mediator between *X* and *Y* in this DAG. Political actors learn about the media's current agenda (t0) directly from previous media coverage (t-1). The time lag accounts for possible reverse causality. Furthermore, I assume that political actors anticipate the shift in the media agenda after they have perceived the exogenous shock directly. The effect of the *b* path is influenced by the moderators Mod_1 and Mod_2, respectively. The moderators account for individual characteristics that are hypothesized to affect the speaking behavior of the MPs. Mod_1 is the hierarchical position of an MP in the party, namely if the MP is defined as party leader or not. Mod_2 is the ideological difference to the party's ideal position. The resulting DAG is described as a moderated mediation analysis with fixed effects (Baron and Kenny 1986; Hayes 2018).

6.2 Path Analysis at the Individual Level

The analysis of the interaction effects at path *b* represents the main analysis to investigate *H1* and *H2*. Instead of analyzing the probability that a party leader takes the floor given a specific topic, a point of time, and media salience, I analyze the probability that the topic of a speech is about a treated topic. This change in the outcome variable provides the opportunity to control for MP characteristics and investigate intra-agent variation. Controlling for MP characteristics is important because the political behavior of MPs is confounded by their characteristics and history in parliament, which are mostly

unobserved (Bäck, Debus, and Müller 2014). To do so, for path *b*, the sum of the media salience of the respective treated topics serves as the explanatory variable and the topic of the speech serves as the outcome variable. For the analysis, the topic of the speech is binarized, 1 if the topic of the speech is about a treated topic, and 0 if not. By integrating one moderating variable each, *H1* and *H2* can be addressed. The binarity of the outcome variables enables a generalized linear regression (logit). The estimate of the interaction effect is not affected by the direct path *c* on the outcome when controlling for the confounder *X*. The unit of analysis is the individual speech given by MPs in the German Bundestag across the observation periods. The data structure enables a panel analysis with unit-fixed effects to control for possible unobserved confounders. Confounders at the unit level are especially political and personal experience, visual characteristics, committee membership, and influence of interest groups (Bäck and Debus 2020). In the fixed effects models, additional dependent variables are not necessary because of the individually estimated intercepts. Due to the (first order) autocorrelation nature of the outcome variable, autoregressive models are calculated. In the analysis, I include a lagged dependent variable (t-1). To address possible problems of reverse causality, the explanatory variable is lagged by one day. The combination of unit fixed effects, a lagged dependent variable, and a lagged explanatory variable results in a model suited to identify the interaction effect of the moderating variables.

$$\log\left(\frac{Y_i}{1-Y_i}\right) = \beta_1 X_i + \beta_2 M_i + \beta_3 Mod_i + \beta_4 (M_i \times Mod_i) + \beta_5 D_i + \mu_i + \varepsilon \quad (4)$$

Equation 4 is a generalized linear model including the treatment variable. Y_i is the probability that the topic for observation i is treated. *M* represents the media salience operationalized as the share of media coverage. *Mod* represents the respective moderating variable. For *H1*, this is the binary variable indicating if an MP is a member of the party leadership. For *H2*, a continuous variable on a scale from 0 to 9 indicates the ideological distance to the own party leadership; β_4 describes the effect of the interaction term between the moderating variable and media salience. The inclusion of the effect of the moderating variables is important so that β_4 is not confounded. However, most of the time the individual effect is collinear with the individual unit fixed effects μ_i. *D* represents the lagged dependent variable; in this case, the binary variable indicating if the last speech was about a treated or untreated topic. Lasty, ε describes the error term.

6.3 Mediation Analysis

To analyze whether the moderation significantly affects the transmitting effect of media, I conduct a mediation analysis. The research strategy for the mediation analysis is based on Baron and Kenny (1986) and Imai et al. (2010). For the mediation analysis, I aggregate the media data by topic and day, operationalizing media presence not as the share of articles within the total media corpus but as the absolute number of articles per topic. Consequently, the unit of analysis is not at the individual speech level but rather the number of articles per topic and day. According to Imai (2012), the ignorability assumption must hold to interpret the results of the analysis causally. This assumption posits that none of the mediation analysis pathways are confounded by an unobserved variable in order to establish causal inference. While this assumption cannot be tested, potential issues are discussed in the conclusion. Additionally, for a causal interpretation of the model, the assumption of unit homogeneity over time would need to hold. However, this is unlikely, as the potential speakers on each topic vary over time. A weaker assumption, that the behavior of units within a group (at an aggregate level) does not change over time with respect to possible covariates, weakens the causal interpretation.

For the analysis of *H3*, speeches are distinguished by the characteristic of the speaker, namely if they are a backbencher or party leader. The analysis of *H4* distinguishes between every category of ideological difference to the party leadership. Since the outcome variables *M* and *Y* are the counted results of a binomial data-generating process, Poisson models can be employed for the analysis (Frome 1983). Additionally, the panel structure of the data enables a panel model with two-way fixed effects. Fixed effects account for variation between different points in time and between topic categories. I calculate two regression models. In the first model, the number of media articles is regressed on the treatment variable to identify the effect of path *a*. The treatment variable *X* is lagged by one day to account for reverse causality. In addition, autocorrelation is addressed by an autoregressive model, with a lagged dependent variable.

$$\log(M_{it}) = \beta_1 X_{it} + \beta_2 M_{it-1} + \mu_i + \vartheta_t + \varepsilon \quad (5)$$

Equation (5) represents the Poisson regression model with two-way fixed effects to estimate path *a*. The dependent variable *M* consists of the number of media articles by topic at one point in time. *X* is the binary treatment effect and M_{it-1} the lagged number of media articles to account for autocorrelation. μ_i describes the unit fixed effects by topic category and ϑ_t the time fixed effects. ε represents the error term.

In the second model (5), the number of speeches in parliament is regressed on media salience while controlling for the treatment variable. The effect of media salience accounts for path *b* and the treatment variable for the *c* path. Since the moderating variables are hypothesized to affect the size

of the indirect effect, the respective levels of the moderating variables are included in the models. The treatment variable *X* and the mediator variable *M* are lagged by one day to account for reverse causality. To account for differences between the government and opposition parties, a control variable is included (Vliegenthart et al. 2016). In addition, I address autocorrelation with an autoregressive model, which includes a lagged dependent variable.

$$\log(Y_{it}) = \beta_1 X_{it} + \beta_2 M_{it} + \beta_3 Mod_{it} + \beta_4 (M_{it} \times Mod_{it}) + \beta_5 Gov_{it} + \beta_6 Y_{it} + \mu_i + \vartheta_t + \varepsilon \quad (6)$$

Equation (6) represents the Poisson regression model with two-way fixed effects to estimate paths *b* and *c* under the influence of moderation. The dependent variable *Y* describes the number of speeches on a respective topic. *X* represents the respective exogenous shock and *M* the media salience operationalized as the number of articles per time and topic. β_4 describes the interaction effect between media salience and the moderating variables. Gov is a binary variable controlling for differences between the government and opposition party and Y_{it-1} describes the lagged number of speeches on a respective topic. μ_i describes the unit fixed effects by topic category and ϑ_t the time fixed effects. ε is the respective error term.

Following the approach of Baron (1986), the mediation effect is calculated by combining the regression results of the different paths of the mediation analysis. The direct effect of the mediation analysis is equal to the regression coefficient of path *c*. The indirect effect of the regression is equal to the product of the coefficients of paths *a* and *b*. The proportion of the mediation effect is the quotient of the indirect effect divided by the sum of the direct and indirect effect (total effect). To analyze the effect of the moderation variables, the direct and indirect effects for different levels of the moderator are compared. The coefficients of the Poisson regression models are logged rate ratios. Based on the log-rate coefficients in the first step, the moderated path *b* is calculated. In the second step, the product of the moderated paths *b* and *a* is calculated. The indirect and direct effect is transformed into rate ratios (RR) for better interpretability. The proportion of the mediation is equal to the share of the log RR of the indirect divided by the log RR of the total effect.

Popular approaches for mediation analysis, like the R *mediation* package (Tingley, Yamamoto, Hirose, Keele, et al. 2014), do not offer standardized functions to calculate mediated moderation analysis with fixed effects. Packages with more flexibility to model variable dependencies like *lavaan* (Rosseel 2012) or *processR* (Coutts and Hayes 2022) are restricted in their ability of functional forms. Since there are no standard functions available, I conduct the analysis with self-adjusted functions. The amount of software development in recent years shows the importance of the methodological contribution. For the mediation analysis, I use a bootstrapping method to estimate robust confidence intervals. For every model specification of the mediation analysis, I calculate a parametric bootstrap analysis with 1000 iterations. The results of a mediation analysis are unlikely to meet the linearity assumptions to

calculate the level of significance based on a t-statistic. The bootstrapping method has the advantage that it relaxes linearity assumptions for calculating confidence intervals using the percentile methods (Davison and Hinkley 1997; Rousselet, Pernet, and Wilcox 2011). For illustration, I calculate the share of the mediation per level of the moderation variable.

In the next section, the results of the analysis are presented and discussed.

7 Results

7.1 Path Analysis of the Interaction at Path *b*

Table 1 shows the results of the logit regression with unit fixed effects of path *b* including the interaction effect of party leadership. The models are based on Equation (4). To compare the level of significance of the interaction effects, I report log odds in every model (see Appendix B for marginal effects). The interaction effect of media salience and party leadership is only significant in models 1.2 and 1.6, which include the treatment variable. The effect of the treatment variable is highly significant in Model 1.2. Comparing models 1.1 and 1.2, the effect of media salience switches from a significant positive to a significant negative effect when controlling for the confounder. This switch is observed in the case of war outbreak in Ukraine, the nuclear catastrophe, and the pooled model. The dependency of the results on the confounder is important. Table 1 shows that the media salience and the interaction effect are biased and lead to false interpretations if the confounder is not controlled for. This supports the proposed relationship between *X* and *M* in the DAG. After the treatment variable is included in Model 1.2, the interaction effect is significant and points in the expected direction. The same holds for the pooled Model 1.6 but not for Model 1.4. In Model 1.4, the coefficient of the interaction effect points in the expected direction but is not significant. The estimates of the interaction effects between *media salience* and *party leader* point to the hypothesized positive relationship. Overall, *H1* is supported as it shows the hypothesized empirical patterns but is not very robust across models as the effect is only slightly significant in two models. Especially the case of the Fukushima Nuclear Catastrophe might not have enough variation in the outcome variable. The significant results in the pooled model might be driven by the significant results in Model 1.2.

Table 1 Regression Results for *H1* at the Individual Level

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock		39.35***		37.39***		36.29***
		(0.16)		(0.29)		(0.06)
Party Leader	0.24	-0.02	0.14	-0.02	0.00	-0.13
	(0.57)	(0.83)	(0.74)	(0.72)	(0.46)	(0.51)
Media Salience (Treated)	7.12***	-31.45***	7.12***	-26.95***	11.58***	-1.44
	(1.54)	(3.37)	(1.86)	(3.48)	(1.26)	(1.77)
Topic of Legislative Speech (t-1)	1.70***	1.68***	2.18***	2.15***	2.21***	2.32***
	(0.10)	(0.12)	(0.23)	(0.25)	(0.12)	(0.14)
Media Salience x Party Leader	5.13	13.78*	2.77	11.18	3.59	7.56*
	(3.26)	(6.71)	(2.70)	(6.76)	(2.13)	(3.50)
Sample size	11981	11981	13077	13077	31248	31248
R2	0.32	0.58	0.32	0.45	0.36	0.53
Adjusted R2	0.25	0.51	0.28	0.41	0.31	0.48
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H1): Effect of media reporting on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

Table 2 shows the logit regression results with unit fixed effects of path *b*, including the interaction effect of the difference of political positions. To compare the level of significance of the interaction effect, I report log odds in every model (see Appendix B for marginal effects). Furthermore, I report interaction effects with the respective categories of the moderating variable in Appendix C for a sensitivity analysis. The number of observations is reduced to 1388 in models 2.1 and 2.2 and 2073 in models 2.3 and 2.4. The interaction between media salience and the ideological intra-party difference shows the expected negative effect in every model. As opposed to Table 1, the interaction effect between media salience and the moderation variable is only significant in the pooled models. The lack of significance in the first four models is probably due to the low number of observations and small variation due to individual fixed effects. As in Table 1, the effect of media salience depends on the inclusion of the treatment variable in most models. In models 2.1 and 2.3, media salience has a significant positive effect. This positive effect of media salience becomes negative and insignificant with the inclusion of the treatment variable. Lastly, in Model 2.6, the effect of media salience remains positive but becomes insignificant. This pattern, like in Table 1, supports the relationship between the treatment and the mediator.

Table 2 Regression Results for *H2* at the Individual Level

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Exogenous Shock		36.92***		37.79***		37.54***
		(0.26)		(0.40)		(0.26)
Media Salience (Treated)	10.80*	-17.86	10.00**	-18.36	16.04***	5.28
	(5.12)	(10.82)	(3.53)	(9.78)	(2.58)	(4.25)
Topic of Legislative Speech (t-1)	3.55***	3.60***	3.76***	3.89***	4.01***	4.24***
	(0.53)	(0.56)	(0.52)	(0.53)	(0.40)	(0.40)
Ideological Distance	0.05	0.16			-0.12	-0.20
	(0.17)	(0.38)			(0.22)	(0.25)
Media Salience x Ideological Distance	-0.21	-1.58	-1.58	1.71	-1.81*	-2.02
	(1.50)	(4.04)	(1.12)	(1.78)	(0.83)	(1.54)
Sample size	1388	1388	2073	2073	4640	4640
R2	0.53	0.71	0.42	0.55	0.55	0.68
Adjusted R2	0.43	0.60	0.35	0.47	0.49	0.61
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

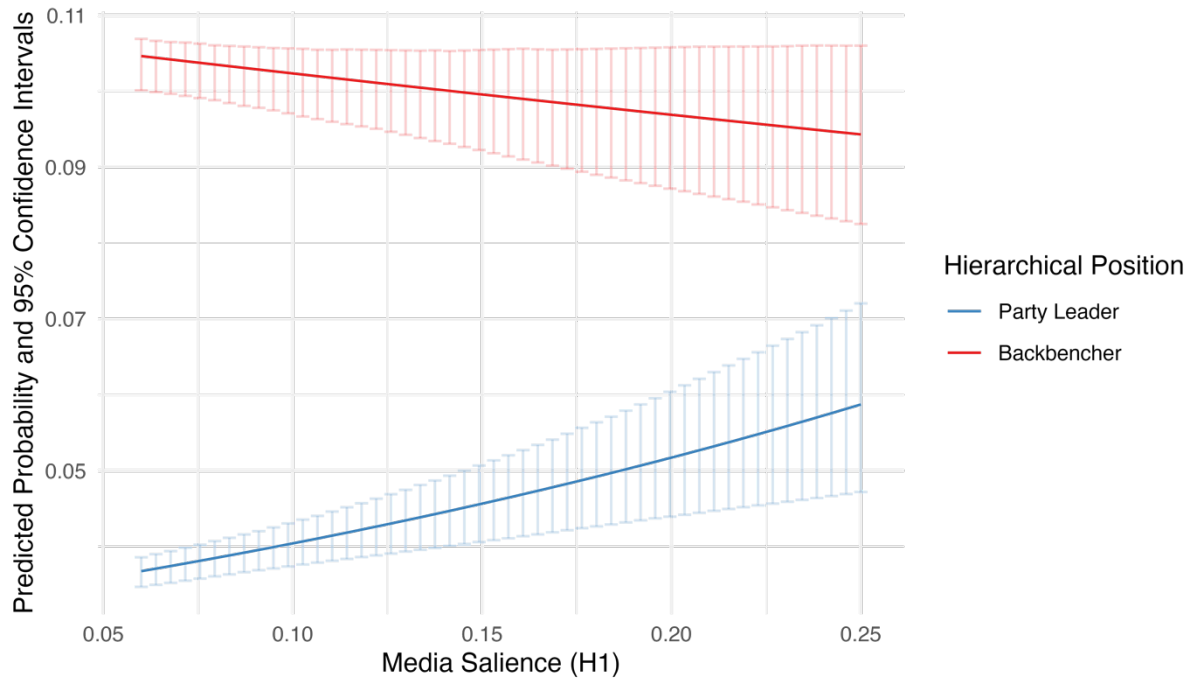
B Path (H2): Effect of media reporting on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

In contrast to Table 1, the dependency of the effect of *media salience* on the *topic of an individual speech* is not as strong in Table 2. The empirical patterns in models 2.1 to 2.6 are robust and in line with *H2,* besides 2.4. Apart from Model 2.5, the effect remains insignificant, and I thus find only weak support for *H2.* This means that there is little evidence that MPs who are ideologically more distant from the party leadership are less likely to speak on issues when media attention is high. Especially in combination with individual unit fixed effects, the models suffer from a large *V* small *N* problem. Overall, the analysis only shows the expected empirical patterns for the combined relationship between media salience and ideological distance on the probability of taking the floor in parliament.

To investigate the hypothesized interaction effects of *H1* and *H2* in more depth, I report predicted probabilities. In both cases, the sixth model in each respective table (Model 1.6 and Model 2.6), which are the most complex and include the highest number of observations, is used to calculate the predicted probabilities. Figure 3 shows the marginal standardized predicted probabilities to hold a speech on a treated topic depending on media salience by party leadership and backbenchers. For Figure 3, the predicted probabilities are based on the pooled Model 1.6. Muller and MacLehose (2014)

show that predicted probabilities at the means are likely biased. To avoid a biased estimate, marginal standardized predicted probabilities are reported (Muller and MacLehose 2014). For marginal standardization, the prediction is weighed by different strata in the population dataset. Since the model accounts for unit fixed effects, the prediction is averaged across all covariates of the model. This method ensures a more representative view of predicted probabilities on the actual data.

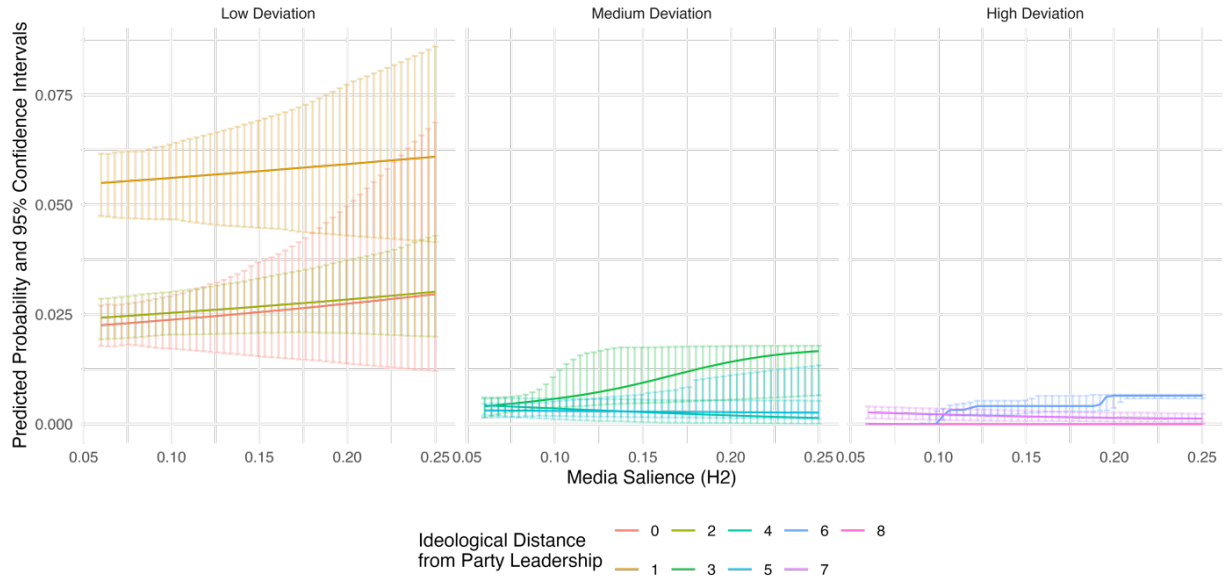
Figure 3 Predicted Probabilities with Respect to Media Salience (*H1*)



Note: Marginal standardized predicated probabilities are based on generalized fixed effect regression (logit) of Model 1.6 (pooled). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

Figure 3 shows the estimated probability of party leaders and backbenchers to speak about a treated topic with respect to media salience. The probability of speaking about a treated topic is positively correlated with media salience. The opposite trend can be observed for backbenchers. For backbenchers, the probability of speaking about a treated topic is negatively associated with media salience. The predicted probabilities for the observed minimum and maximum media attention never cross. This implies that backbenchers are, on average, more likely to speak about treated topics than party leaders at any value of media salience. The positive trend of the predicted probabilities of party leaders and the negative trend of backbenchers is in line with the formal model and supports *H1*. With higher media salience, the probability that a party leader speaks about that topic increases. On the other hand, party leaders take the floor instead of backbenchers so that backbenchers are less likely to speak about a salient topic.

Figure 4 Predicted Probabilities of the Pooled Model (*H2*)



Note: Marginal standardized predicated probabilities are based on generalized fixed effect regression (logit) of Model 1.6 in the Appendix (pooled). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

Figure 4 shows the marginal standardized predicted probabilities of holding a speech on a treated topic depending on media salience by different levels of ideological distance to the party leadership. For Figure 4, the predicted probabilities are based on the pooled Model 2.6. in Appendix B. For better visibility and intuition, the moderating variable *ideological distance to the party leader* is treated as a categorical variable. Category 0 indicates no deviation, while 9 refers to the maximum ideological distance from the party leadership. Figure 4 shows that the predicted probabilities of categories 0, 1, and 2 have similar trends. In line with *H2,* the slope of category 0 is larger than the slope of category 1, which in turn is larger compared to the slope of category 2. Notably, the confidence intervals of categories 0 and 1 are relatively large and overlap. While the slope of the predicted probabilities of category 3 is positive, the slope changes direction for categories 4 and 5. Although category 3 has the largest slope, the predicted probabilities are in every scenario smaller than in categories 0 to 2. This illustrates that the probability of an MP with an ideological distance of 3 giving a speech on a topic increases parallel to media presence. However, the probability that an MP with an ideological distance of 3 will make a speech on a topic is never higher than the probability of MPs with a lower ideological distance from the party leadership. This pattern does not support *H2* but is in line with the overarching pattern that MPs who are more ideologically distant speak less often. All other categories follow the negative trend besides category 6, which shows a slightly positive slope. Overall, Figure 4 shows great support for *H2*, indicating a negative relationship between *ideological distance from the party leadership* and the probability of speaking about a treated topic in parliamentary debates. Only levels 3 and 6 do not support the hypothesized empirical relationship. However, the figure is evidence that

the relationship between ideological distance from the ideal party position and media saliency does not change substantially the probability to speak in parliament. Furthermore, the confidence intervals include the possibility that the moderation has no effect.

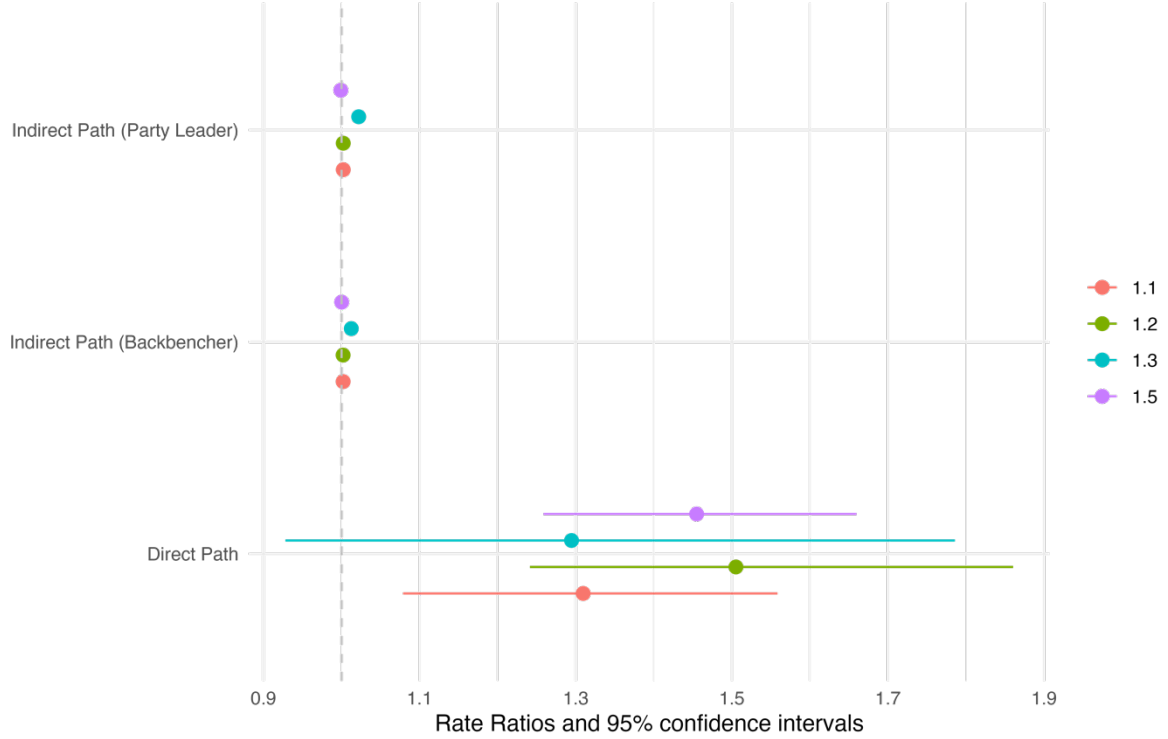
In the next section, a mediation analysis is conducted to investigate whether the interaction effects between the party leadership and the different levels of ideological deviation influence the transmission function of media.

7.2 Mediation Analysis

Figure 5 shows the results of the moderated mediation analysis with the party leader as moderator at path *b*. The calculations are based on equations (5) and (6). The mediation analysis is based on the individual path analysis at the aggregate level (Appendix B). Notably, not all models are reported but only models that show significant effects on every path (Baron and Kenny 1986). In models 1.4 and 1.6, path *a* or *b* is insignificant, which results in no mediation. Two of three two-way fixed effects models are excluded, resulting in three models with unit fixed effects and one model with two-way fixed effects. In every model, 1000 bootstrap iterations are performed to calculate robust confidence intervals.

In Figure 5, the direct (*c*) and indirect path (*a* x *b*) show significant results at the 0.95 level in all models besides the indirect effect of party leaders in Model 1.5. I calculate the confidence intervals using the percentile method. The direct path has a strong positive effect in every model. In Figure 5, the direct path increases the RR by 31 points, which means that MPs are 31% more likely to speak about a treated topic after the treatment. The effect is robust and increases to 50% in Model 1.2, and 46% in Model 1.5. The treatment effects of the *c* path decrease slightly to 29% in Model 1.3. This implies that the treatment in each scenario has a strong direct impact on the outcome variable. The indirect effect is differentiated into two levels of the moderating variable: backbencher and party leader. Although every effect is significant except for the indirect effect of party leaders in Model 1.5, the effects are small. In models 1.1, 1.2, and 1.5 the effect size of every level is close to 1. In Model 1.3, the RR is increased by 1% for backbenchers and 2% for party leaders. This implies that party leaders respond more strongly to media salience, while the likelihood of backbenchers speaking is more strongly influenced by the exogenous shock. However, the effect size of the indirect effect is very small compared to the total treatment effect. The proportion of the indirect effect on the total effect in models 1.1, 1.2, and 1.5 is lower than 1% in absolute terms (see Appendix C for details).

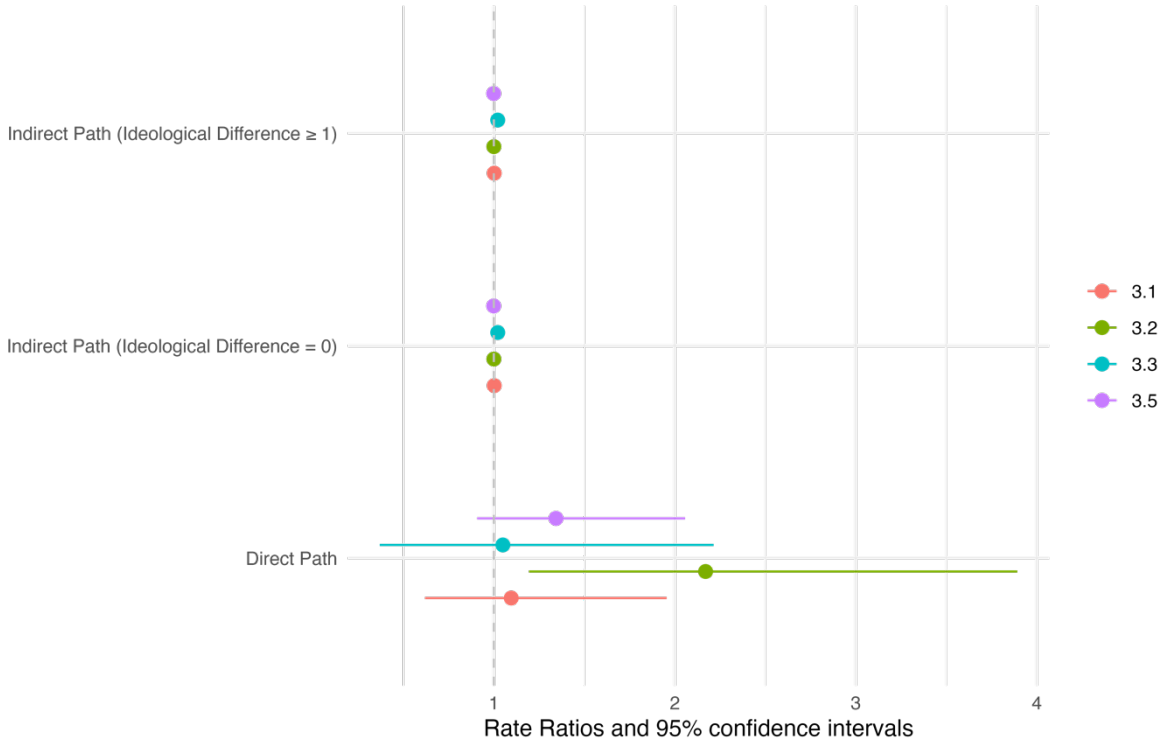
Figure 5 Results of the Mediation Analysis with Respect to Party Leaders and Backbenchers



Note: Estimates are based on generalized fixed effect regression (Poisson). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

The proportion of the total effect that is attributable to the indirect effect in Model 1.3 is 4.61% for party leaders and 7.79% for backbenchers. It is also notably higher than in models 1.1, 1.2 and 1.5, but the standard errors are also higher. Lastly, the indirect effect at the level of backbenchers in Model 1.5 is slightly below 1 so the indirect effect proportion of the total effect is negative. The confidence intervals show that it cannot be ruled out that there is no difference between backbenchers and party leaders. Only in Model 1.5 is the indirect effect of party leaders and backbenchers significantly different. These results reinforce the picture that the treatment mainly influences the outcome variable directly and not via the indirect path. Furthermore, the indirect effect of party leaders and backbenchers is only significant in Model 1.5, while at the same time the estimate is not clearly distinguishable from no effect. For this reason, *H3* finds no support in this analysis and is therefore rejected. This implies that the effect of media as a mediator does not differ between party leaders and backbenchers. The proportion of the exogenous shock that affects the behavior of party leaders and backbenchers is mediated both directly and via the media.

Figure 6 Results of the Mediation Analysis with Respect to the Ideological Differences of MPs



Note: Estimates are based on generalized fixed effects regression (Poisson). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

Figure 6 shows the results of the moderated mediation analysis with levels of ideological difference as moderators at path *b*. The ideological differences are binarized for easier interpretation. The variable takes the value of 1 if the ideological difference is greater than 0. The intuition is that the moderating variable is 1 if the MP ideologically deviates from the party line. As in Table 3, not all models are reported, just models that fulfill the conditions for the mediation analysis. The level of significance is based on the respective bootstrapped confidence intervals. In Model 3.6, the path *a* is insignificant, which results in no mediation. Model 3.4 must be excluded because it does not meet the statistical properties for mediation analysis.

The direct paths of models 3.1, 3.2, 3.3, and 3.5 indicate a positive relationship between the treatment and the number of speeches on a treated topic. In Model 3.2, the treatment increases the RR by a maximum of 117 points, which can be interpreted as MPs being 117% more likely to speak about a treated topic. The effect size decreases to 35% in Model 3.5, 10% in Model 3.1, and only 5% in Model 3.3. The effect of the direct path in models 3.1, 3.3, and 3.5 is not distinguishable from 1 at the 95% confidence level and therefore insignificant. The results imply that the treatment effect strongly affects the outcome variable via the direct path although the effect is insignificant in three out of four models. The indirect effect estimate shows a similarly small coefficient to Table 3. The coefficients for the

indirect path are significant in models 3.1, 3.3 and 3.5. For Model 3.2, I cannot rule out that there is no effect, as the confidence intervals contain the value 1. The effect size in Model 3.3 shows different results for the respective levels of the moderator. If there is no deviation from the party line, the RR to speak about a treated topic is increased by 2%. If there is a deviation from the ideal position of the party, the MP's RR is also increased by 4%. The small effects show that media share only weakly mediates the treatment effect. In the two cases with exogenous shocks, the results show that MPs whose ideological positions are more distant from the party position are not less likely to speak about salient topics. The share of the indirect effect on the total effect is small in models 3.5 and 3.2. In Model 3.1, the share of the indirect effect is 2.4 percent and in Model 3.3 the share is increased to 30.5 percent. However, the difference between the levels of ideological distance is not statistically significant in any model. Ideological distance does not have the assumed negative effect on the probability of taking the floor in the case of strong exogenous shocks on the media agenda. Therefore, *H4* is rejected in this model. The proportion of the exogenous shock that affects the behavior of different levels of ideological distance from the party leader is transmitted both directly and via the media. A sensitivity analysis of *H4* at every level of the moderating variable also does not support *H4* (see Appendix B).

As discussed, the data for the mediation analysis are aggregated so that no individual unit fixed effects models are calculated. As a result, different MP characteristics are pooled together, and confounders are not controlled. The missing controls for confounder might be one reason why the results of the individual level are not robust in the aggregate analysis. For this reason, the results of the aggregate analysis seem to be biased. A possible solution for future research is multilevel mediation analysis.

8 Discussion and Conclusion

In this thesis, I answer the research question of *what influence media attention has on the speaking behavior of politicians in parliament.* I proceed by reviewing the literature on the influence of mass media and media bias on the political and speech behavior of MPs. Based on the literature review, I extend a formal model which incorporates the transmitting function of media on the delegation process of speeches in parliament. Four hypotheses from the formal model are derived and tested with a new dataset in two scenarios. *H1* and *H2* find support in the regression analysis at the individual level, although the patterns are not robust in every model. Especially the models to test *H2* lack significance due to the small number of observations. *H3* and *H4* are tested using a moderating mediation analysis framework with parametric bootstrapping. *H3* and *H4* find no support in the models. The effect of the indirect path is small, and the calculated proportion of the indirect effect compared to the total effect is not robust. The analyses show no significant differences in the

transmitter function of media between different MP characteristics. The results suggest that as media salience increases, party leader become more selective, differentiating based on hierarchical position and ideological alignment with the party line. Specifically, heightened media attention increases the likelihood of party leaders taking the floor in parliament, while MPs who are ideologically more distant from the party leadership are less likely to speak. Regarding *H3* and *H4*, the findings imply that in scenarios involving a distinct exogenous shock, the transmitting effect of media does not differ between party leaders and backbenchers. Media salience plays a secondary role, with MPs primarily responding to the exogenous shock, regardless of their ideological distance from the party leadership.

The theoretical and empirical results have important implications for the understanding of the agenda-setting function of media and the analysis of speech behavior in parliament. I propose a formal delegation model which explains the mechanisms of how the importance of topics influences the party leader's trade-off between party unity and the possibility for MPs to gain experience. This mechanism explains variation in the overarching question of who speaks when and about what. For future research, the formal model can serve as a foundation on the theoretical and empirical analysis of speeches and the impact of media. In the empirical analysis of this thesis, I show that firstly, at the individual level, MP characteristics like party leader or ideological position influence the effect of media salience of newspaper articles on speaking behavior in the German Bundestag. In terms of external validity, I suspect that this effect may also be observable in other media formats, such as television news, as I assume that newspapers are representative of the German media landscape. Secondly, the mediation analysis suggests that the behavioral adaption of MPs is directly related to the treatment and not significantly transmitted by newspaper. This implies that newspapers are important for political agenda setting independently or in the absence of major shocks on the political agenda.

The results need to be interpreted with caution due to several limitations of the theoretical and empirical models. First, the theoretical model lacks a differentiation of media saliency by type of medium and outlet. It is unlikely that parties react the same across every medium and outlet. Future empirical and theoretical research should investigate the different effects of media on different parties. Second, the formal and theoretical model assumes that the choice by party leaders of who will take the floor in a parliamentary debate is random, or at least independent of other speeches. This independence assumption is unlikely to be met, which might bias the results. For example, it seems likely that party leaders balance the choice of speakers between different party wings. Third, including unit fixed effects reduces the number of observations in the individual analysis so that the sample might no longer be representative of the population. Furthermore, the data aggregation for the mediation analysis might be inefficient. A hierarchical data analysis, like a moderated multilevel mediation analysis, might result in more efficient analysis. Moderated multilevel mediation analysis is out of the scope of this thesis due to the necessary computational resources. Further research should

address this issue. Fourth, the combination of a lagged dependent variable and fixed effects might bias the empirical results. Future research should consider more advanced methods to address possible bias. Fifth, due to the research design using two cases and the German Bundestag, the external validity is questionable. Former research has shown that parliamentary behavior and media effects depend on the respective institutional settings of different states. Lastly, the outcome variable is based on a data set containing all speeches in the German Bundestag. Recent statistical articles discuss the differences between design-based and sample-based standard errors. It seems possible that despite estimating the standard errors with bootstrap methods, the standard errors are too large.

In addition to the model and data limitations, the causality of the moderated mediation analysis must be discussed in light of the ignorability assumption. The political information system is too complex and interconnected to control for all possible unobserved confounders. For instance, media salience and speech behavior in parliament are likely confounded by the actions of other governments. This is particularly relevant for topics like energy and defense, which are primarily discussed at the international level. These multilevel structure is likely to confound both the media share and the outcome variable. International news and social media represent additional potential unobserved confounders affecting media share and speech behavior. In this thesis, I operationalize media salience exclusively via german media, without accounting for international reporting. English-speaking outlets from the United States or Great Britain, as well as German-speaking newspapers from Austria or Switzerland, are likely to confound the variables of media salience and speech behavior. The same applies to English- and German-speaking social media. On the other hand, in this paper, I consider Germany as a sub-sample embedded within the international context. Firstly, the exogenous shock was external, and thus not subject to confounding with the treatment. Secondly, shortly after the shocks, media coverage focused heavily on the war and the nuclear accident, suggesting that German reporting was likely aligned with international media at that time. Therefore, German media could serve as a representative sample of international coverage. However, it is important to acknowledge that reporting likely diverged across countries over the observation period. In conclusion, despite these considerations, the causality of the mediation analysis must still be questioned in light of the ignorability assumption.

Future research investigating the effects of mass media should concentrate on comparative research between states. A comparative research design between institutional systems can support the formulated formal model and show the relevance of the institutional systems, which is held constant in this thesis. The simplicity of a single case enabled the thesis to build the foundation for such extensions. Furthermore, future research could focus on the content of the speeches and not only on the topic. Modern embedding models should enable research to investigate individual speeches' ideological positions to test further implications of the formal model. Lastly, the formal model can be

extended to other dynamic political behavior which is controlled by party leaders. This might for example include press statements or social media behavior.

Returning to Habermas (2006), I conclude that mass media indeed has a strong effect on the political sphere. Nevertheless, the political sphere in the case of major exogenous shocks acts mostly independently of the media sphere. In this sense, the fourth estate is not the driving factor behind the selection process of politicians during exogenous shocks to the political agenda.

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Appendix A

A1.1 One-shot deviation

The possible deviation of the backbenchers can be formally modeled as follows:

1. Consider an infinitely repeated Prisoner's Dilemma (PD) with perfect information.
2. Player 1 of the PD is the party leader (*L*)
3. Player 2 of the PD is the selected backbencher to speak (*M*)
4. Consider the following stage game where c > a > b > d

		Backbencher (*M*)	
		C	D
Party Leader (*L*)	A	a,a	d,c
	B	c,d	b,b

5. Consider that PL always plays the strategy grim-trigger: If *M* deviates from cooperating (C), *L* will always play B afterward.
6. *M* has no pre-terminated strategy.
7. Consider any non-terminal history h = (A,C)….(A,C)
8. If *M* keeps playing C, it results in the following terminal history (h, (A,C), (A,C),….
9. If M plays D, it results in the following terminal history (h, (A,D), (B,D),….
10. Comparing the discounted average utilities in the sub-games following h yields:
    The one-shot deviation is not profitable for M if
    $(1-\delta)c + \delta b \leq \delta^t a$

The intuition behind the model: the repeating prisoner's dilemma represents the decisions of the party leadership and a backbencher of the same party on who speaks on any issue in parliament and corresponding punishments. The strategies for *L* and *M* are not symmetrical. (A,C) represents a scenario where *M* makes a speech according to party rules. In the sense of a PD, one speaks of cooperation. (B,C) represents a situation in which the party leadership does not delegate the speech to *M* and *M* does not make a speech and does not receive party support. In a PD, this case would correspond to deviation from the symmetric strategy response. Due to the hierarchical constellation between *L* and *M*, strategy B can be understood, as exclusion from the parliamentary group and/or party. (A,D) represents a situation in which *M* deceives the party and does not abide by the party rules. In a PD, this cheating is the symmetrical response to (B,C). The last case (B,D) represents a situation that is unfortunate for both parties. This situation could occur, for example, if the party would like to

let *M* speak, but does not trust them or wants to punish them. It is not necessary for the game that the benefit is the same for both players but serves as a simplified representation. The benefit for L likely depends on the number of *M*.

L plays grim-trigger to enforce the party rules against *M* by threatening strategy B. *M*'s strategy does not matter for the model. In the example, it is assumed that *M* wants to maximize its utility and reacts rationally in both h. The equilibrium shows that *M*'s decision to play C depends on the dependence of the party and the utility from a speech deviating from the party rules and the discount factor δ. For this paper, it is assumed that $1-\delta$ corresponds to the probability of being allowed to make another speech in parliament, which includes a re-election. According to Downs (1957), MPs are primarily interested in their re-election, for which the support of the parties in Germany is very important. For this reason, a very low discount factor is assumed.

A1.2 Equilibrium

$$U_M = -\lambda_M \times w_K\left(x_{sk}^i - x_{Mk}\right)^2 - (1-\lambda_M) \times w_K\left(x_{sk}^i - x_{Lk}\right)^2$$

$$x_{SK}^* = \arg\max_{x_{KS}} U_M$$

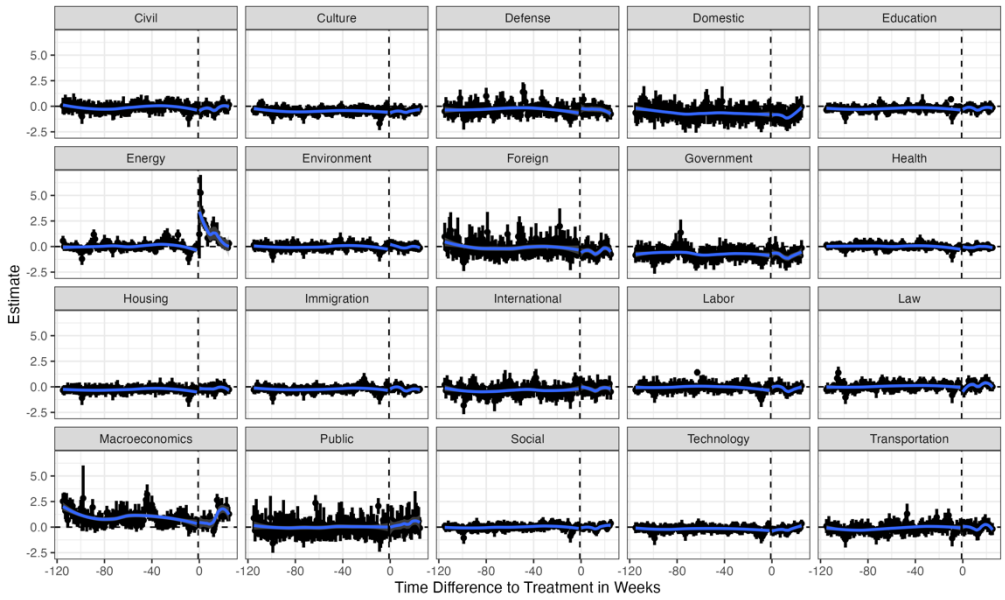
$$\text{FOC: } \frac{\partial U_M}{\partial U_{SK}} = -2\lambda_M w_K \times (x_{SK} - x_{MK}) - 2(1-\lambda_M) \times w_K x_{SK} \stackrel{!}{=} 0$$

$$\Leftrightarrow -2w_K \times (x_{SK} - \lambda_M x_{MK}) = 0$$

$$\Leftrightarrow x_{SK}^* = \lambda_M x_{MK}.$$

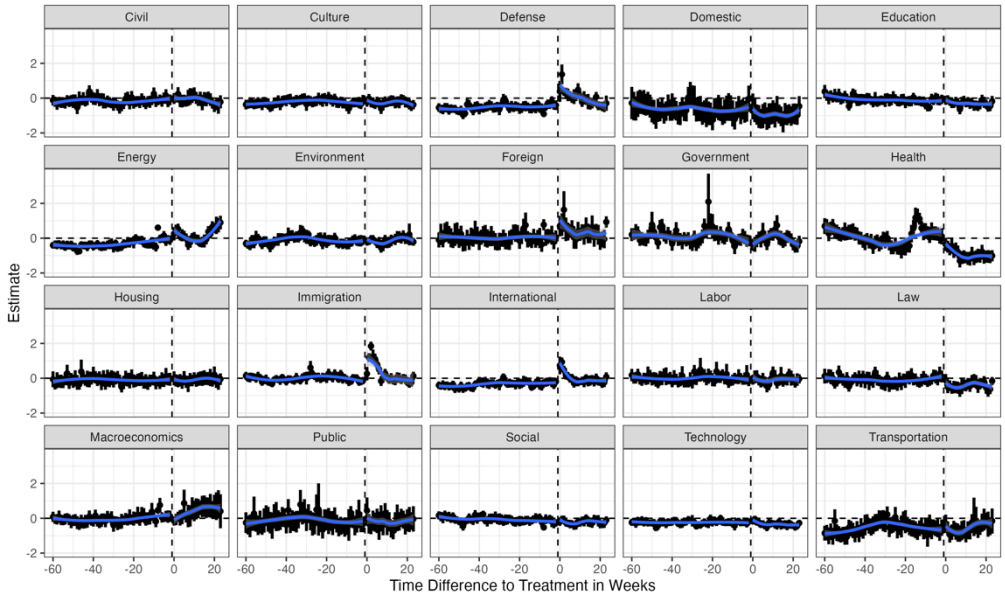
Appendix B

Figure B.1: Event Study: Response of Media Salience on the Reactor Catatrophe in Fukushima by CAP topic



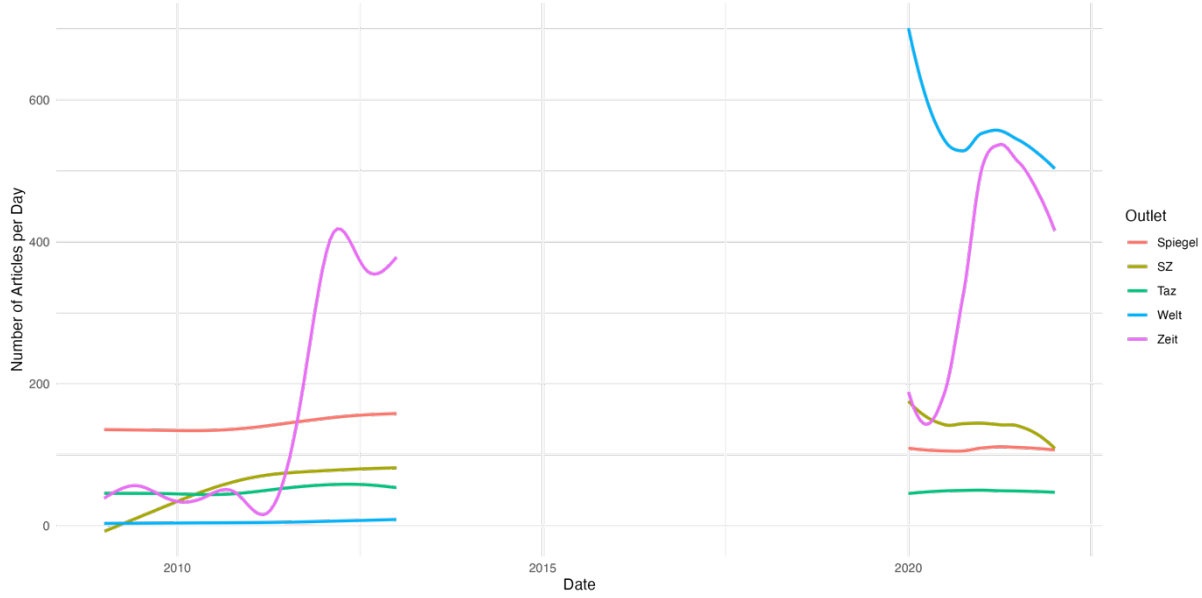
Note: The coefficients are based on a linear regression (OLS) with robust standard errors. The outcome variable are the z-scores of the share of the following topics: Energy.

Figure B.2: Event Study: Response of Media Salience on the Russian Invasion in Ukraine by CAP topic



Note: The coefficients are based on a linear regression (OLS) with robust standard errors. The outcome variable are the z-scores of the share of the following topics: Defense, International, Foreign and Immigration.

Figure B.3: Number of Newspaper Articles over Time by Outlet



Note: The number of articles is smoothed over time by outlet.

Table 1: Description of Variables

Variable type: numeric								
				Percentile				
Variable	Missing Values	Mean	Standard Deviation	0	25	50	75	100
Number of Media Articles	0	31.12	51.57	0.00	3.00	11.00	34.00	952.00
Number of Media Articles (t-1)	1,550	31.28	52.00	0.00	4.00	12.00	33.00	952.00
Exogenous Shock	0	0.02	0.16	0.00	0.00	0.00	0.00	1.00
Post Treatment Period	0	0.21	0.41	0.00	0.00	0.00	0.00	1.00
Exogenous Shock	0	0.03	0.18	0.00	0.00	0.00	0.00	1.00
Government	0	0.48	0.50	0.00	0.00	0.00	1.00	1.00
Post Treatment Period	0	0.23	0.42	0.00	0.00	0.00	0.00	1.00
Media Salience (Treated)	0	0.05	0.05	0.00	0.01	0.02	0.08	0.24
Topic of Legislative Speech (t-1)	1,726	0.09	0.28	0.00	0.00	0.00	0.00	1.00
Ideological Distance	45,465	1.33	1.58	0.00	0.00	1.00	2.00	9.00
Parliamentary Session	0	306.56	326.44	1.00	65.00	118.00	750.00	818.00

Variable type: factor				
Variable	Missing Values	Min	Max	Number Levels
Topic (CAP)	0	3	14	21
Politician ID	0	8	8	1478

Variable type: date					
Variable	Missing Values	Min	Max	Median	Number Unique Dates
Date (Media Articles)	0	2009-01-01	2022-07-31	2011-02-14	1550
Date (Parliamentary Sessions)	0	2009-01-14	2022-07-07	2011-01-19	241

Figure 4: Correlation Matrix of CAP categories

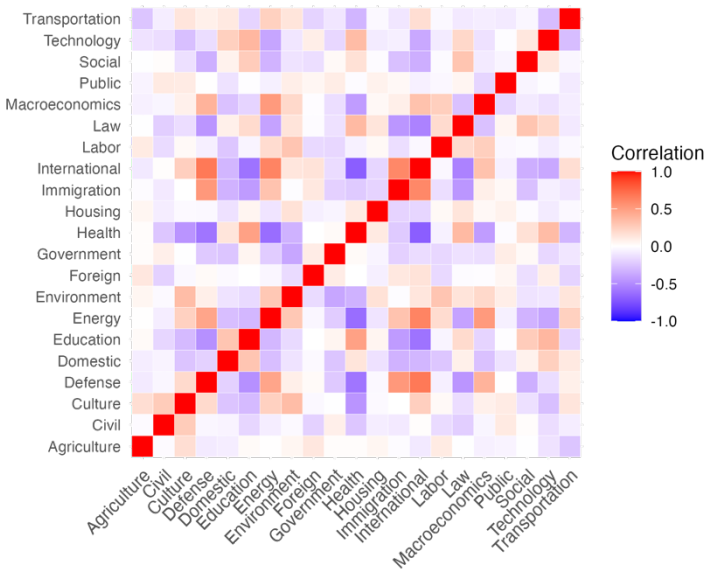


Figure B.5: Paywall Bias by CAP Category and Outlet

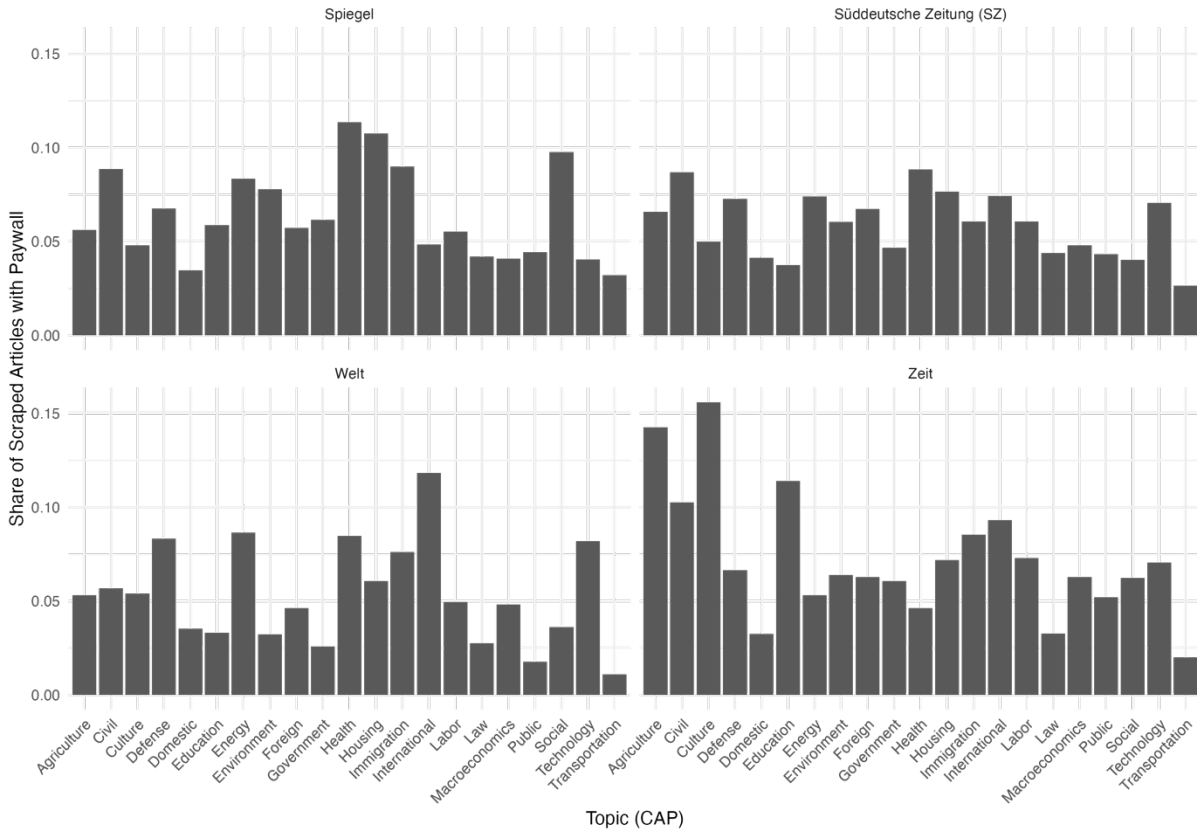
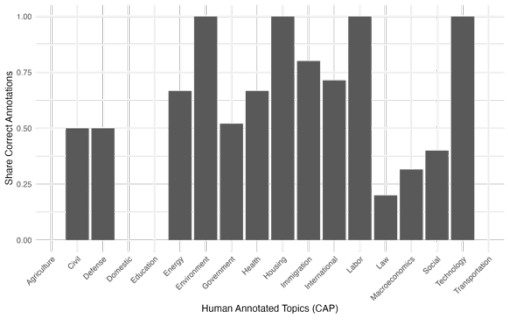
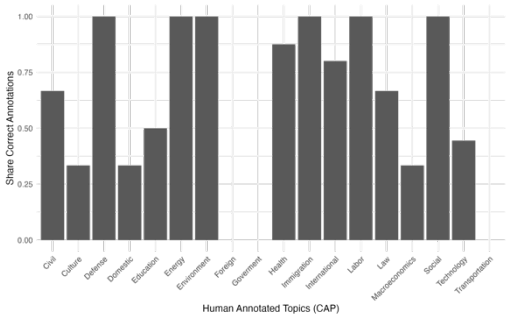
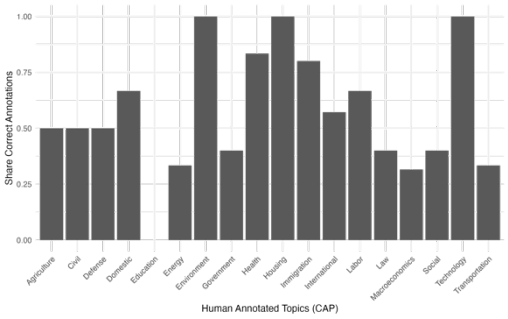
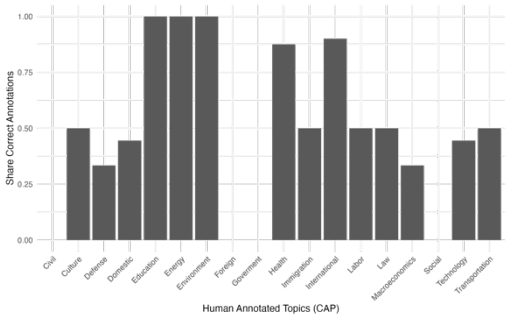
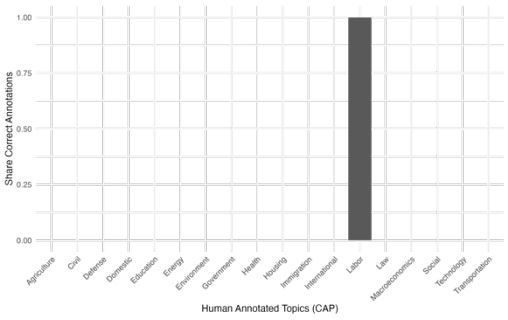
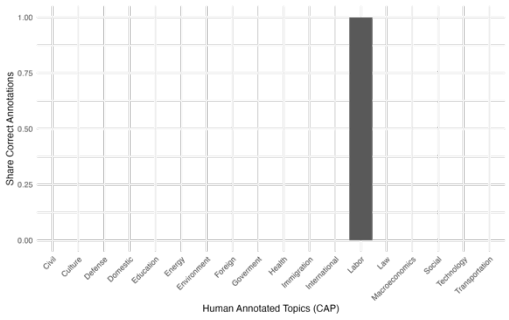


Table B.2 Operationalization Party Leadership

Variable	Operationalization
Party Leader	Fraktionsvorsitzender, Parlamentarischer Geschäftsführer, Parteivorsitzender, Stellvertretender Parlamentarischer Geschäftsführer, Generalsekretär, Bundesgeschäftsführer, Präsident des Deutschen Bundestags, Stellvertretender Fraktionsvorsitzender, Präsidiumsmitglied, Stellvertretender Generalsekretär, Stellvertretender Parteivorsitzender, Vizepräsident des Deutschen Bundestags
Party Leader (2)	Fraktionsvorsitzender, Parlamentarischer Geschäftsführer, Parteivorsitzender, Generalsekretär, Bundesgeschäftsführer, Präsident des Deutschen Bundestags, Vizepräsident des Deutschen Bundestags
Party Leader (3)	Arbeitsgruppenvorsitzender, Stellvertretender Parteivorsitzender, Präsidiumsmitglied, Parlamentarischer Geschäftsführer, Stellvertretender

	Fraktionsvorsitzender, Ausschuss Vorsitzender, Erweiterter Vorstand Parteivorsitzender, Bundesgeschäftsführer, Fraktionsvorsitzender, Präsident des Deutschen Bundestags, Fachpolitischer Sprecher, Generalsekretär, Stellvertretende Parteivorsitzender, Justiziar, Untergruppenvorsitzende, Bundesschatzmeister, Ehrenvorsitzender, Vizepräsident des Deutschen Bundestags, Stellvertretender Parlamentarischer Geschäftsführer, Stellvertretender Generalsekretär

Figure B.6 Comparison of LLMs

Model	Speeches	Media
Klamm et al (2022)		
Sylvester et al. (2022)		
Sebök et al. (2024)		

Note: The analysis is run over 100 randomly sampled speeches and media articles. The LLM is tested against one human annotator.

Table B.3 Comparison of the Accuracy of LLMs against a Human Annotator

	Accuracy	
Model	**Speeches**	**Media**
Klamm et al (2022)	47 %	51%
Sylvester et al. (2022)	47%	48%
Sebök et al. (2024)	3%	2%

Appendix C

Table C.1: Reporting Differences between Outlets by Exogenous Shock (A Path)

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock	0.93***	0.93***	0.99***	0.99***	0.94***	0.95***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
SZ (ref. = Spiegel)		-0.09***		0.00		-0.06***
		(0.00)		(0.00)		(0.00)
Taz (ref. = Spiegel)		-0.01***		0.01***		0.01**
		(0.00)		(0.00)		(0.00)
Welt (ref. = Spiegel)		-0.10***		-0.00		-0.07***
		(0.00)		(0.00)		(0.00)
Zeit (ref. = Spiegel)		-0.12***		0.00***		-0.08***
		(0.00)		(0.00)		(0.00)
Sample size	754575	754575	257588	237429	1012163	992004
R2		0.36		0.47		0.39
Adjusted R2		0.36		0.43		0.39
Log Likelihood	-186279.27		-15192.39		-210217.18	
Time fixed effects		X		X		X

* p < 0.05, ** p < 0.01, *** p < 0.001

A Path: Effect of treatment on media reporting (individual). Reported are average marginal effects (AME) of a Poisson-Models with fixed effects. Robust standard errors clustered in parentheses.

Table C.2: B Path: Ideological Distance by Categories Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Exogenous Shock		15.62***		37.79***		80.13***
		(1.62)		(0.47)		(0.40)
Media Salience (Treated)	11.38	-4.86	12.38*	-38.99*	16.07***	4.51
	(9.73)	(17.18)	(5.13)	(19.80)	(3.05)	(6.60)
Topic of Legislative Speech (t-1)	3.52***	3.56***	3.76***	3.91***	3.98***	4.23***
	(0.54)	(0.57)	(0.52)	(0.53)	(0.40)	(0.40)
Ideological Distance (1)	0.11	3.31			-0.20	-0.39
	(1.34)	(2.12)			(0.55)	(0.69)
Ideological Distance (2)	0.64	2.16			-0.24	-0.67
	(1.26)	(2.00)			(0.52)	(0.64)
Media Salience x Ideological Distance (1)	-0.50	-33.83	-6.28	28.71	-2.33	-2.47
	(11.09)	(20.98)	(5.95)	(21.03)	(4.47)	(8.35)
Media Salience x Ideological Distance (2)	-6.22	-19.91	-1.69	41.20	-3.98	0.18
	(10.84)	(19.65)	(8.32)	(21.16)	(4.54)	(7.97)
Media Salience x Ideological Distance (3)	17.24	28.20			18.76	28.11
	(19.41)	(24.87)			(18.64)	(20.38)
Media Salience x Ideological Distance (4)	-1421.15***	-1452.33***	-7.82	28.93	-16.84***	-17.01**
	(27.91)	(29.76)	(6.21)	(19.84)	(3.93)	(6.58)
Media Salience x Ideological Distance (5)	2.46	-24.01			8.84	-8.51
	(11.97)	(23.53)			(12.62)	(19.08)
Media Salience x Ideological Distance (6)	32.78	1141.39***			29.48	1115.52***
	(21.22)	(17.18)			(21.72)	(6.60)
Media Salience x Ideological Distance (7)	-14.96		0.91	30.99	-19.94***	-21.20**
	(9.71)		(5.09)	(19.82)	(3.05)	(6.58)
Media Salience x Ideological Distance (9)			-72.82***	-21.43	-82.67***	-71.06***
			(5.14)	(19.82)	(3.05)	(6.60)
Sample size	1388	1388	2073	2073	4640	4640
R2	0.53	0.71	0.43	0.55	0.56	0.68
Adjusted R2	0.43	0.61	0.35	0.47	0.49	0.61
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H2): Effect of media reporting on speech behavior. Reported are log odds of a logit model with fixed effects.

Robust standard errors clustered in parentheses.

Table C.3: B Path: Party Leader (2) Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock		39.31***		37.36***		36.29***
		(0.15)		(0.29)		(0.06)
Party Leader (2)	0.09	0.16	0.27	0.09	-0.09	-0.20
	(0.57)	(0.86)	(0.71)	(0.68)	(0.44)	(0.49)
Media Salience (Treated)	7.26***	-29.87***	7.41***	-26.68***	11.63***	-1.20
	(1.51)	(3.36)	(1.87)	(3.43)	(1.24)	(1.74)
Topic of Legislative Speech (t-1)	1.70***	1.68***	2.18***	2.15***	2.21***	2.32***
	(0.10)	(0.12)	(0.23)	(0.25)	(0.12)	(0.14)
Media Salience x Party Leader (2)	4.65	7.16	2.15	10.62	3.45	6.79
	(3.42)	(7.69)	(2.70)	(6.92)	(2.21)	(3.72)
Sample size	11981	11981	13077	13077	31248	31248
R2	0.32	0.58	0.32	0.45	0.36	0.53
Adjusted R2	0.25	0.51	0.28	0.41	0.31	0.48
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H1): Effect of media reporting on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

Table C.4: B Path: Party Leader (3) Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock		39.36***		37.10***		36.26***
		(0.20)		(0.23)		(0.06)
Party Leader (3)	0.53	0.57	0.16	0.20	-0.07	-0.02
	(0.75)	(0.91)	(0.76)	(0.73)	(0.57)	(0.61)
Media Salience (Treated)	6.43**	-32.30***	6.39**	-22.36***	11.25***	-0.13
	(2.13)	(5.39)	(2.29)	(4.11)	(1.72)	(2.53)
Topic of Legislative Speech (t-1)	1.70***	1.68***	2.18***	2.15***	2.21***	2.33***
	(0.10)	(0.12)	(0.23)	(0.25)	(0.12)	(0.14)
Media Salience x Party Leader (3)	3.22	6.56	2.87	-2.29	2.38	1.11
	(2.76)	(6.52)	(2.85)	(6.57)	(2.11)	(3.31)
Sample size	11981	11981	13077	13077	31248	31248
R2	0.32	0.58	0.32	0.45	0.36	0.53
Adjusted R2	0.25	0.51	0.28	0.41	0.31	0.48
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H1): Effect of media reporting on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

Table C.5: C Path: Party Leader Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock	74.04***	73.43***	56.92***	56.22***	56.92***	56.22***
	(0.26)	(0.16)	(0.13)	(0.11)	(0.13)	(0.11)
Party Leader	1.80	1.83*	-1.23	-1.05	-1.23	-1.05
	(0.95)	(0.87)	(0.96)	(0.79)	(0.96)	(0.79)
Topic of Legislative Speech (t-1)		1.73***		1.82***		1.82***
		(0.13)		(0.25)		(0.25)
Exogenous Shock x Party Leader	-1.57***	-1.78***	-3.41***	-3.29***	-3.41***	-3.29***
	(0.19)	(0.16)	(0.25)	(0.24)	(0.25)	(0.24)
Sample size	12719	11915	10884	10648	10884	10648
R2	0.63	0.64	0.47	0.51	0.47	0.51
Adjusted R2	0.54	0.56	0.41	0.45	0.41	0.45
Time fixed effects	X	X	X	X	X	X
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H1): Effect of treatment on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

Table C.6: C Path: Ideological Distance Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock	72.70***	65.28***	57.10***	53.05***	67.36***	64.10***
	(0.82)	(0.95)	(0.73)	(0.72)	(0.60)	(0.75)
Topic of Legislative Speech (t-1)		4.01***		3.66***		4.15***
		(0.66)		(0.77)		(0.50)
Ideological Distance	-0.00	0.20			-0.00	-0.25
	(0.00)	(0.26)			(0.00)	(0.29)
Exogenous Shock x Ideological Distance	0.44**	0.21	-0.32	-0.04	0.59***	0.25*
	(0.14)	(0.13)	(0.27)	(0.32)	(0.11)	(0.11)
Sample size	1295	1261	1097	1048	2892	2795
R2	0.62	0.76	0.47	0.61	0.57	0.72
Adjusted R2	0.44	0.57	0.25	0.39	0.40	0.55
Time fixed effects	X	X	X	X	X	X
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H1): Effect of treatment on speech behavior. Reported are log odds of a logit model with fixed effects. Robust standard errors clustered in parentheses.

Table C.7: C Path: Party Leader (2) Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock	74.07***	73.47***	56.89***	56.16***	56.89***	56.16***
	(0.25)	(0.17)	(0.14)	(0.11)	(0.14)	(0.11)
Party Leader (2)	1.25	1.33	-1.13	-0.98	-1.13	-0.98
	(0.74)	(0.71)	(0.91)	(0.75)	(0.91)	(0.75)
Topic of Legislative Speech (t-1)		1.73***		1.82***		1.82***
		(0.13)		(0.25)		(0.25)
Exogenous Shock x Party Leader (2)	-1.64***	-1.86***	-3.28***	-3.11***	-3.28***	-3.11***
	(0.21)	(0.19)	(0.23)	(0.23)	(0.23)	(0.23)
Sample size	12719	11915	10884	10648	10884	10648
R2	0.63	0.64	0.47	0.51	0.47	0.51
Adjusted R2	0.54	0.56	0.41	0.45	0.41	0.45
Time fixed effects	X	X	X	X	X	X
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H1): Effect of treatment on speech behavior. Reported are log odds of a logit model with fixed effects.
Robust standard errors clustered in parentheses.

Table C.8: C Path: Party Leader (3) Disaggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Exogenous Shock	74.31***	73.78***	57.29***	56.49***	57.29***	56.49***
	(0.24)	(0.16)	(0.15)	(0.13)	(0.15)	(0.13)
Party Leader (3)	1.73	1.67	-1.23	-1.05	-1.23	-1.05
	(1.07)	(0.99)	(0.96)	(0.79)	(0.96)	(0.79)
Topic of Legislative Speech (t-1)		1.72***		1.82***		1.82***
		(0.13)		(0.25)		(0.25)
Exogenous Shock x Party Leader (3)	-1.05***	-1.30***	-2.22***	-1.91***	-2.22***	-1.91***
	(0.08)	(0.08)	(0.17)	(0.17)	(0.17)	(0.17)
Sample size	12719	11915	10884	10648	10884	10648
R2	0.63	0.64	0.47	0.51	0.47	0.51
Adjusted R2	0.54	0.56	0.41	0.45	0.41	0.45
Time fixed effects	X	X	X	X	X	X
Unit fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H1): Effect of treatment on speech behavior. Reported are log odds of a logit model with fixed effects.
Robust standard errors clustered in parentheses.

Table C.9: A Path: Party Leader Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Number of Media Articles (t-1)	0.00**	0.00	0.01***	0.00	0.01***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.41***	0.59***	1.73***	1.63***	0.60**	0.17
	(0.10)	(0.11)	(0.01)	(0.04)	(0.20)	(0.23)
Sample size	6800	6800	12448	12448	19248	19248
R2	0.87	0.88	0.67	0.75	0.63	0.87
Adjusted R2	0.87	0.88	0.67	0.75	0.63	0.87
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

A Path (H3): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.10: A Path: Ideological Distance Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Number of Media Articles (t-1)	0.00**	0.00	0.01***	0.00	0.01***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.41***	0.59***	1.73***	1.63***	0.59**	0.19
	(0.10)	(0.11)	(0.01)	(0.04)	(0.19)	(0.22)
Sample size	34000	34000	56016	56016	90016	90016
R2	0.87	0.88	0.67	0.75	0.64	0.87
Adjusted R2	0.87	0.88	0.67	0.75	0.64	0.87
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

A Path (H4): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.11: B Path: Party Leader Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Number of Media Articles	0.01***	0.00*	0.01**	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Speeches (t-1)	0.00	-0.00	-0.01**	-0.00*	-0.01**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.27	0.41*	0.26***	0.37***	0.37***	0.53***
	(0.15)	(0.18)	(0.05)	(0.07)	(0.05)	(0.08)
Government	-0.27***	-0.27***	0.02	0.03	-0.08***	-0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Party Leader	-1.73***	-1.74***	-1.26***	-1.24***	-1.18***	-1.15***
	(0.12)	(0.12)	(0.09)	(0.10)	(0.09)	(0.09)
Number of Media Articles x Party Leader	0.00	0.00	0.01	0.01	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Sample size	7056	7056	13020	13020	20076	20076
R2	0.46	0.52	0.37	0.43	0.38	0.45
Adjusted R2	0.46	0.52	0.37	0.43	0.38	0.45
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H3): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.12: B Path: Ideological Distance by Categories Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Number of Media Articles	0.01***	0.00	0.01*	0.00	-0.00***	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Speeches (t-1)	0.06***	0.02*	-0.01	-0.03	0.00	-0.01
	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Exogenous Shock	0.04	0.78*	0.32***	0.24**	0.18	0.68***
	(0.29)	(0.32)	(0.06)	(0.08)	(0.19)	(0.19)
Government	0.08	0.09	0.28***	0.29***	0.23***	0.23***
	(0.10)	(0.10)	(0.06)	(0.06)	(0.06)	(0.06)
Ideological Distance (1)	0.65***	0.65***	0.13	0.11	0.26**	0.26***
	(0.18)	(0.19)	(0.11)	(0.12)	(0.08)	(0.08)
Ideological Distance (2)	-0.37	-0.37	-0.71***	-0.71***	-0.73***	-0.73***
	(0.22)	(0.23)	(0.17)	(0.18)	(0.12)	(0.12)
Ideological Distance (3)	-1.99***	-2.00***	-2.45***	-2.49***	-2.29***	-2.29***
	(0.35)	(0.36)	(0.30)	(0.32)	(0.22)	(0.21)
Ideological Distance (4)	-2.51***	-2.52***	-2.71***	-2.71***	-2.77***	-2.77***
	(0.35)	(0.35)	(0.43)	(0.45)	(0.26)	(0.26)
Ideological Distance (5)	-1.80***	-1.81***	-2.89***	-2.90***	-2.82***	-2.80***
	(0.30)	(0.31)	(0.29)	(0.30)	(0.23)	(0.24)
Ideological Distance (6)	-1.85***	-1.85***	-2.65***	-2.62***	-2.87***	-2.87***
	(0.29)	(0.29)	(0.42)	(0.42)	(0.40)	(0.40)
Ideological Distance (7)	-1.48**	-1.48**	-3.41***	-3.36***	-3.41***	-3.41***
	(0.53)	(0.52)	(0.48)	(0.49)	(0.46)	(0.47)
Ideological Distance (8)	-4.62***	-4.63***			-5.32***	-4.94***
	(0.61)	(0.62)			(0.56)	(0.56)
Ideological Distance (9)	-3.74***	-3.74***	-3.56***	-3.56***	-3.61***	-3.62***
	(0.83)	(0.84)	(0.43)	(0.46)	(0.35)	(0.35)
Number of Media Articles x Ideological Distance (1)	-0.00	-0.00	0.00	0.01	0.00*	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (2)	0.00	0.00	-0.00	-0.00	0.00*	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (3)	0.00	0.00	0.01	0.01	0.00***	0.00***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (4)	0.00	0.00	-0.00	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (5)	0.00**	0.00**	0.00	0.00	0.01***	0.01***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (6)	-0.00	-0.00	-0.02	-0.02	0.00	0.00
	(0.00)	(0.00)	(0.02)	(0.02)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (7)	-0.01**	-0.01**	-0.04**	-0.04**	-0.00	-0.00
	(0.00)	(0.00)	(0.01)	(0.02)	(0.00)	(0.00)
Number of Media Articles x Ideological Distance (8)	0.00	0.00			0.00*	0.00
	(0.00)	(0.00)			(0.00)	(0.00)
Number of Media Articles x Ideological Distance (9)	-0.00	-0.00	-0.00	-0.01	-0.00	-0.00
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
Sample size	35280	34020	58590	57834	93870	91854
R2	0.28	0.34	0.34	0.39	0.32	0.37
Adjusted R2	0.28	0.32	0.34	0.38	0.32	0.36
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H4): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.13: B Path: Ideological Distance Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Number of Media Articles	0.01***	0.00	0.01***	0.00	-0.00**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.09	0.77*	0.05	-0.02	0.30	0.71**
	(0.32)	(0.35)	(0.06)	(0.09)	(0.20)	(0.23)
Government	0.00	0.01	0.06	0.06	0.05	0.05
	(0.11)	(0.11)	(0.08)	(0.08)	(0.08)	(0.08)
Ideological Distance	-18.39***	-18.33***	-18.81***	-18.66***	-19.08***	-18.98***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Number of Media Articles x Ideological Distance	-0.01***	-0.01***	-0.04***	-0.04***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Speeches (t-1)	0.04**	-0.02	-0.00	-0.01	0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Sample size	7056	6804	13020	12852	20076	19656
R2	0.40	0.48	0.43	0.49	0.41	0.49
Adjusted R2	0.39	0.45	0.43	0.48	0.41	0.47
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H4): Aggregated Level, Binarized.

Robust standard errors clustered in parentheses.

Table C.14: B Path: Party Leader (2) Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Number of Media Articles	0.01***	0.00*	0.01*	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Speeches (t-1)	-0.00	-0.00	-0.01***	-0.00*	-0.01**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.27	0.41*	0.26***	0.37***	0.38***	0.53***
	(0.15)	(0.18)	(0.05)	(0.07)	(0.05)	(0.08)
Government	-0.27***	-0.27***	0.02	0.03	-0.08***	-0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Party Leader (2)	-1.85***	-1.86***	-1.36***	-1.34***	-1.25***	-1.22***
	(0.14)	(0.14)	(0.10)	(0.11)	(0.10)	(0.10)
Number of Media Articles x Party Leader (2)	0.00	-0.00	0.01	0.01	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Sample size	7056	7056	13020	13020	20076	20076
R2	0.48	0.54	0.37	0.44	0.39	0.46
Adjusted R2	0.48	0.53	0.37	0.43	0.39	0.45
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H3): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.15: B Path: Party Leader (3) Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Number of Media Articles	0.00***	0.00*	0.01**	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Speeches (t-1)	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.27	0.41*	0.23***	0.37***	0.36***	0.53***
	(0.15)	(0.18)	(0.05)	(0.07)	(0.05)	(0.08)
Government	-0.27***	-0.27***	0.03	0.03	-0.07**	-0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Party Leader (3)	-0.36***	-0.36***	-0.29***	-0.29***	-0.25***	-0.25***
	(0.07)	(0.07)	(0.06)	(0.07)	(0.06)	(0.06)
Number of Media Articles x Party Leader (3)	0.00**	0.00**	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Sample size	7056	7056	13020	13020	20076	20076
R2	0.36	0.43	0.32	0.39	0.32	0.40
Adjusted R2	0.36	0.42	0.32	0.39	0.32	0.39
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

B Path (H3): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.16: C Path: Party Leader Aggregated

	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	1.1	1.2	1.3	1.4	1.5	1.6
Number of Speeches (t-1)	0.04***	0.04***	0.01*	0.01**	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exogenous Shock	0.36**	0.43***	0.39***	0.39***	0.33***	0.45***
	(0.12)	(0.13)	(0.00)	(0.06)	(0.05)	(0.06)
Government	-0.21***	-0.21***	0.03	0.02	-0.06**	-0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Sample size	7056	7056	13020	13020	20076	20076
R2	0.33	0.40	0.29	0.36	0.29	0.36
Adjusted R2	0.33	0.39	0.29	0.36	0.29	0.36
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H3): Poisson regression at the Aggregated Level.

Robust standard errors clustered in parentheses.

Table C.17: C Path: Ideological Distnace Aggregated

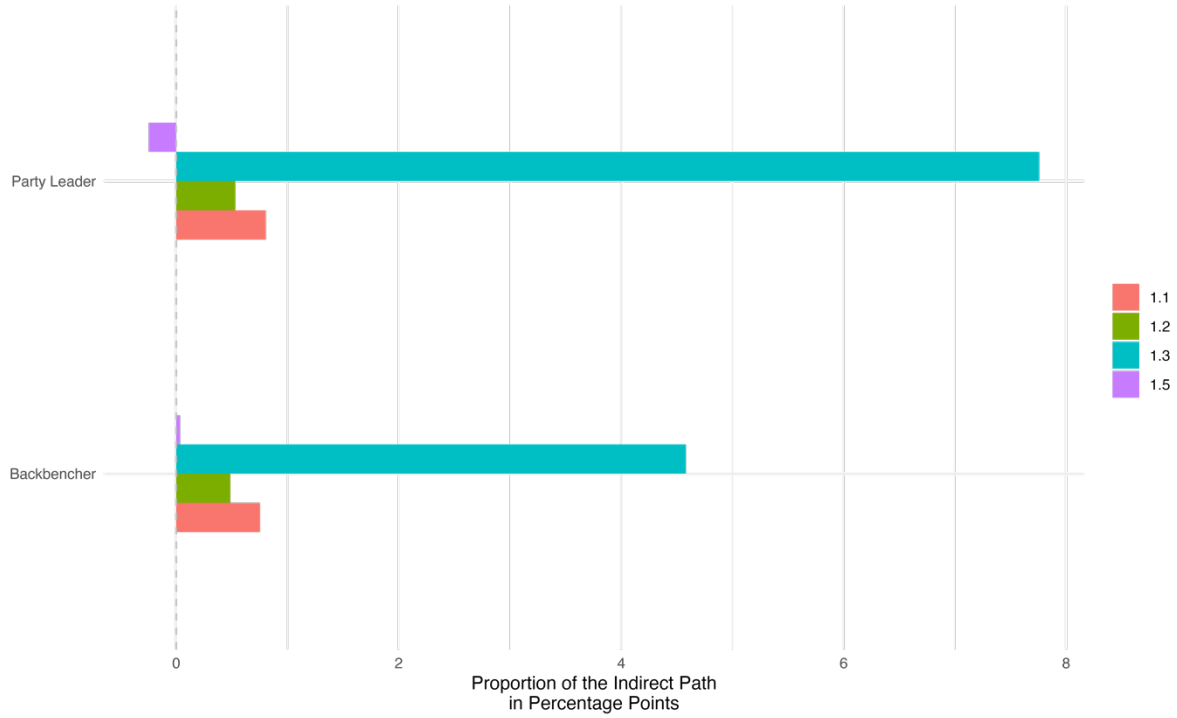
	Ukraine War		Fukushima Nuclear Catastrophe		Pooled	
	2.1	2.2	2.3	2.4	2.5	2.6
Number of Speeches (t-1)	0.17***	0.17***	0.12***	0.14***	0.14***	0.14***
	(0.03)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Exogenous Shock	0.20	0.81**	0.50***	0.30***	0.02	0.64***
	(0.21)	(0.25)	(0.00)	(0.05)	(0.20)	(0.17)
Government	0.08	0.08	0.26***	0.25***	0.21***	0.21***
	(0.10)	(0.10)	(0.07)	(0.07)	(0.06)	(0.06)
Sample size	35280	34020	58590	57834	93870	91854
R2	0.12	0.18	0.15	0.19	0.14	0.19
Adjusted R2	0.12	0.16	0.15	0.19	0.14	0.18
Time fixed effects		X		X		X
Topic fixed effects	X	X	X	X	X	X

* p < 0.05, ** p < 0.01, *** p < 0.001

C Path (H4): Poisson regression at the Aggregated Level.

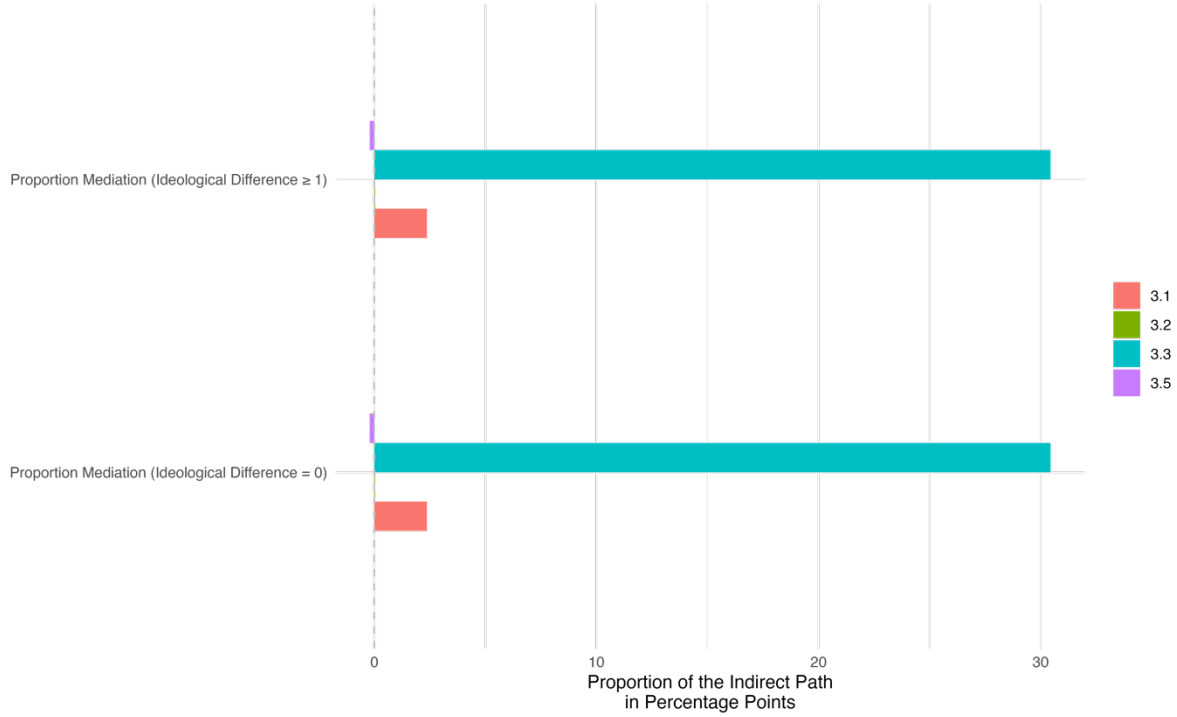
Robust standard errors clustered in parentheses.

Figure C.1 Results of the Medaition Analysis with Respect to Party Leaders and Backbenchers



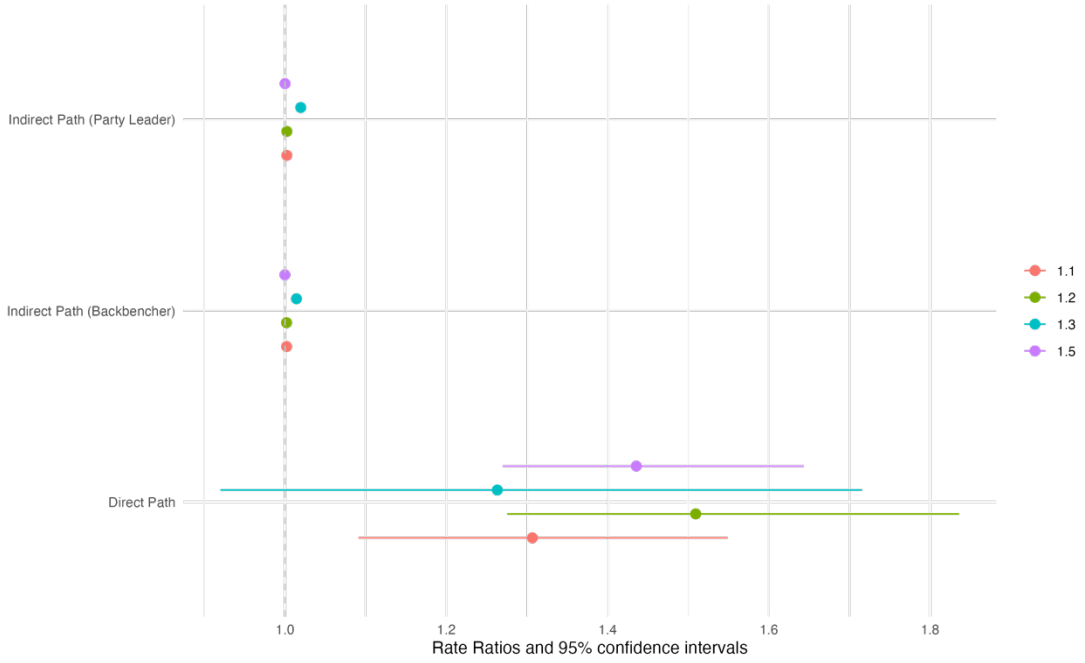
Note: Estimates are based on generalized fixed effect regression (Poisson).

Figure C.2 Results of the Mediation Analysis with Respect to the Ideological Differences Between MPs



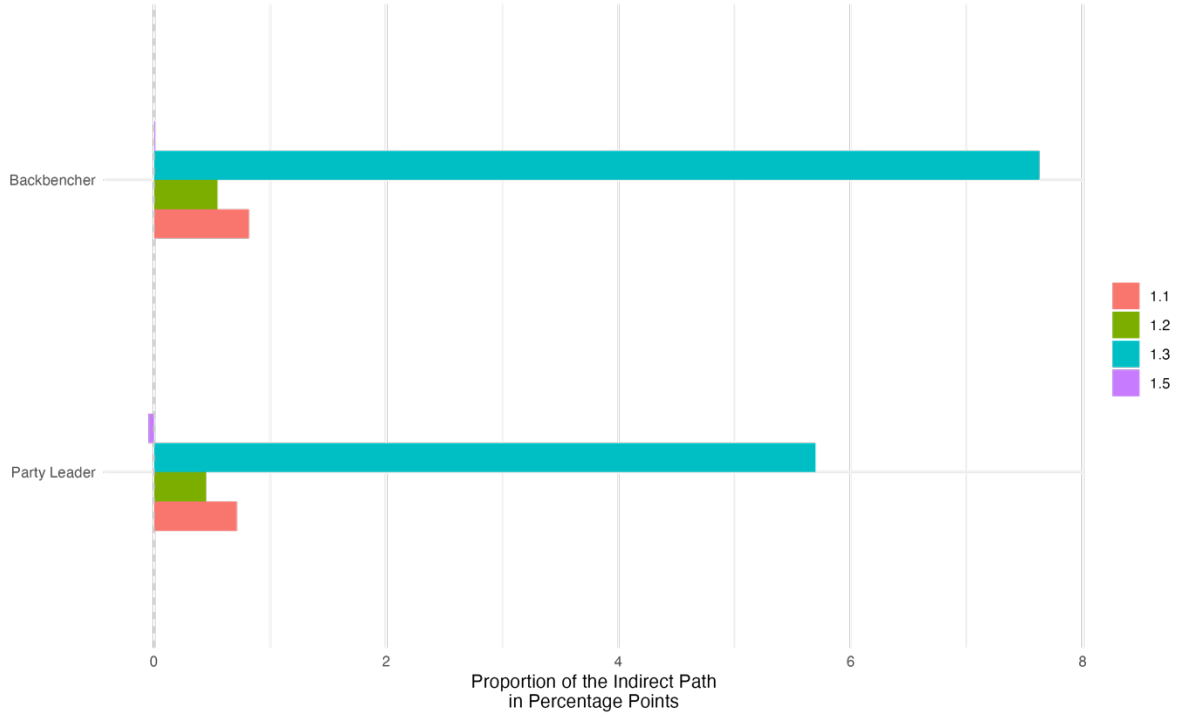
Note: Estimates are based on generalized fixed effect regression (Poisson).

Figure C.3 Mediation Estimates Party Leader (2)



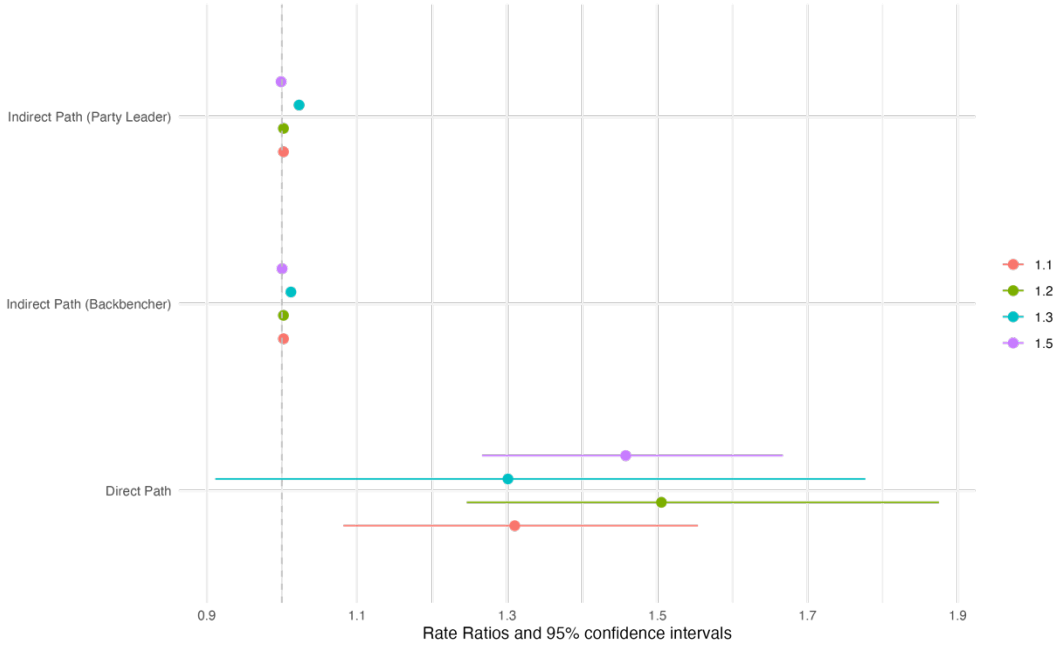
Note: Estimates are based on generalized fixed effect regression (Poisson). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

Figure C.4 Share of Mediation Party Leader (2)



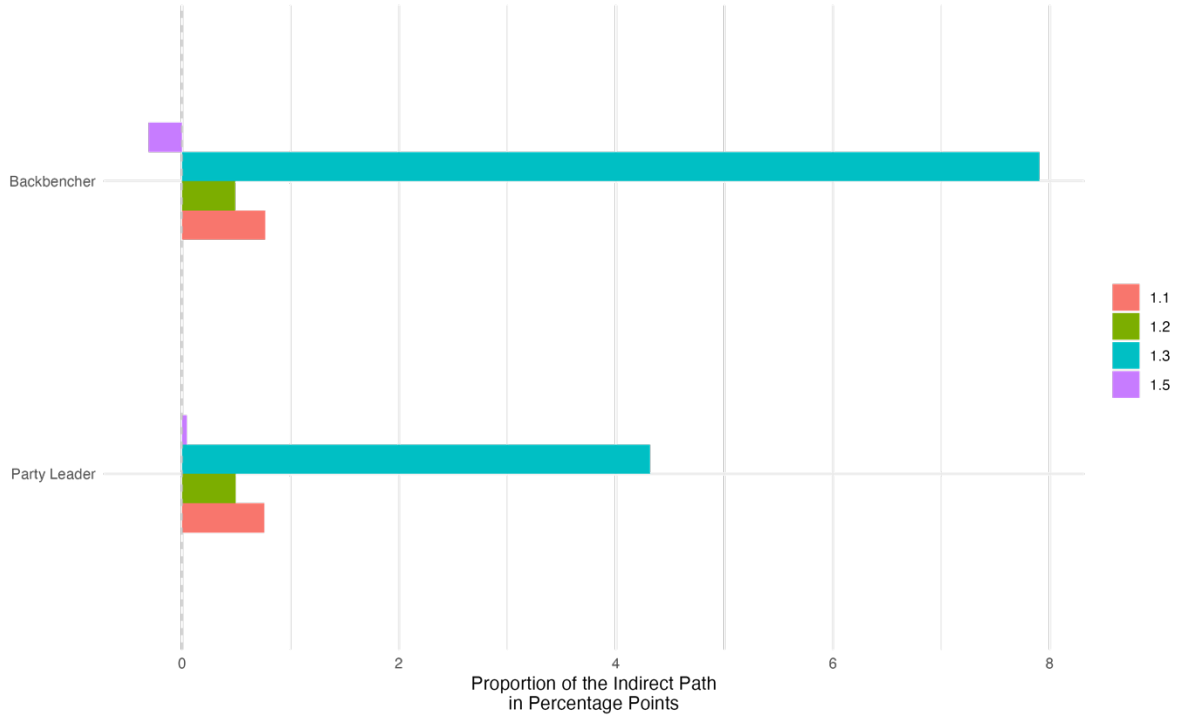
Note: Estimates are based on generalized fixed effect regression (Poisson).

Figure C.5 Mediation Estimates Party Leader (3)



Note: Estimates are based on generalized fixed effect regression (Poisson). 95% confidence intervals are based on stratified parametric bootstrap results using the percentile method with 1000 iterations.

Figure C.6 Share of Mediation Party Leader (3)



Note: Estimates are based on generalized fixed effect regression (Poisson).