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Partisan Media Bias in German Political Talk Shows: A Longitudinal Analysis (2017–2025)

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Abstract

Partisan media bias refers to the systematic and disproportionate media coverage of political parties relative to others. Such preferential, or limited, coverage can significantly influence political outcomes. Despite the central role political talk shows play in shaping public discourse in Germany, they have not yet been systematically examined in the political communication literature. Addressing this gap, this study investigates three dimensions of partisan media bias in German political talk shows between 2017 and 2025: (1) discourse visibility (who is talked about), (2) participation visibility (who talks), and (3) tonality bias (how parties are talked about). To do so, it constructs a novel dataset of over 1,500 talk show transcripts and applies a combination of computational text analysis and sentiment analysis. The findings reveal consistent advantages for incumbent parties, a persistent overrepresentation of Die Grünen, and notable underrepresentation of Die Linke and the AfD. However, the AfD recently gained visibility, suggesting a loosening of editorial gatekeeping norms over time. These patterns point toward structural imbalances in coverage that challenge normative expectations of political balance, particularly within Public Service Media. This thesis offers an empirical foundation for future research into the dynamics and consequences of media bias in political talk shows. It concludes by advocating for institutionalized monitoring mechanisms and editorial quotas to ensure media balance in talk shows.

Key words

Partisan Media Bias, Computational Social Sciences, Political Talk Shows, Text-as-Data

Preface

This Master's thesis was written between January and April 2025 at Sciences Po as part of the two-year Master's in Public Policy (MPP), with a specialization in Digital New Technologies.

In the last two years I gained a strong interest in computational social sciences, so I truly enjoyed exploring computational methods to uncover social phenomena for this research. Many thanks to my supervisor Jean-Philippe Cointet for sparking this interest last year in the course *Decoding biases in Artificial Intelligence*, and of course for the great feedback on this Master thesis.

The paper at hand made use of artificial intelligence for paraphrasing, rewording, structuring suggestions and formatting.

Why should I read this research?

This thesis turns towards a largely overlooked medium: German political talk shows. Despite their widespread reach and persistent relevance - 28% of Germans reporting interest in political talk shows - research has rarely considered them in empirical analyses. This is puzzling, given their central role in shaping political information and discourse in Germany.

Thus, the first key contribution of this thesis lies in the construction of a novel longitudinal dataset of over 1500 transcripts and associated metadata from German Public Service Media political talk shows spanning 2011 to 2025. As such this dataset offers a valuable empirical foundation for future research.

Second, drawing on this dataset, the study investigates whether and how partisan media bias manifests in political talk shows between 2017 and 2025. It distinguishes between three dimensions of bias: discourse visibility (who is talked about), participation visibility (who is talking), and tonality (how parties are talked about). This conceptual refinement - particularly the distinction between discourse and participation visibility - responds to the dialogical nature of political talk shows, nuancing existing frameworks in the field. Methodologically, the study adopts a longitudinal and computational approach, employing natural language processing, sentiment analysis, and inferential statistics to measure and trace partisan bias over time. This overcomes the field's predominant focus on single election periods.

Findings indicate persistent partisan imbalance: Incumbent parties and particularly Die Grünen are consistently overrepresented, while Die Linke and the AfD are underrepresented. Notably, the AfDs visibility has increased over time, pointing towards a gradual erosion of the "Brandmauer". These patterns challenge expectations of political balance in Public Service Media. Future monitoring and policy safeguards are suggested.

I. Introduction

Extensive research has established that traditional media - such as newspaper and television - shape public opinion not only by determining what citizens think about (agenda-setting) but also by shaping how they think about it (framing) (McCombs & Shaw, 1972; Entman, 1993). One mechanism through which this influence unfolds is media coverage of political parties. Given space and time constraints in print and broadcast formats, media outlets must make selective decisions about which actors to cover (Saez-Trumper et al., 2013). When this coverage disproportionately favors or disfavors particular parties, it constitutes partisan media bias - an imbalance that shapes how voters perceive parties, assess candidates and ultimately behave politically (Gerber et al., 2009; Eberl et al., 2017b; Geiß & Schäfer, 2017; Haselmayer et al., 2017).

Despite the well-documented effects of partisan media bias in newspapers and TV news, no systematic analysis has yet been conducted on German political talk shows. In fact, research has generally neglected them. This is puzzling, considering their persistent relevance: nearly 28% of Germans report interest in political talk shows (Statista, 2025), even within today's high-choice media environment (Van Aelst et al., 2017). Political talk shows thus are central to political information provision, but the extent and nature of their partisan biases are poorly understood.

This thesis addresses this gap by pursuing two aims: First it introduces a novel longitudinal dataset of German Public Service Media political talk show transcripts and metadata (1500 episodes), enabling future research on political discourse in this underexplored media format. Second, it empirically investigates the extent to which political talk shows exhibit three forms of partisan media bias, namely discourse visibility (who is talked about), participation visibility (who is talking), and tonality (how parties are talked about) - as well as how these biases have evolved between 2017 and 2025. To do so, a combination of computational tools and qualitative analysis is used.

Conceptually, this study contributes to the literature by distinguishing between two forms of visibility bias: discourse visibility and participation visibility. This distinction reflects the dialogical nature of political talk shows, offering a nuanced analytical framework for analyzing partisan media bias. Methodologically, this study adopts a longitudinal approach, extending the conventional focus on election campaigns (e.g. Brandenburg, 2005; Eberl et al., 2017b), and applies computational tools to measure partisan media bias over time.

The findings reveal systematic patterns of partisan media bias in political talk shows. Incumbent parties - and particularly Die Grünen - tend to benefit from enhanced visibility. Furthermore the longitudinal analysis highlights interesting evolutions over time, notably a marked increase in discourse visibility for the AfD in recent years, despite prior exclusion. The implications of these findings and avenues for future research and policy will be discussed.

II. Transformation of The Media System

This section illustrates the continuing relevance of traditional media, including broadcast formats such as political talk shows, thereby establishing the rationale of this research. Concretely: while the media environment has undergone a fundamental transformation with the increasing adoption of digital and social media platforms, traditional and legacy media remain highly relevant in providing political information and shaping political opinion.

A. The Effect of Traditional Media on Political Opinion

In communication sciences, there is consensus on the fact that media coverage shapes public opinion (Djerf-Pierre & Shehata, 2017, McCombs & Valenzuela, 2020). Across normative models of democracy and the role of media systems in them, this is in principle desired: Well-functioning democracies depend on the provision of political information to citizens, so that they can form informed opinions and act as meaningful citizens (Van Aelst et al., 2017). Traditionally, the role of political information provision has been fulfilled by the mass media - or traditional media - that is print and broadcasting media (Van Aelst et al., 2017).

The mechanisms through which traditional media shapes public opinion have frequently been theorised and tested in communication sciences. These mechanisms operate at several levels. McCombs & Shaws (1972) influential media agenda setting theory posits that if the media covers a topic, the public will consider this topic to be important. The salience of an issue, i.e. how much it is covered in the media, translates to the topic's salience on the public agenda. The media thus defines what the public thinks about. Framing theory, developed by Entman (1993) goes a step further, arguing that the question of how topics and issues are presented, influences how the public thinks about said issues. There is ample empirical support for both agenda setting effects (McCombs, 2005; Wu & Coleman, 2009, Djerf-Pierre & Shehata, 2017, McCombs & Valenzuela, 2020), and framing effects (e.g. see De Vreese et al., 2011; Lecheler & De Vreese, 2012) on public opinion. Here, it is worth mentioning - for demarcation purposes - that in political science media political agenda setting focuses on the relationship between media coverage on political agendas (Walgrave & Van Aelst, 2006), instead of public opinion.

B. The Shift to a High-Choice Media Environment

However, the emergence - and increasing adoption - of digital and social media has fundamentally changed media and political information environments (Van Aelst et al., 2017; Arora et al., 2022), thus questioning the importance of (public opinion formation through) traditional media (Langer & Gruber, 2021). Information flows are vaster and faster than ever (Langer & Gruber, 2021), traditional media have lost their hegemony over media consumption (and information provision) (Mitchell et al., 2017), and citizens are less attached to political news than ever (Bennet & Iyengar, 2008). This abundance of information provision spaces and actors, has led to what Van Aelst et al. (2017) define as a high-choice media environment, leading to a number of concerns regarding political information provision crucial for democratic functioning.

C.   The Continuing Importance of Traditional Media

Yet, despite this transformation, traditional media still matter. Langer & Gruber (2021), examining the role of different media in political agenda setting during the "Windrush scandal" in the UK, find that legacy news media (using both traditional and digital channels) remain crucial in (1) amplifying the salience of issues, and (2) sustaining attention for issues. Djerf-Pierre & Shehata (2017) similarly do not find evidence that traditional media has become less influential as agenda setters. Further, in Germany - the focus of this study - a 2020 Reuters survey found that 70% of Germans used TV for news in the past week, 69% accessed online news, 39% used social media, and 26% read print media (Newman et al., 2020). Traditional media, such as TV and print media thus remain relevant, while decreasing in relative importance (Van Aelst et al., 2017; Newman et al., 2020). Consequently, taking political talk shows - broadcasted in traditional media of TV - as a research object remains relevant. This is further supported by the fact that legacy broadcasters such as ZDF and ARD upload political talk shows online - both on YouTube and ARD Mediathek - thus reaching a wider audience than just traditional media users.

III.   Political Talk Shows

The following section establishes the relevance for taking German political talk shows as research objects. Despite their empirical and theoretical relevance, German political talk shows have not yet been systematically researched. This is puzzling: First, political talk shows are widely consumed and play a critical role in the provision of political information. Second, their dialogical nature as arenas for real-time political discourse potentially enable novel insights into the (performative) dynamics of, for instance, political communication. Third, political talk shows serve as platforms for partisan self-promotion, a function that may conflict with the normative expectations of impartiality and balance enshrined in the mandate of Public Service Media (PSM).

A.   Defining Political Talk Shows in the German Context

In the German context, this research defines political talk shows as a discussion-based format of televised political communication, broadcasted at least weekly on Public Service Media (PSM), in which a fixed moderator engages with guests - predominantly politicians and experts - to debate and interpret current political and societal issues (Kessler & Lachenmaier, 2017). The dialogical nature of political talk shows thus demarcates them from other media, such as broadcasting news or newspaper coverage.

Audiences directly experience political discourse, rather than consuming a synthesis. Importantly, the function of political talk shows as arenas for activating critical discourse during broadcast may enhance their role in the provision of political information and the subsequent formation of public opinion (Heyen, 2020).

As such it is important to realize that political talk shows are subject to several gatekeeping processes (Kessler & Lachenmaier, 2017; Fröhlich & Hillje, 2020), i.e. the process of controlling the entry of messages into the gatekeepers space (Barzilai-Naho,

2019). Broadly speaking, these processes relate to topic selection, guest selection, and moderation of the discussion (Faas & Krewel, 2021), all of which might be interesting to analyze individually. First, however, it is important to understand the outcome of gatekeeping.

B.   Empirical Relevance: Why Political Talk Shows Matter

In Germany, political talk shows play an important role in the provision of political information (Heyen, 2020). Following a survey conducted by IfD Allensbach approximately 23 Million people - 28% of the population - indicated (high) interest in political talk shows between 2019 and 2023 (Statista, 2025). This translates into actual viewership: In 2019, Anne Will had on average 3.3. Million viewers, Hart aber Fair 2.5 Million, and Maybrit Illner 2.4 Million (Fröhlich & Hillje, 2020). Further, political talk-shows are virtually omnipresent in German television: Five out of seven nights ARD or ZDF broadcast a political talk show (Kessler & Lachenmaier, 2017). Despite slight negative trends in viewership and problems in reaching a younger audience (Fröhlich & Hillke, 2020), political talk shows thus provide political information to a substantial share of the German population.

C.   The Gatekeeper: Public Service Media

The German political talk shows analyzed in this study are broadcasted by PSM. This means that political talk shows face legally enshrined programmatic requirements of impartiality and balance.

   The foundational (historical) rationale behind PSM in Germany is to ensure a media system independent of, and critical towards, political authority, to prevent a recurrence of the "Gleichschaltung", i.e. the forced alignment of media and political power during the National Socialist regime (Bundeszentrale für politische Bildung, n.d.; Mitteldeutscher Rundfunk, 2024). To safeguard freedom of the press, as guaranteed under Article 5 of the German Basic Law (Grundgesetz für die Bundesrepublik, 1949), the Federal Constitutional Court affirmed the necessity of independent PSM in its First Broadcasting Decision (BVerfGE 12, 205). As a result, ARD and ZDF, Germany's main public broadcasters, are not subject to state control, but instead operate with editorial self-governance (Bundeszentrale für politische Bildung, n.d.).

   Yet, the mandate of PSM is legally defined: PSM must ensure the basic provision of radio and television programming for the population, equally split up into information, education and entertainment (Bundeszentrale für politische Bildung, n.d.). Doing so, they must serve as a "medium and eminent factor" in public opinion and will formation (BVerfGE 12, 205). PSM independence is a serving freedom, imposing stringent broadcast requirements of objectivity, impartiality, balance and diversity of opinions, as codified in Article 26 of the Medienstaatsvertrag (2020) (former Rundfunkstaatsvertrag).

D.   Existing Research on Political Talk Shows

Political talk shows have not been systematically researched, despite their wide-spread consumption. Cross-country, political talk shows have served as research objects across distinct subfields: For instance, Paz Pérez (2020) examines gender representation among talk show guests in Europe (excluding Germany) and the United States, while Ceron and Splendore (2018) investigate audience perceptions of media pluralism by linking Twitter commentary to political talk show broadcasts in Italy. Similarly, Van Zoonen & Holtz-Bacha (2000) explore the personalization of politics in Dutch talk shows, and Zaheer (2016) analyzes the role of political talk shows in shaping political efficacy and participation in Pakistan. Finally, Arceneaux et al. (2013) examine the effects of opinionated political talk shows on polarization of individuals in the US, finding that ideological shows can polarize political attitudes. The generalizability of these findings, however, is limited, given that political talk-shows are shaped by the institutional context in which they are produced and received (Pędzisz, 2007).

In Germany, academic research linking political talk shows to broader political and sociological outcomes remains relatively limited. Existing literature has primarily focused on qualitative evaluations of whether political talk show coverage meets normative standards of political education and deliberation, often drawing on Habermasian public sphere theory (Kade, 2003; Wagner, 2008; Kessler & Lachenmaier, 2017). These studies generally conclude that political talk shows do contribute to public deliberation by highlighting salient issues and presenting diverse viewpoints. At the same time, they criticize the increasing subjectivity, conflict orientation, and entertainment logic that characterize many programs (Kade, 2003; Wagner, 2008). Notably, Heyen (2020) examines the framing of the AfD in 45 political talk shows during the federal elections in autumn 2019. The study found that political talk shows serve as a significant platform for disseminating AfD positions.

The composition of guests has been frequently analyzed in the German grey literature, finding underrepresentation of women, migrants, East Germans and people of color (Faas & Krewel, 2021; Fröhlich & Hillje, 2020). Further, these studies highlight that politicians (by far) dominate screen time - accounting for 39% of guest positions in Covid-19-related talk shows (Faas & Krewel, 2021) and 42% across all political talk shows from 2017 to 2020 (Fröhlich & Hillje, 2020). Previous selective analysis of RedaktionsNetzwerk Deutschland in 2020 and 2024 have pointed towards political talk shows primarily hosting traditional "Volksparteien", namely SPD and CDU/CSU, while disregarding parties further to the left or right (Sternberg & Christ, 2020; Ranke & Gurol, 2024) . Concretely, Die Linke and especially the AfD - actors on the far left, respectively extreme right - are consistently underrepresented. In the case of the AfD, this likely reflects editorial gatekeeping driven by democratic norm-setting and reputational concerns, in line with the "Brandmauer", a normative barrier upheld by mainstream political and media actors to prevent the normalization and legitimization of the far-right party AfD (Schroeder et al., 2025). Yet, these analyses remain methodologically limited, often relying on proprietary data and offering only selective, non-systematic insights.

To sum up, political talk shows serve as a key platform for politicians to promote themselves and their party agendas (Holtz-Bacha, 2000; Kessler & Lachenmaier, 2017).

Given the programmatic requirements of Public Service Media (PSM) for impartiality and balance, paired with recurring indications of partisan media bias, this makes political talk shows a compelling object for analyzing the dynamics of partisan media bias.

IV. Theoretical Framework - Partisan Media Bias

This section provides the conceptual foundation for the analysis of partisan media bias in political talk shows. It first outlines the theoretical framework, adapting established notions of visibility and tonality bias to the specific media logic of political talk shows by introducing an analytical distinction between participation and discourse visibility. It then reviews the state of the art to illustrate the theoretical and empirical relevance and novelty of this study.

A. The Effect of Partisan Media Bias

Partisan media bias has well-documented effects on political perceptions and behavior. Given that printed media face space constraints, and television broadcasts have temporal constraints, media outlets must make selective decisions about what and who to report on (Saez-Trumper et al., 2013). Since media coverage has a substantial impact on public opinions and political preferences (see section II), and citizens primarily encounter messages from political actors through news media (Haselmayer et al., 2017, p. 467), political actors have to compete for media attention, some more successful than others (Hopmann, 2010). Hence, if political parties and/ or their messages are disproportionately covered in the media, this imbalance influences how people perceive these political parties. The academic literature employs a range of terms, such as media bias, partisan media bias, and political balance, to investigate the extent to which media coverage disproportionately favors specific political actors (Hopmann et al., 2012b, p. 243). For the sake of conceptual clarity, this study refers to this phenomenon as partisan media bias in the following.

Indeed, numerous articles studying the effects of partisan media, have found that preferential - or limited - media coverage of political parties significantly influences assessment of political candidates (Eberl et al., 2017), political mobilization (Geiß & Schäfer, 2017), voting behavior (Gerber et al., 2009; Chiang & Knight, 2011, Hopmann et al, 2010), and issue attitudes (Vliegenthart, 2009). Further, partisan media bias has been linked to increasing partisan polarization (Levendusky, 2013; Van Aelst et al., 2017). The media effects of partisan bias, thus, are well-established, even though it is important to preemptively note that their magnitude varies by context and most of the studies focus on electoral periods (see section IV.D).

B. Defining Political Media Bias

This study defines partisan media bias as systematic and disproportionate media coverage of one political party relative to others against a theoretical justified benchmark of balanced coverage (e.g., as in Eberl et al., 2017). This has two key components:

First, assessment of partisan media bias requires a reference point, namely the concept of political balance (Hopmann et al., 2012b; Eberl et al., 2017a; Castro, 2021). Equal media coverage of all political parties does not necessarily imply balanced reporting, especially in contexts where parties differ significantly in electoral strength or political relevance (Eberl et al., 2017a; Castro, 2021). The idea of balance, therefore, is not absolute; it must be normatively and empirically contextualised.

Second, systematicity of partisan media bias refers to consistent and recurring favouritism - across time or media outlets - that benefits one party at the expense of the others within a given political system (Eberl et al., 2017a). This implies a comprehensive and longitudinal analysis of media coverage: Isolated instances of disproportionate coverage are insufficient to establish bias unless they form part of a sustained pattern (Hopmann et al., 2012b, Eberl et al., 2017a).

C.   Media Balance

Hoppman et al. (2012) suggests two primary dimensions for establishing partisan media balance benchmarks, namely (1) a political system perspective, and (2) a media routines perspective. These benchmark models have subsequently been adopted in the relevant literature, though sometimes termed differently (e.g. see Castro, 2021; Eberl et al., 2017).

First, the political system perspective conceptualizes media partisan balance in relation to political parties electoral strength - typically operationalized via vote shares or seat distributions. According to this view, media coverage of political parties should be proportional to their political weight, expressed through democratic elections (McQuail, 1992; Hopmann et al., 2012b). Castro (2021) refers to this benchmark as neutrality, illustrating the normative argument that media should align with popular will as manifested through electoral strength.

The media routine perspective, on the other hand, conceptualizes media balance based on the newsworthiness of political actors in an evolving media and political landscape (McQuail, 1992; Hopmann et al, 2012b). Here, media coverage should correspond to a party's newsworthiness in a given moment in time, relating to factors such as party relevance (Sartori, 1976; Hoppman et al., 2012a), public visibility, opinion poll performance and communicative appeal (Hoppman et al., 2012b).

These perspectives of media balance of political party coverage differ primarily in terms of the extent to which the media ought to be dynamically responsive to situational and temporal changes. The media political system perspective anchors balance based on popular will as manifested through fixed electoral cycles (typically every four evers). Conversely, the media system perspective considers that public interest and opinion might vary due to unfolding events, hence arguing that media attention may reasonably vary (Hopmann et al., 2012b). These dynamism, however, causes challenges in measuring constantly evolving political party relevance, especially if aiming to analyse longitudinal patterns. Measurement of balance in the party system sense, on the other hand, is relatively straight-foward referring to electoral results.

In that sense, the choice of what conception of political balance to adopt is essentially informed by normative judgement - and measurement considerations. Due to these

complexities Hopmann et al. (2012b) recommend to draw on both, the political - and media system perspective, if possible. To assess partisan media bias in political talk shows over time this research thus will establish both a political- and media routine baseline, subsequently contextualizing findings accordingly. The concrete operationalization will be discussed in the corresponding section.

D.   Types of Partisan Media Bias

While the literature typically distinguishes between three subcategories of partisan media bias - namely (1) visibility bias, (2) tonality bias, and (3) agenda bias (e.g., Hopmann et al., 2012b; Eberl et al., 2017; Castro, 2021) - this research focuses on examining the prevalence of visibility and tonality bias in German political talk shows over time, to remain within the scope of this study. Building on the discussion-based format of political talk shows, it further proposes a conceptual refinement by distinguishing between two types of media visibility: participation visibility and discourse visibility. This analytical distinction offers a conceptual contribution to the literature on partisan media bias (see Table 1 for an overview).

Table 1. Overview of conceptualization of analyzed dimensions of partisan media bias

Partisan Media Bias Dimension	Focus	Conceptualization
Participation Visibility	Which political parties are present?	Occurs when a political party is systematically overrepresented or underrepresented among talk show guests.
Discourse Visibility	Which political parties are being talked about?	Occurs when a political party is systematically overrepresented or underrepresented in the discussion.
Tonality (of discourse)	How are political parties talked about?	Occurs when a political party is systematically (dis)favoured in tone during the discussion.

1. Visibility Bias

In the media partisan bias literature, visibility refers to how frequently political actors are mentioned in media coverage. Visibility bias occurs when political parties systematically receive an undue amount of attention relative to a normative benchmark of political balance (Eberl et al., 2017). This form of bias is strictly quantitative: it considers how often a political actor is mentioned, irrespective of how they are portrayed.

Theoretically, the media effect of political party visibility derives from the assumption that high media visibility means high exposure to voters (Geiß & Schäfer, 2017). Here it is assumed that the media effects of discourse visibility also hold for participation visibility, even if so far not examined in the literature. Hence, visibility allows voters to learn about candidates, political parties, and their positions. In fact, voters' perception of political parties' importance is linked to their media salience (Eberl et al., 2017). Thus, there should be a

positive effect of visibility on voter evaluations and familiarity with political parties (Van Aelst et al., 2008).

Studies on the media effect on public/ voter preferences and behavior have generally supported the notion that media visibility benefits political parties (Semetko & Schönbach, 1996; Oegema & Kleinnijenhuis, 2000), even though the effect of visibility bias generally tends to be less pronounced - or disappear - if examined in conjunction with tonality- and agenda bias (Eberl et al., 2017; Geiß & Schäfer, 2017).

In terms of visibility bias distribution in media coverage, a substantial body of research suggests that incumbent parties are generally favored in terms of media visibility across European multi-party systems (Hoppman et al., 2012b; Castro, 2021). It is worth noting that visibility bias for incumbent parties seems to be more pronounced in television news coverage (Hopmann et al. 2012b; Brandenburg, 2005; Walgrave & De Swert, 2006), than in newspaper coverage (D'Alessio & Allen, 2000; Hopmann et al., 2012b). Hence, in examining the occurrence of visibility bias in political talk shows over time in Germany, I expect that respective incumbent parties will be overrepresented in political-talk show coverage.

This paper argues that the analysis of political talk shows requires the introduction of a new dimension to the notion of partisan visibility. So far visibility has been treated as a unified category, typically operationalized through mention frequency. Yet, political talk shows are dialogical settings, where parties do not only appear as subjects of conversations, but also as participants. Consequently, this paper suggests distinguishing between:

- **Discourse visibility:** How often parties are talked about in the show, corresponding to traditional visibility bias.
- **Participation visibility:** Whether representatives of a party are present as speakers in the show.

This distinction is inspired by Kim et al. 's (2022) analysis of screen time of US political actors on cable news in a timespan of 10 years, to infer visibility bias. In a basic sense, this study thus distinguished partisan visibility thus in terms of (1) who is talked about and (2) who is speaking. This accounts for the fact that, for instance, a participant affiliated with the CDU may frequently mention Die Grünen. The assumption is that such mentions contribute to the visibility of both the CDU, and Die Grünen. In that sense - while lacking empirical assessment - it is assumed that the media effects for discourse visibility extend to participation visibility, given that both forms contribute to public exposure. Consequently, following the afore discussion, this research will test two hypotheses:

- **H1:** Incumbent parties will be systematically overrepresented in political talk show discourse (discourse visibility).
- **H2:** Incumbent parties will be systematically overrepresented among political talk show guests (participation visibility).

2. Tonality Bias

Tonality refers to how political actors are covered by the media, i.e. the valence of political parties (Hopmann et al., 2012b; Eberl et al. 2017). Tonality bias thus can be conceptualized as systematic (dis)favouritism of one political party in political talk-show discussions, relative to coverage of the other parties. (Eberl et al., 2017). In that sense, tonality bias operates on top of visibility bias: a political party may receive frequent media coverage but be portrayed predominantly negatively. This highlights the importance of examining visibility and tonality bias in conjunction (Eberl et al., 2017; Geiß & Schäfer, 2017; Castro, 2021).

The theoretical assumption underlying analyses of tonality bias is that positive media messages about a political party or candidate contribute to more favorable public evaluations and, consequently, may influence voting behavior. The reverse is assumed for negative messages (Geiß & Schäfer, 2017). In fact, empirical studies generally support a link between the tone of media coverage of political actors, their evaluation, and electoral behavior (see Geiß & Schäfer (2017) for a review). Further, tonality bias tends to have a greater effect on opinion formation and/ or voting behavior than visibility bias (Boomgaarden & Semetko, 2012, Eberl et al., 2017a; Geiß & Schäfer, 2017).

3. Agenda Bias

While this study focuses on visibility and tonality bias, it still conceptually engages with agenda bias, given that the three dimensions of partisan bias frequently operate in conjunction (Geiß & Schäfer, 2017). Concretely, agenda partisan bias refers to what is covered - and what is left out - that is, whether the issue selection itself reflects partisan favouritism, rather than the relative importance of these issues (D'Alessio & Allen, 2000; Hopmann et al., 2012b; Eberl et al., 2017a).

As defined, following media agenda-setting theory, the media has substantial influence on which policy issues the public perceives as important (McCombs & Shaw, 1972). Hence, when the media systematically prioritizes preferred issues of a political party, this can shape public opinion in that party's favor (Boomgaarden & Vliegenthart, 2009), and influence voting behavior (Green & Hobolt, 2008). Agenda bias thus occurs when issue salience systematically favors one party's priorities, and e.g. can significantly shape how voters assess political candidates during elections (Eberl et al., 2017b). Importantly Operationalizing agenda partisan bias is more challenging than visibility and tonality bias, as parties preferred issues need to be compared with media agendas (D'Alessio & Allen, 2000; Hopmann et al., 2012b). To sum up, while this study does not empirically assess agenda bis, its conceptual inclusion is important for understanding the broader ecosystem in which partisan visibility and tone operate: For instance one causal direction is that the decision of what issues to cover (agenda bias) can condition who is visibility (discourse & participation bias), and how they are talked about (tonality bias).

E.   State of the Art

Having conceptualized partisan media bias, this study now continues to present an overview of research on partisan media bias, in order to underscore the empirical relevance of this research.

1. What has been analyzed?

First, this review provides an overview of the contexts and media types analyzed. The literature has focussed primarily on establishing whether bias exists in newspaper or TV broadcasting news, typically during election periods. Only recently cross-spatial and temporal assessments have begun to occur, with no study examining political talk-show coverage.

A number of studies have examined newspaper coverage, often during election campaigns. For example, Eberl et al. (2018a) analyze coverage during the 2013 Austrian election, finding visibility bias in favour of incumbent parties, considerable variation in tonality bias across outlets, and notable agenda bias. Hopmann and De Vreese (2010) analyze Danish newspaper coverage during the 2007 election campaign, while Brandenburg (2005) includes both newspaper and television coverage of the 2002 Irish election, showing incumbency bias. Castro (2021) conducts a cross-national assessment of newspaper outlets across 24 EU countries, finding that levels of partisan media bias are higher in Southern and Eastern Europe than in Northern Europe. Importantly for this study, Castro (2021) also highlights that although public service broadcasters tend to be more neutral than private media, they still exhibit significant measures of partisan bias. This emphasizes the importance of examining partisan bias in public service political talk shows in Germany.

Television and broadcast media have also been subject to analysis. In the German context, Geiß and Schäfer (2017) examine both visibility and tonality effects in evening news broadcasts. Bernhard et al. (2023) analyze partisan media bias over time using a longitudinal dataset of U.S. television newscasts, while Kim et al. (2022) study ideological bias in U.S. cable television over a ten-year period. Longitudinal studies thus have been predominantly conducted for television broadcasting media in the context of the US, while most studies have focussed on single event horizons - notably during election periods.

2. Mediating Factors of Partisan Media Bias

Second, this review provides an overview of the factors associated with certain political parties being more successful than others in being covered by the media. These factors as such will serve to contextualize and explain the findings of this review. Precisely, factors on the (1) message, (2) media outlet, and (3) political system level contribute to explaining media favoritism.

Analyzing why certain political messages make it into the media, while others do not, Haselmayer et al. (2017) summarized four key message-level factors. Messages originating from powerful or charismatic politicians are more likely to be reported. Further, stories that emphasize conflict and criticism, and messages including surprising or novel messages, receive more attention. Messages linked to topics already salient in the media receive preferential treatment.

On the media outlet level, Gentzkow and Shapiro (2006) argue that media outlets tend to provide more extensive and favorable coverage to parties aligned with their consumers' preferences. Haselmayer et al. (2017) confirm this in the Austrian context finding significant evidence of partisan slant corresponding to audience orientation. Yet, for the analysis of political talk-shows it will be important to keep in mind that they are broadcasted in PSM - required to be impartial and balanced - so that market dynamics should, in theory, not account for partisan bias.

Third, the characteristics of political parties themselves - as embedded in the overall political system - condition their media coverage. Relevant parties—those that play a meaningful role in political competition, receive disproportionately more coverage. Building on Sartori's (1976) classic typology of party relevance, Hopmann et al. (2012a) argue that media agenda responsiveness follows a hierarchy: (1) parties with coalition potential are most successful in setting the media agenda; (2) blackmail potential parties, which can influence coalitions without entering them receive moderate coverage; while (3) irrelevant parties are largely ignored. Moreover, as defined, empirical findings suggest that incumbent parties are generally favored in terms of media visibility across European multi-party systems (Hopmann et al., 2012a, p. 176; Castro, 2021).

Finally, it is important to define that exceptions to the above defined factors are not uncommon (Hopmann et al., 2012b), i.e. considerable variation exists between different political and media system dynamics. This underlines the importance of contextualizing the analysis and findings in terms of party characteristics - e.g. being incumbent, having coalition potential or blackmailing power.

V.   Scope & Research Contributions

To sum up, this research contributes to the literature on partisan media bias by (1) analyzing the neglected medium of political talk shows, and (2) adopting a longitudinal research design to trace the evolution of visibility and tonality bias in German political talk shows between 2017 and 2025. The study addresses two key research gaps:

First, existing research on partisan media bias has primarily focused on print newspapers (e.g., Castro, 2021) and television news broadcasting (e.g., Kim et al., 2022; Bernhardt et al., 2023), with more recent work extending into social media environments. To date, however, no systematic analysis has examined political talk shows: a media format that, despite its broad reach and central role in the provision of political information, remains largely overlooked in this literature.

Second, most studies on partisan media bias have examined single event horizons, especially election campaigns (e.g., Brandenburg, 2005). This focus is justified, as election periods are high-salience events where agenda-setting and media effects are intensified (Walgrave & Van Aelst, 2006). Yet, recent longitudinal research (e.g., Kim et al., 2022) underscores that media bias is highly dynamic, varying over time and across political contexts. Focusing solely on electoral windows thus risks missing broader structural trends and offers no stable baseline to assess shifts in bias. A longitudinal approach, as employed in

this study, therefore allows for capturing both short-term fluctuations and long-term patterns in political talk show coverage.

In addressing these gaps, this research asks the following guiding questions: (1) To what extent do German political talk shows exhibit partisan media bias, namely discourse visibility bias, participation visibility bias, and tonality bias? And, (2) how have these dimensions of bias evolved over time? While the operational design of this study will be informed by literature expectations on incumbent visibility advantages (see H1 and H2), this study will maintain an exploratory orientation. This follows the rationale of uncovering and interpreting unexpected patterns. In addition, this research suggests a conceptual refinement by distinguishing between discourse visibility and participation visibility. This stems from the dialogical format of political talk shows, providing an analytical extension to existing frameworks on partisan media bias, which have typically treated visibility as a single category.

To conclude, it is important to emphasize that this study is descriptive and exploratory in scope. It does not seek to establish causal effects of partisan talk show bias on public attitudes, behaviors, or voting preferences, nor to provide in-depth explanations of observations. Rather, it aims to lay the empirical groundwork: establishing whether, and how, partisan media bias manifests in political talk shows. Future research could build on these findings by linking longitudinal patterns of talk show coverage to indicators of audience engagement or sentiment, such as user reactions on platforms like YouTube or Twitter.

VI. Data Collection: German Political Talk Shows

Given that German Political talk shows have not yet been assessed in a longitudinal framework, no dataset existed to examine the research questions of this study. Therefore, the first concrete contribution of this thesis is the construction of a comprehensive dataset of transcripts and corresponding metadata from German political talk shows from 2013 to 2025. The underlying data collection rationale was to build a dataset as comprehensive as possible, to enable research beyond the specific scope of this thesis. Hence, the procedure for extracting relevant partisan media bias data from this dataset will be outlined in section VII, while the following section describes the collection procedure for the meta-dataset.

A. Corpus Creation & Description

Corpus Design and Talk Show Selection
The selection of talk shows for the corpus followed clearly defined inclusion and exclusion criteria, balancing relevance and data accessibility. These criteria relate to (1) reach, (2) content, (3) discussion format, and (4) availability, and are summarized in Table 2. The reach criterion refers to the average market share of the talk show format, with the rationale of capturing programs with the potential for broader deliberative impact. To this end, I selected the top 10 political talk shows by market share. Second, I included only talk shows whose primary content focus is political, thereby excluding formats aimed predominantly at

entertainment. This broadly follows the rationale of ensuring the utility of the dataset in assessing political phenomena, and more narrowly with this study's focus on partisan media bias. If the topic discussed is political, political parties will be more likely to be mentioned and invited. Third, to fulfill the discussion-based format criterion, I selected only talk shows with a minimum of three participants, thus excluding interview-based formats.

Finally, the availability criterion was central for practical reasons: only talk shows published either on YouTube or in the ARD Mediathek and equipped with transcripts or subtitles were considered eligible. ARD Mediathek is the online offering of on-demand videos and shows from German public service broadcasting media, such as ARD, ZDF and Phoenix. All major talk shows are uploaded there. Yet, due to licensing restrictions only talk shows streamed after 2022 can be found in ARD Mediathek. As created professionally, ARD Mediathek subtitles are of high quality, accurately reflecting speech. Hence, ARD Mediathek serves to comprehensively extract all political-talk show transcripts until 2022. Yet, as will be mentioned later, just the evening (approximately 10% market share) talk shows come with subtitles. The major PSM media in Germany also have YouTube channels. Here they upload (some) talk shows. YouTube has the benefit of talk show uploads (potentially) covering a greater time-span than ARD Mediathek. The downside of YouTube as compared to ARD Mediathek is that I found uploads to be less consistent: Not every individual talkshow in time-frame is uploaded. Yet, as private channels also reupload talk-shows running back to 2010, relying on YouTube enables the construction of a longitudinal dataset, if with potential trade-offs in terms of data density at a given time. For further analyses drawing on YouTube also has the benefit of linking comments - as a proxy for opinion - to political talk show discussions.

Table 2. Corpus, inclusion and exclusion criteria

Dimension	Inclusion Criteria	Exclusion Criteria
Reach	● On average 5% market share/ views	● Small audience
Content	● Focus on political issues	● Other
Kind	● Discussion basedMinimum of 2 guests + moderator	● Interviews
Availability	● Published on YouTube or ARD Mediathek with subtitles	● No transcripts/ subtitles

Corpus Description

Seven German political talk shows comply with the inclusion criteria. Table 3 provides a description of the talk shows. Several observations are noteworthy: All included talk shows are produced by Public Service Media (PSM). This is noteworthy for two reasons: First, it provides a consistent institutional context for analysis, particularly in light of the requirements imposed on PSM outlets. Simultaneously, however, this might limit overall

generalizability. Further, it likely renders the talk-shows quite similar in scope and approach, possibly mitigating differences across formats.

It is also worth noting that "Der Internationale Frühschoppen" and "Der Presseclub" are daytime formats, while all other shows are broadcast in the evening. They further serve as a replacement for each other. Hence these shows should be merged in most analyses. This distinction is reflected in market share: the former typically have a market share of 5 - 6% (Riedner, 2024), while the latter have more than 10% (Scheiwe, 2024). Although it would have been possible to stricten the inclusion criteria to exclude these talk shows, data collection was straightforward (availability), hence the inclusions. Still this discrepancy may have implications for interpreting overall reach and potential audience effects, and should be considered in subsequent analyses.

Table 3. Overview of talk shows corresponding with inclusion criteria.

Name	Description
Markus Lanz	Airs three times per week on ZDF. Hosted by journalist Markus Lanz. Features 3–5 guests from politics, media, and public life discussing current affairs.
Maybrit Illner	Weekly show on ZDF, aired during primetime on Thursdays. Hosted by Maybrit Illner. Includes 3–4 politicians, experts, and commentators discussing political and social topics
Maischberger. die woche	Weekly show on ARD, aired on Wednesdays. Hosted by Sandra Maischberger. Features 5–6 guests, typically politicians, journalists, and public figures, addressing political and societal events of the week.
Anne Will	Weekly show on ARD, aired on Sundays. Hosted by Anne Will. Focuses on current political discussions with 3–4 guests from politics and expert communities (ended in 2023).
Hart aber Fair	Aired every Monday evening on ARD. Covers current political debates with 3–5 participants, including politicians, experts, and public commentators.
Der Internationale Frühschoppen	Occasional alternative to Presseclub, broadcast on Sundays at 12:00 PM. Features 3–5 international journalists discussing global political developments.
Der Presse Club	Weekly broadcast on Sundays at 12:00 PM on ARD and Phoenix. Features 3–5 German journalists engaging in discussion on a current political issue.

B.   Data Collection Tools & Procedures

I engaged in extensive web-scraping in the last two weeks of February 2025, collecting (1) talk show transcripts or subtitles, and (2) corresponding meta-data. Extracting a comprehensive set of political-talk show uploads - particularly on YouTube - proved to be a challenge due to the multitude of private and public channels uploading given subsets of a political-talk show format.

To scrape, the relevant Python libraries were used. On YouTube, I first manually gathered a dictionary of links of talk show playlists and search pages corresponding to their name. Then I used selenium to automate web-scraping and collect video meta-data of all videos on a given playlist or search page. To fetch transcripts I used youtube-transcript-api, as it is considerably quicker than Selenium. For talk shows on ARD Mediathek I too created a dictionary of links and talk show names, before using yt-dlp to fetch the JSON data corresponding to the respective webpage. I then extracted the relevant meta-data and subtitles in VTT link format.

Table xyz provides an overview of the collected variables per talkshow unit and respective rationales. Variables were either included because they (1) include relevant text data (transcript, title & description), (2) allow for comparison across time and talk-shows (Talk Show Name, Date), (3) or serve to organize the data frame and determine missing values (Link, Video ID, Views, Duration, Channel).

Table 4. Collected variables for each talkshow unit.

Variable	Rationale	Data Type
Title	Topic information	Object
Link	Unique ID	Object
Video ID	Unique ID	Object
Date	Time-series analysis	Datetime
Views (YT)	Reach	Integer
Description	For guest information	Object
Transcript/ Subtitles	Text data	Object
Duration	Filtering none talk shows	Float64
Channel	Explains variation in description & title	Object
Talk Show Name	Comparison across talk shows	Object

C.   Cleaning and Filtering Procedures

Considerable data-cleaning and processing was necessary. The initial unprocessed dataset comprised 2468 talk show episodes: 1922 episodes ranging from 2011 to 2025 scrapped from YouTube, and 469 episodes covering the timeframe 2022 - 2025 collected from ARD Mediathek. Unfortunately it was not possible to collect episodes from Presseclub on ARD Mediathek, as they did not have subtitles.

To clean the data, I harmonized the value format in each column - e.g. transformed all dates to YYYYMMDD. Second, I determined and dropped all entries with missing

transcripts. (After running an additional round of web-scraping for the missing transcripts.) Third, I identified and dropped double values, identified via (1) identical links, or (2) identical titles or dates, given the same talk show format. This was especially important given the potential overlap between the videos collected from YouTube and ARD Mediathek. Fourth, I dropped videos shorter than 33.33 min (2000 seconds) and longer than 100 minutes (6000 seconds). This followed the rationale that videos under 30 minutes generally tended to be interviews, excerpts or commentaries, while videos longer than 100 minutes were specials. Hence, videos were not talk-shows and do not fit the inclusion criteria. It is possible that there are single entries longer than 30 minutes that are not talk-shows. I tried to minimize the chance of including these by reading manually through the titles. Yet, excluding videos ranging from 30 - 40 minutes would likely have excluded talk-shows. This was a trade-off between increasing corpus size and the risk of including non talk-show videos.

D. Dataset Composition

The final dataset includes 1530 talk-shows spanning 2011 - 2025. However, episode distribution per year and talk-show format is uneven. Hart aber Fair, Maybrit Illner, Frühschoppen and Markus Lanz all have at least 15 entries per year from 2020 - 2024. Presseclub has at least 25 entries from 2012 - 2018 (see figure 2). For Anne Will and Maischberger only specific years have entries at all. This uneven distribution highlights challenges in comparing trends across talk-show formats. Yet, following the assumption that PSM talk show agendas, topics and formats are similar, joint analysis to discover general trends and patterns across talk-show formats is possible. Similarly, the distribution of total talk-show episodes across years is uneven. While there are at least 100 episodes per year from 2020 to 2024, the period between 2013 and 2020 includes only 30 to 40 episodes per year (see figure 1). This discrepancy may potentially skew the results, introducing bias in the topics represented within the collected talk shows. Although 30 to 40 episodes still offer ample material for analysis, this imbalance should be kept in mind when interpreting findings.

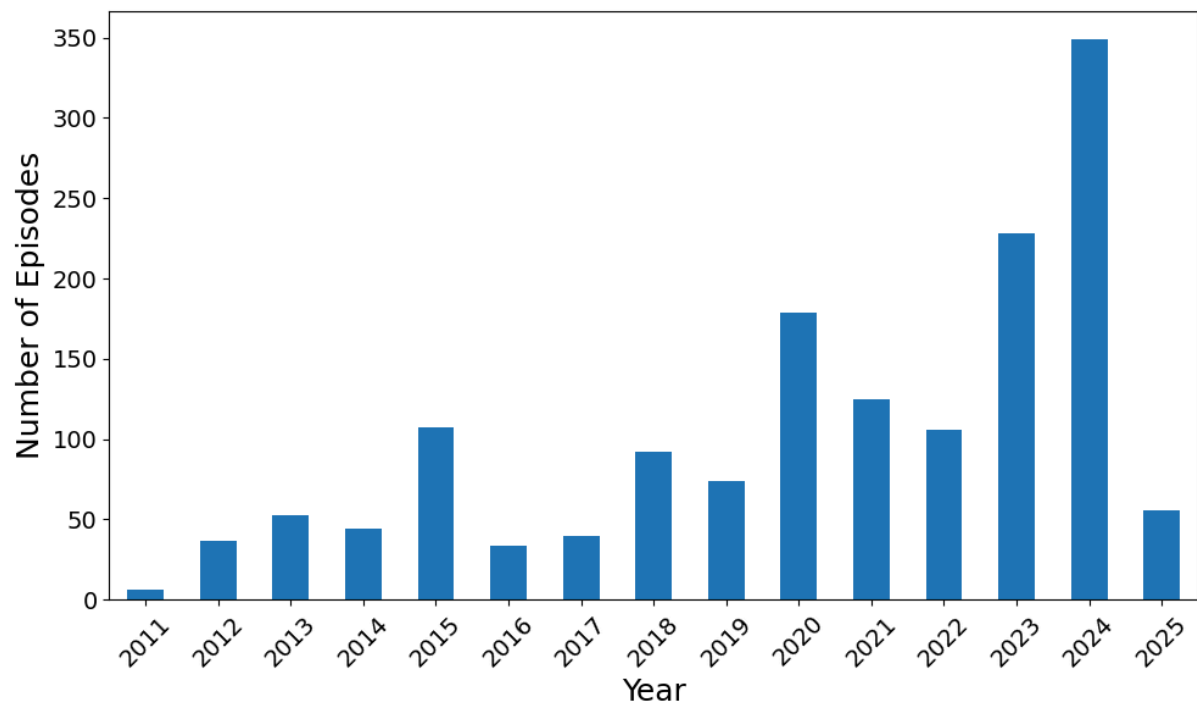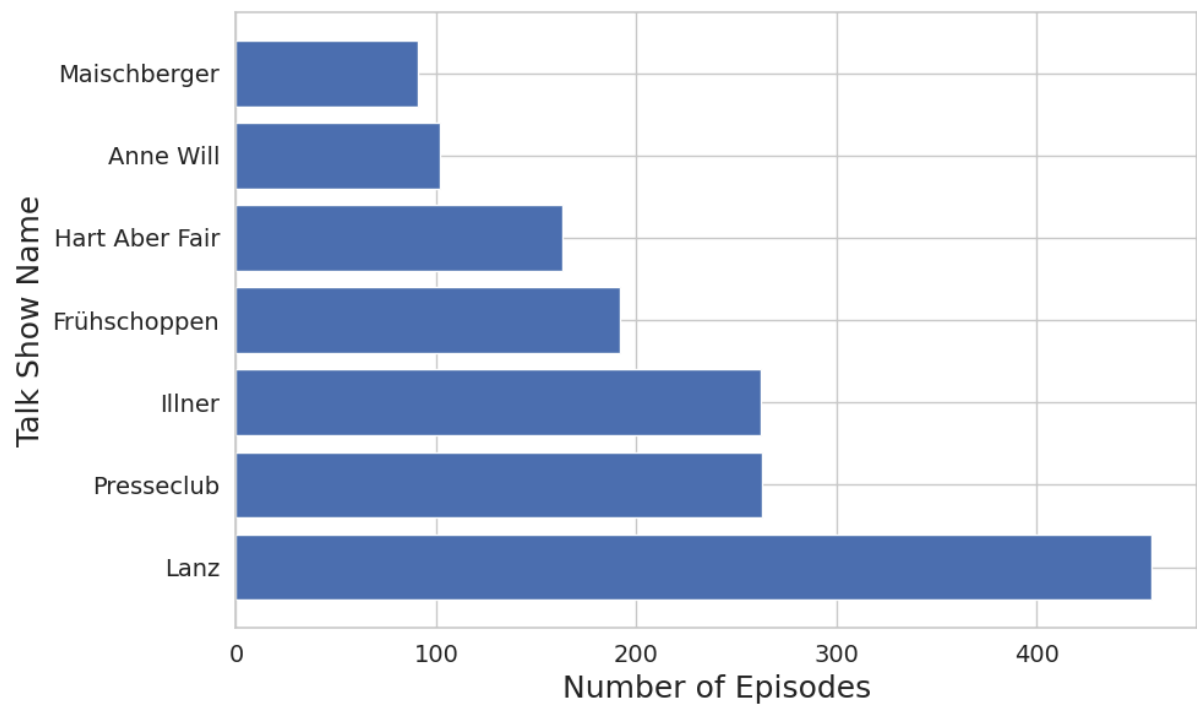Figure 1. Distribution of talk show episodes per year

Figure 2. Distribution of talk show episodes per format

E.   Data Quality Considerations

The main added-value of this dataset lies in the provision of talk-show transcripts. As data was collected from different streaming sources - YouTube and ARD Mediathek - the structure and quality of the subtitles/ transcripts varies. This research thus applied several text-processing techniques to improve and harmonize text data quality (for example see table 5). ARD Mediathek subtitles include noise such as timestamps, VTT format information, and indication of speaker shift.

Table 5. Illustrating preprocessing of ARD Mediathek transcripts.

| 00:00:00.000 --> 00:00:02.120 align:middle <c.textWhite>Diese Untertitel</c> <c.textWhite>sind live produziert.</c> | Diese Untertitel sind live produziert. |

Punctuation, capitalization and spelling, however, are correct. For ARD Mediathek transcripts, regex was used to eliminate (1) timestamps, (2) text between <>, (3) numeration, (4) headers, (5) spaces and lines. YouTube subtitles, on the other hand, are auto-generated. While there is capitalization, there is no punctuation. Further text can be misspelled or wrongly transcribed, meaning that data quality is lower. I thus automatically inserted punctuation. There are thus three transcript columns: an unprocessed one, a harmonized one, and a lemmatized one.

F.   Data Limitations & Future Potential

To conclude, the dataset of political talk show transcripts is subject to two main limitations: (1) an uneven distribution across different talk show formats, and (2) variation in the number of episodes per year. While the former can be reasonably addressed by treating all formats equally, particularly given that they are all broadcast by Public Service Media (PSM) and thus adhere to comparable editorial standards, the latter requires a more careful consideration. Depending on the specific research question, it may necessitate limiting the temporal scope of analysis. Accordingly, this thesis focuses on the period from 2017 to 2025 for the analysis of partisan media bias. Despite these limitations, the dataset will be a valuable contribution that holds potential for a variety of future research applications in the field of computational social science, as demonstrated in the following.

VII.   Methods

Having constructed a novel dataset of German political talk show transcripts, this thesis now outlines the methodological approach used to detect the extent to which political talk shows exhibit (1) discourse visibility bias, (2) participation visibility bias, and (3) tonality bias over

time. Overall, the methodological approach is multi-method, combining Natural Language Processing (NLP) for data extraction, (simple) statistical inference for testing bias, as well as qualitative analysis to interpret patterns over time.

This research focuses on the timeframe between September 2017 and February 2025, thereby addressing the previously mentioned data density concerns, while ensuring to cover two full electoral cycles. Further, this research includes all parties that held seats in the Bundestag at any point during the observation period: Die Linke, Die Grünen, SPD, CDU/CSU, FDP and AfD.

For each bias type, the study constructs standardised indicators, i.e. termed gaps, that capture deviation in political talk show coverage from normatively grounded balance baselines, following work of Eberl et al. (2017) and Wagner (2021). In line with Hopmann (2012b), two benchmarks are used for discourse and participation visibility: a Party System (PS) baseline based on electoral strength, and a Media System (MS) baseline based on polling strength (see table 6). Tonality bias is evaluated against a party-aggregated neutrality benchmark. Each indicator is harmonized into a continuous bounded variable ranging from -1 to +1, thereby enabling cross party and longitudinal comparison.

To assess systematic bias, the study then applies t-tests to test average deviation from balance for discourse and participation bias, comparing electoral periods. This study analyzed tonality bias descriptively due to data sparsity issues. The inferential analysis is then complemented by descriptive trend plots across half-year bins to qualitatively trace the evolution of bias over time and contextualize findings.

Having provided this initial overview of the methodology, this study now turns towards describing each methodological step in depth.

Table 6. Construction of balance baselines

	Discourse Visibility	**Participation Visibility**	**Tonality**
Political System Perspective	Electoral strength: Zweitstimmen Bundestag	Electoral strength: Zweitstimmen Bundestag	Neutral coverage
Media Routine Perspective	Opinion polls: Sonntagsfrage	Opinion polls: Sonntagsfrage	/

A.   Discourse Visibility Bias

To reiterate, partisan discourse visibility bias occurs when a political party is systematically overrepresented or underrepresented in the discussion, as compared to a notion of balanced coverage (e.g. see Eberl et al., 2017a). Partisan discourse visibility thus captures who is talked about.

1. Data Collection: Extracting Political Party Mentions

To identify partisan discourse visibility, it is first necessary to gather all mentions of political parties in political talk show discussions. This research employed regex to match a dictionary

of party synonyms with political talk show transcripts. The party synonyms dictionary matches political party abbreviations with a list of colloquial synonyms, and frequent misspellings of these in subtitle generation, as subtitle software - especially on YouTube - is prone to mistakes.

Dictionary Construction for Party Synonyms

To construct the synonym dictionary, lists of potential party-related terms were first generated using ChatGPT and DeepSeek. These initial outputs were then verified, refined, and supplemented through qualitative assessment. While the use of large language models allowed for broad and efficient coverage, it also introduced the risk of overgeneralization. To mitigate this, manual refinement was carried out to ensure specificity and contextual accuracy. As the author is German - and thus familiar with - colloquial German political language. Along with input from fellow German political science students this aimed to ensure the validity of the dictionary. The final version of the synonym dictionary is presented in Table 7.

Using the dictionary this research identified political party mentions in talk-show transcripts relying on regular expression, extracting the surrounding context and linking each mention with relevant meta-data, such as the talk-show date, title and talk show name. In total, I identified 41,829 mentions of political parties, corresponding to an average of approximately 27 party mentions per talk show episode. However, it is important to note that 20 episodes alone account for nearly one-tenth of all mentions (see Figure 4). These outlier episodes typically focus explicitly on elections or party strategy, which naturally increases the frequency of party references. Figure 3 illustrates the distribution of political party mentions across episodes, highlighting the variation in how intensively parties are discussed in the corpus.

Table 7. Political Party Synonyms

Official Acronym	Synonyms
CDU	CDU, Christdemokraten, Christliche Demokraten, Union, Schwarze, c d u, zdu, cedu, Christdemokratinnen, Christliche Demokratinnen, Christdemokratische Partei
CSU	CSU, Christsoziale, Christlich-Soziale, Bayerische Union, christsozialen, c s u, cesu, zesu, Christsozialinnen
SPD	SPD, Sozialdemokraten, Sozis, Rote, Arbeiterpartei, Genossen, sp d, esspeedee, spdee, Sozialdemokratinnen, Genossinnen, Sozialdemokratische Partei
Grüne	Die Grünen, Bündnis 90/Die Grünen, Ökos, Umweltpartei, Klimapartei, Grün-alternative Partei, grüne, grünen, gruenen, gruene, grüninnen, bündis 90, bundnis 90, Grüninnen, Grüne Partei
FDP	FDP, Liberale, Gelbe, Freidemokraten, liberalen, martkliberale, frei demokratische partei, f d p, fd pee, efdeepee, gelben, Liberallinnen
AfD	AfD, Alternative, Rechtspopulisten, Blaue, Rechtspartei,

	Nationalkonservative, blauen, a f d, af de, aphd, altantive, alternative für deutschland, Rechtspopulistinnen, Rechtspopulistische Partei
Die Linke	d linke, dee linke, lünke, Die Linke, Linkspartei, Sozialisten
BSW	BSW, wagenknecht partei, bündnis sarah wagenknecht, b s w

Limitations

Several limitations, however, have to be considered: Difficulties in correctly identifying party mentions arise if party synonyms also serve as generic political descriptors. This specially holds for Die Linke, where terms like linke, or linken are used both to refer to the political party, but also to indicate general left-leaning political views. The same is true for "Konservative" (conservatives) for the CDU or "Rechte" (right) for AfD. This poses a substantial risk of false-positives, that is incorrectly identifying general ideological references as party mentions.

The choice of including a narrow party synonym set versus a broad one depends on the research goal: For instance, assessments of affective polarization in multi-party systems, are primarily interested in a dichotomy between two opposing camps in society (e.g. the left and the right) (Wagner, 2021). Thus, frequent uses of terms such as left and right might provide information about affective polarization trends. However, as this study is more narrowly focussed on the dynamics of partisan bias by political party, it chose synonyms for Die Linke - and all political parties - in a more narrow sense.

This was tested by comparing a conservative synonym dictionary to one including terms like "left" and "conservative". The overall discursive visibility pattern across political parties remained stable, with the exception of Die Linke, which lost 66% of mentions in the conservative estimate. This is likely due to the fact that labels such as "linke politik" (left politics) referring broadly to left-wing politics, now got excluded. Still this might point towards future research interest in examining right-left dichotomies in political talk show discourse.

Figure 3. Distribution of political party mentions across political talk shows, by party.
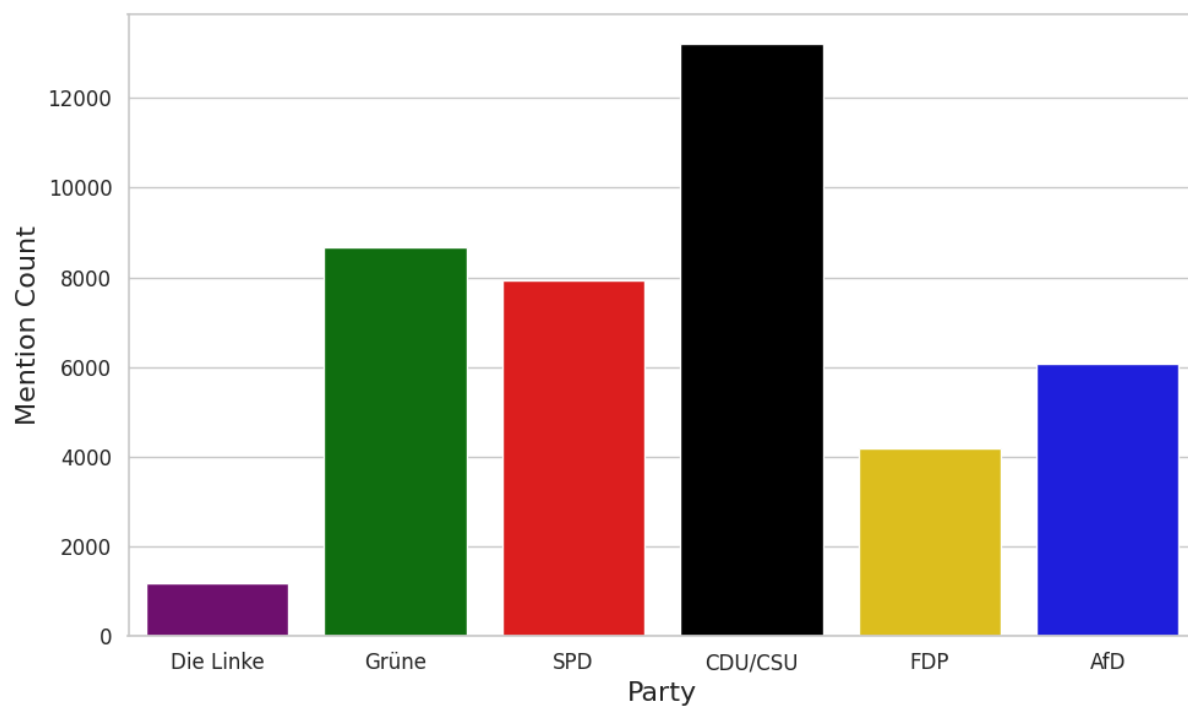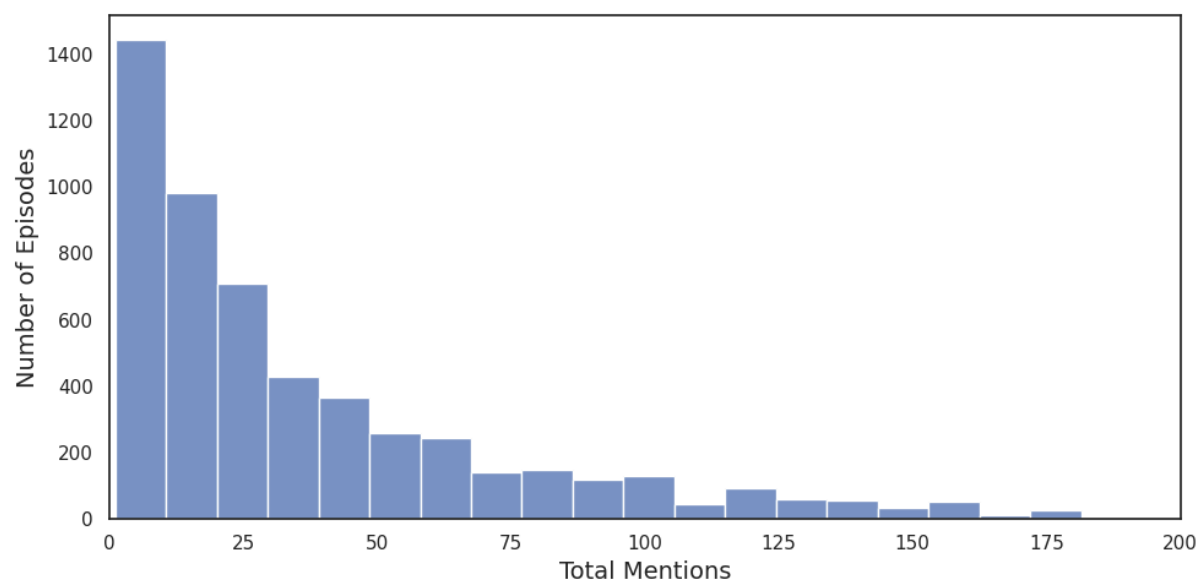

Figure 4. Distribution of mentions across talk show episodes.

2. Operationalization

Partisan discourse visibility bias occurs when a political party is systematically over- or underrepresented in political talk show discussions, relative to theoretical balance benchmarks. This analysis is conducted at the level of talk show episodes.

Balance Benchmarks: Party System and Media System

Following Hopmann et al. (2012b) this research constructs balance benchlines for both the party- and media system perspectives (for discussion see section IV.C).The political system perspective argues that media coverage of political parties ought to reflect their electoral strength (Hopmann et al., 2012b). I established the political system's balance baseline based on the share of votes, namely the distribution of second votes (Zweitstimme) for the Bundestag. To reiterate, this assumes a stable level of media coverage for each party between electoral cycles.

The media routine perspective argues that media balance ought to reflect evolving newsworthiness of political actors. To establish the media routine balance baseline, this research relies on Sonntagsfrage opinion poll data (again following Hopmann et al.'s (2012b) suggestions), collected and merged from (Statista, 2024; Forschungsgruppe Wahlen, 2017). The Sonntagsfrage, conducted by Infratest, captures voting intention of a representative sample of individuals, every Sunday (for survey design see infratest dimap (n.d.)). Although having faced criticisms regarding its validity/ accuracy (Gschwend et al., 2018), this research chooses the Sonntagsfrage based on its high granularity and data availability during the whole time-time frame of analysis.

Normalization & Construction of Visibility Data

To ensure valid comparisons and enable a zero-sum logic, party shares in both the Media System (MS) and Party System (PS) baselines are normalized. Only parties that were at some point represented in the German Bundestag during the observation period are included, so that party shares in each baseline sum to one. In addition, to prevent visibility gaps from being calculated only for parties mentioned in a given episode, which could artificially inflate overrepresentation, this research constructed a complete matrix that includes all six major parties across all talk show episodes. If a party is not mentioned in an episode, it is still included with zero mentions. This approach thus treats absence from discourse as visibility data and ensures that the sum of party visibility shares in each episode equals one.

Gap Indicator Construction

For each political party, this research calculates the discourse visibility gap at the episode level as the main indicator of discourse visibility bias. Discourse visibility, thus, is operationalized as the difference between the observed visibility share of a political party x relative to the expected share - given the PS and MS balance baselines in a political talk show episode e. This discourse visibility gap is a continuous bounded variable ranging from -1 to +1, thereby establishing the size and direction of the effect.

Formalized,

$$Discourse\ Visibility\ Gap\ {}^{PS}_{x,e} = Visibility\ Share_{x,e} - Electoral\ Share_{x}$$

-

$$Discourse\ Visibility\ Gap\ {}^{MS}_{x,e} = Visibility\ Share_{x,e} - Polling\ Share_{x}$$

Where,

$$Discourse\ Visibility\ Share_{x,e} = \frac{\sum Mentions_{x,e}}{\sum Mentions_{all\ parties,\ e}}$$

3. Statistical & Descriptive Analysis

Corresponding with research question 1, to examine whether a given party experiences discourse partisan media bias, i.e. the systematic occurrence of over- or underrepresentation as measured through the discourse gap - this research conducts a weighted one-sample t-test per electoral period (for formal hypothesis see table 8). This test assesses whether, on average, a party's visibility deviates significantly from the expected baseline during each governing period.

Table 8. Formalization of hypothesis' to test partisan media bias

Perspective	Null Hypothesis (H_0)	Alternative Hypothesis (H_1)
Party	$H_0: \mu(Gap\ {}^{PS}_{x,t}) = 0$	$H_1: \mu(Gap\ {}^{PS}_{x,t})\ != 0$
MS	$H_0: \mu(Gap\ {}^{MS}_{x,t}) = 0$	$H_1: \mu(Gap\ {}^{MS}_{x,t})\ != 0$

The focus on the difference between relatively long time-frames of electoral periods - here 2017 to 2021, and 2021 to 2025 - is theoretically motivated in order to answer H1, namely that governing parties experience an incumbent discourse visibility bias. Consequently, if incumbent parties have a significant positive discourse gap during their governing period, this research will accept H1. Methodologically, the long time-frame ensures that observation size is sufficiently large, especially relevant for participation visibility bias, as will be outlined later. This choice of time-frame further implies that research question two on the evolution of discourse visibility bias is primarily answered in regards to a comparison between two electoral periods.

The choice to conduct a weighted one-sample t-test is motivated by the fact that some episodes feature substantially more mentions of parties than others. For the t-test, each episode's discourse visibility gap is treated as one observation. Yet, especially in a

multi-party context, where smaller parties might be mentioned only briefly or inconsistently - a few low mentioned episodes can strongly skew results. Weighting thus reduces the influence of outliers and ensures that episodes with more coverage contribute more to findings.

Finally, next to inferential statistics, this research also carries out an extensive descriptive analysis, by plotting average discourse gaps in 6 month time intervals. The start point is September 2017 aligned with the federal elections, ensuring that timebins follow electoral cycles. This will contextualize the inferential analysis, particularly as fluctuation in bias might occur in short event horizons.

Limitations

The statistical analysis has several limitations, and should rather be seen as an exploratory first step. While normality should hold given the central limit theorem (for discourse and participation visibility given the long-timeframe), limitations relate to violations of the independence assumption: First, mentions within a single episode are inherently interdependent, as party visibility is shaped by the dynamics of a shared conversation. Second, episodes within the same week or from the same talk show format are likely correlated, as they respond to the same news cycle, or editorial framing. This thus creates dependence both in the guests that participate (participation visibility) and topics discussed (discourse visibility). Such clustering violates strict independence and could lead to underestimated standard errors. Thus, it is important to see the statistical tests as an exploratory first step to claim significance with more elaborated models later.

B.   Participation Visibility Bias

Partisan visibility occurs if a political party is systematically over or underrepresented among talk show guests, as compared to a notion of balanced representation. It thus relates to the amount of direct coverage that representatives of political parties receive, capturing who talks. I employ the party system- and media system balance benchlines defined in table 6 and elaborated on section IV.D.

1. Data Collection: Identification of Guests and Affiliations

Evaluating partisan participation visibility in political talk shows requires identifying both talk show guests and their political affiliation. This involves two major challenges: (1) Extracting names of participations from talk show meta data, and (2) linking them to formal partisan affiliations. As manually determining the party affiliation of thousands of named individuals mentioned in talk shows would exceed the scope of this study, I limit the scope to formal political actors, i.e. elected German politicians. The approach in short thus is to match participants identified in political talk show text through Named Entity Recognition (NER) with politician reference databases constructed relying on Wikipedia.

Name Entity Recognition

First, this research applied NER using spaCy's de_core_news_sm (tailored to German) model to (1) the description, (2) the title, and (3) the first 15 lines of transcript (for model evaluation see Explosion (n.d.)). My qualitative analysis had shown that many descriptions and titles included guest names. Further, moderators tend to introduce and open guest interactions in the first 15 lines of political talk show transcripts. NER yielded approximately 12,000 unique entities. This thus included considerable noise, yet offering a set from which to identify guests.

Politician Reference Dataset Construction

Second, to link named entities to political affiliations, this research constructed a comprehensive list of German politicians relying on Wikipedia (Wikipedia contributors, n.d.-a to n.d.-g). Concretely, it included (1) members of the Bundestag (since 2013), (2) German members of the European Parliament (since 2014), (3) Heads of German federal state governments, (4) manually curated additions. This led to 1,419 unique politicians affiliated with either SPD, CDU/CSU, FDP, Grüne, Die Linke or AfD.

Matching Strategy: Identification of Guests

Third, to match NER-extracted entities with politicians, this research applied fuzzy matching (similarity threshold of 0.9). Approximately 5,000 entities got matched. I asked ChatGPT to identify likely false positives among the matched last names, manually validated them, and excluded erroneous entries. I then removed multiple appearances of the same guest in the same talk show, and excluded "star politicians" such as Angela Merkel and Olaf Scholz, following the recommendation by Kim et al. (2022) - i.e. it is unlikely that Angela Merkel participated 500 times in political talk shows.

Fourth, in order to limit the impact of entities mentioned in the discussion, but not being guests, I restricted participation counts to maximum one guest per party per episode. This aligns with previous studies having found that approximately 40% of talk show guests are politicians (Fröhlich & Hillje, 2020). Given an average of four guests per episode this implies 1-2 politicians per show, where it is unlikely that both come from the same party. This final step produced a dataset of 2,702 uniquely identified politician guest appearances - linked with their party affiliation. Figure 5 shows the distribution of guests by party affiliations.

Figure 5. Party Guest Counts (Max 1 Guest per Party per Episode)
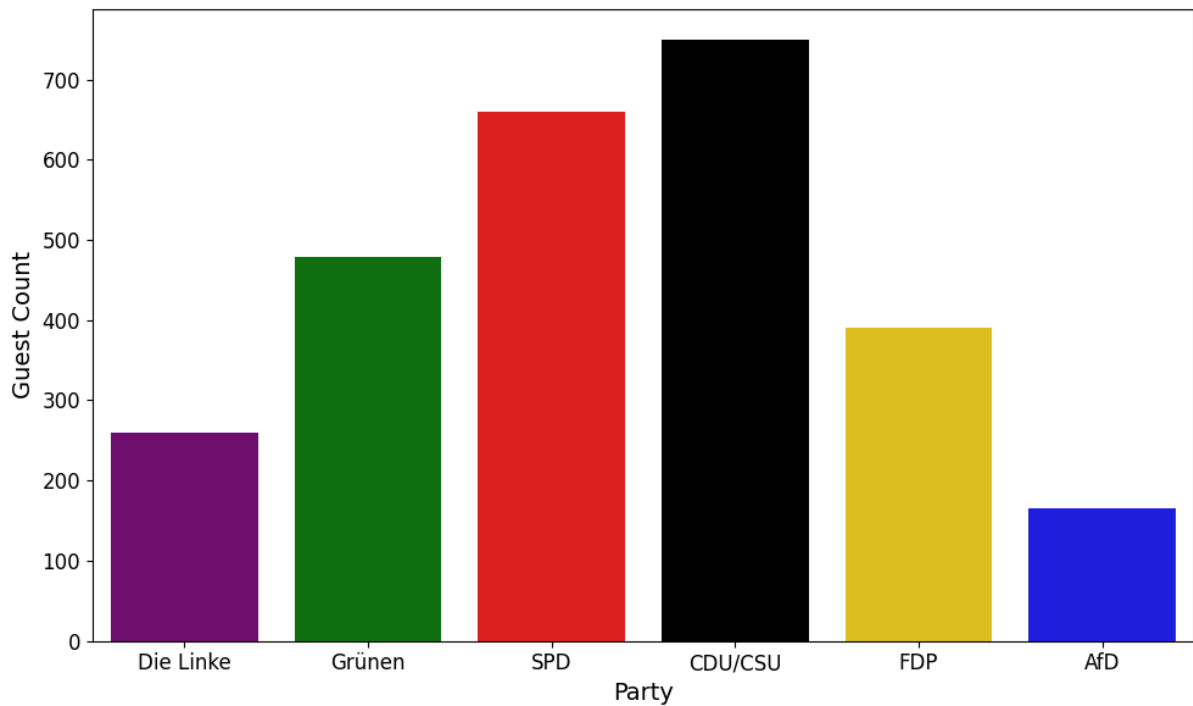
Limitations

While this approach presented a feasible method of extracting guests and linking them to party affiliation, several limitations persisted: First, this method likely captured some entities mentioned in the discussion, rather than participating. Based on expected proportions, the theoretical maximum number of political participants across 1,530 talk shows is 2,448 (assuming 40% politician presence × 4 guests × 1,530 episodes). The identified number (2,702) slightly exceeds this, indicating potential inclusion of some non-speakers. Yet, given the high N this research is confident that the inclusion of non-speakers will not skew the results (and rather be a measure of discourse visibility bias).

Second, this approach excludes guests who are not elected politicians—for instance, political commentators, journalists, or experts affiliated with ideologically aligned think tanks—are not captured by this method. As such, participation visibility in this analysis is limited to formal political actors.

Third, unlike Kim et al. (2022), who analyzed cable news coverage of U.S. politicians using precise screen-time data, this research does not track how long each participant speaks or appears on screen. Rather, I assume that talk-show guests all participate equally, that is, have the same screen time. While this does not account for charismatic or famous politicians dominating a given political-talk show, I believe that this measure provides a reasonable approximation. To conclude, further analysis might use more technically sophisticated methods such as speaker segmentation or diarization in noisy talk show transcripts.

2. Operationalization & Analysis

The operationalization and measurement of participation partisan visibility is identical to the one for discourse partisan visibility (see section VII.A.2), with the distinction that the variable of interest is party x guests per episode t, rather than mentions.

Formally,

$$Participation\ Visibility\ Gap\ _{x,e}^{PS} = Visibility\ Share_{x,e} - Electoral\ Share_x$$

$$Participation\ Visibility\ Gap\ _{x,e}^{MS} = Visibility\ Share_{x,e} - Polling\ Share_x$$

Where,

$$Participation\ Visibility\ Share_{x,e} = \frac{\sum Guests_{x,e}}{\sum Guests_{all\ parties,e}}$$

Again, I test whether participation visibility of a given party during a governing period is significantly different from zero, employing an unweighted on-sample t-test as the number of guests across episodes is expected to be constant (see table 8 for hypothesis). This research will accept H2 - i.e. incumbent parties being systematically overrepresented among political talk show guests - if incumbent parties have significant positive participation gaps. Statistical assumptions are discussed in section VII.A.3

C. Tonality Bias

Third, this study assesses tonality bias, that is the systematic (dis)favouritism of one political party in political talk show discussions relative to the coverage of other parties. Tonality captures how political parties are talked about, i.e. their valence.

1. Sentiment Analysis

To assess the tonality of political parties, this research uses the XLM Roberta-German Sentiment model to identify the sentiment of the sentence surrounding party mentions, operationalized as the emotional tone with which each party is discussed.

Model Selection
While the literature on partisan bias has predominantly relied on manually approaches to coding documents (on varying levels) as positive, neutral or negative and subsequently aggregating codes (Eberl et al., 2017a), this is not feasible for this research due to the size of the corpus. Hence, automatic sentiment analysis is used.

Sentiment analysis has been defined as a powerful tool to "mine people's attitudes, emotions, appraisals, and opinions about issues, entities, topics, events, and products" (Cui et al., 2023, p. 8470). Yet, the accuracy of sentiment analysis is domain-specific - different types

of corpora exhibit different characteristics (Cochrane et al., 2022, p. 99). Here, two key characteristics of the corpus matter: First, the text is German, and second it comprises transcripts of political discussions, including the expression of emotions and sentiments based on intonation, facial expression, and body language - all not captured in text. Yet, Cochrane et al. (2022) find that while transcripts may not fully capture emotional arousal, they do reliably convey sentiments, pointing towards the utility of automated sentiment analysis.

I chose the XLM-RoBERTa-German Sentiment Model (Ssary, 2022), which fulfils three criteria: It is (1) able to accurately assess German text, (2) classify political and informal text, and (3) and has been evaluated positively in former research. Concretely, XLM-RoBERTA has been fine-tuned on over 200,000 German-language sentiment analysis samples and achieves 87% accuracy, outperforming other German Sentiment analysis models (Ssary, 2022). Generally, transformer-based models - such as RoBERTA - are currently considered the state of the art (Hellwig et al., 2024; Kolb, 2022).

For each (context) document, XLM-RoBERTA determines the probability of the chunk being positive, neutral or negative. I thus measure whether the context surrounding a political party is negative, positive or neutral, serving as a proxy for the tonality with which a particular party is discussed.

Chunking Context Windows

This research applies sentiment analysis to the single sentence - from now on referred to as context - in which a party mention is embedded in. This follows the goal of creating context windows that capture the sentiment associated with the party, but not any other sentiments. Catelli et al. (2022) point out the problem of the presence of multiple different sentiments in the same text (p15). Thus, if choosing bigger context windows - e.g. 3 sentences - sentiments might refer to different topics or entities already, particularly given that (heated) political talk-show discussion might quickly shift between topics and sentiments. While this chunking choice does not fully exclude "sentiment noise", the goal is to reduce it as much as possible.

In fact, this research tested both three sentence context windows - i.e. the political party mentioned being in the middle sentence - and one sentence window, finding strong differences in sentiment classification, despite using the same model pipeline (see figure 6). For three sentence context windows 42.1% of the total political partisan mentions exhibit negative sentiment, while for one sentence context windows only 9.6% do. On a methodological note, however, this highlights the importance of theoretically justifying assumptions. In fact, the strong difference in sentiment identification is interesting to reflect on, and might be worth investigating for further research. Possibly: Three sentence context windows likely capture different topics and entities. The political talk show discussion, in that sense, tends to be more negative than the direct mention of a political party, where - so one could interpret - speakers tend to be more civil than when discussing a topic. This is in line with research classifying political talk show discussions as conflict driven (Wagner, 2008), but interestingly this does not fully seem to extend to the immediate context of a political party mention, which are more civil.

Figure 6. Difference in political party sentiment distribution by context window, given the same model pipeline.
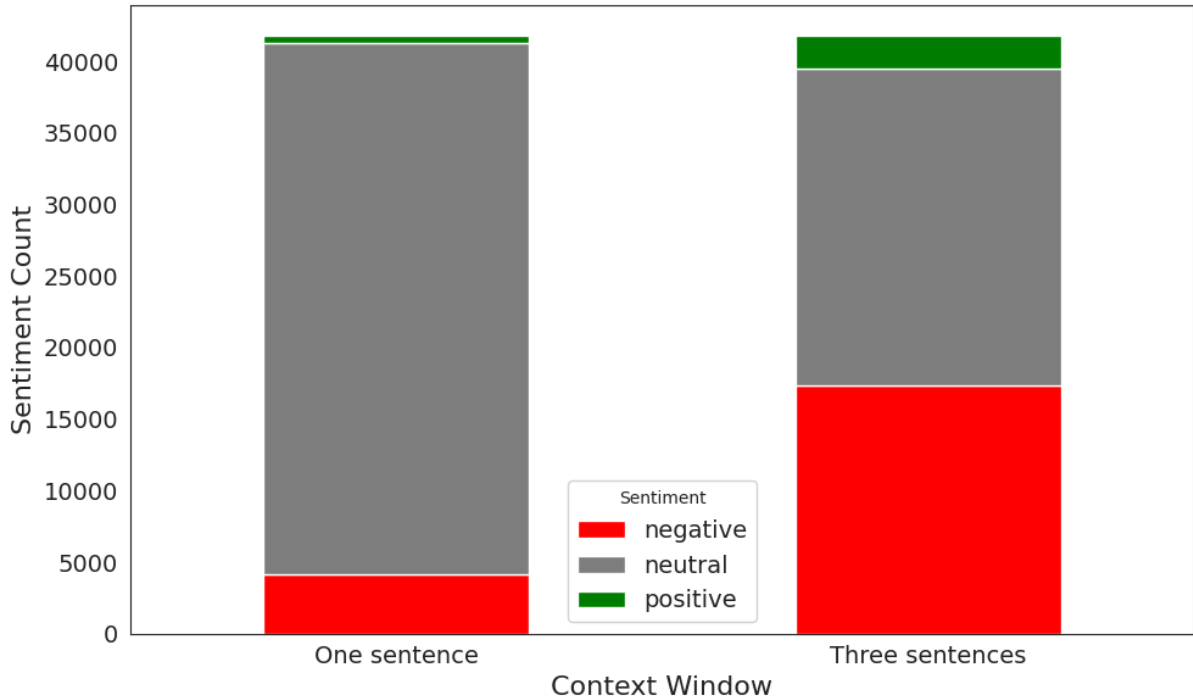
Ultimately, here the scope of this research is identifying tonality partisan media bias - hence, in line with the conceptualization of tonality bias - this research is interested in the valence political parties themselves receive - not necessarily the valence of the topics they are located in. Thus, given theoretical motivations this research chooses to proceed with the sentiments associated with the one context window surrounding political party mentions.

2. Operationalization

Having extracted the sentiments of the sentence in which political parties are mentioned, this research - in line with Eberl et al. (2017b) - measures tonality bias as the systematic deviation of each party's specific tonality from the average tonality of all parties, in a time bin.

Party System Neutrality Benchmark

The average tonality score across all parties is used as the Party System (PS) media balance baseline, following the approach of Hopmann et al. (2012b). This study does not incorporate a Media System (MS) baseline for tonality due to conceptual and operational challenges in defining media-driven expectations of tone across political actors.

Following a PS perspective operationalizing balanced media coverage is quite straightforward: Hopmann et al. (2012b) argue that balanced tonality requires neutrality. In absolute terms this would require that every political party is covered in a neutral tone. However, since this study analyzes only a single medium—political talk shows—and the theoretical relevance of tonality bias lies in its potential to shape voter behavior and attitudes (e.g., Boomgaarden & Semetko, 2012), the emphasis should rather be on the relative

consistency across parties Therefore, following the PS perspective, tonality bias is absent if all political parties are evaluated in a similarly toned manner, regardless of whether the tone is neutral, negative, or positive. This assumes equivalent media effects across parties and ignores audience-side factors like selective exposure (e.g. see Geiß & Schäfer, 2017).

The MS perspective, on the other hand, is more complicated to operationalize, as it relates to parties dynamic newsworthiness: Defining what constitutes justified variation in tone over time, based on changes in a party's newsworthiness - or how favorable or unfavorable a political party is publicly perceived - is difficult. The first challenge relates to measuring changes in parties' newsworthiness, that is how positive or negative they are publicly perceived. Sheafer (2001) for example, uses expert surveys to capture political charisma or media appeal. To account for a timeframe of ten years in retrospective here, however, is difficult. For a longitudinal study focussing solely on PSM outlets such as this one, Hopmann et al. (2012b) suggestion of using shifts in opinion poll support may serve as a proxy for such newsworthiness, under the assumption that media tone should become more favorable toward parties gaining in popularity and more critical toward those in decline. Thus, applying the MS perspective would require comparing changes in sentiment tone for party x to changes in its public support, as indicated by polling trends over time. Moreover, applying a dynamic MS baseline also necessitates identification of a starting point: Even if tonality and polling move in the same direction, a biased starting level would still indicate structural bias. One possible solution might be to establish a baseline level of tonality bias using electoral results, and then assess whether subsequent changes in tone align proportionately with changes in public support. However, due to this conceptual and operational complexity as well as limited scope of this research, I decide to disregard an MS-based balance benchmark to tonality bias, relying solely on the PS lens. Here, future research could explore the extent to which tonality trends in political talk-shows correlate with opinion poll dynamics, investigating the interaction between changes in public opinion and media tonality over time.

To conclude this discussion, for the analysis of tonality bias I conceptualize balanced coverage as neutral coverage - that is equal across all parties

Indicator Construction

To measure and compare each party's deviation in tone from a neutral Party System (PS) baseline, this study calculates the Tonality Gap for party x at time t. A positive gap indicates that party x is portrayed more favorably than the average across parties, while a negative gap indicates the opposite.

Formally:

$$Tonality\ Gap_{x,t} = Tonality\ Score_{x,t} - \overline{Tonality_t}$$

Where,

$$Tonality\ Score_{x,t} = \frac{P_{x,t} - N_{x,t}}{P_{x,t} + N_{x,t}}$$

And,

$$\overline{Tonality}_t = \frac{1}{k} \sum_{x=1}^{k} Tonality\ Score$$

The Tonality Score is calculated by subtracting the number of negative mentions (N) from positive mentions (P) of a party and dividing the result by the total number of positive and negative mentions in a given time t. This yields a bounded, directional metric ranging from −1 (entirely negative) to +1 (entirely positive), with 0 indicating balanced tone. Neutral mentions are excluded under the assumption that they do not contribute to tonal bias. As previously discussed, tonality bias refers to the systematic favoring or disfavoring of a party relative to the tone applied to others. Even if all parties are covered with a negative tone, balance is preserved if they are treated equally. Thus, the baseline for balance is the mean tone across all parties at time t.

3. Analysis

To explore differences in party-specific tonality, this research conducts a descriptive analysis of how tone evolves over time across political parties. While this provides valuable insights into longitudinal trends, statistical testing (e.g., t-tests) is not pursued due to methodological constraints. Specifically, the use of a one-sentence context window results in a sparse number of observations per party–time in combination, and in many cases, a lack of variance, with only negative sentiments recorded. As figure 7 shows this is particularly noticeable for smaller parties such as die Linke and FDP. Thus, since neutral mentions are excluded from the Tonality Score by design, the resulting datasets frequently fail to meet the assumptions required for robust statistical inference. Thus, tonality bias is assessed descriptively rather than inferentially.

Figure 7. Heatmap of sum of positive and negative mentions per party per time bin
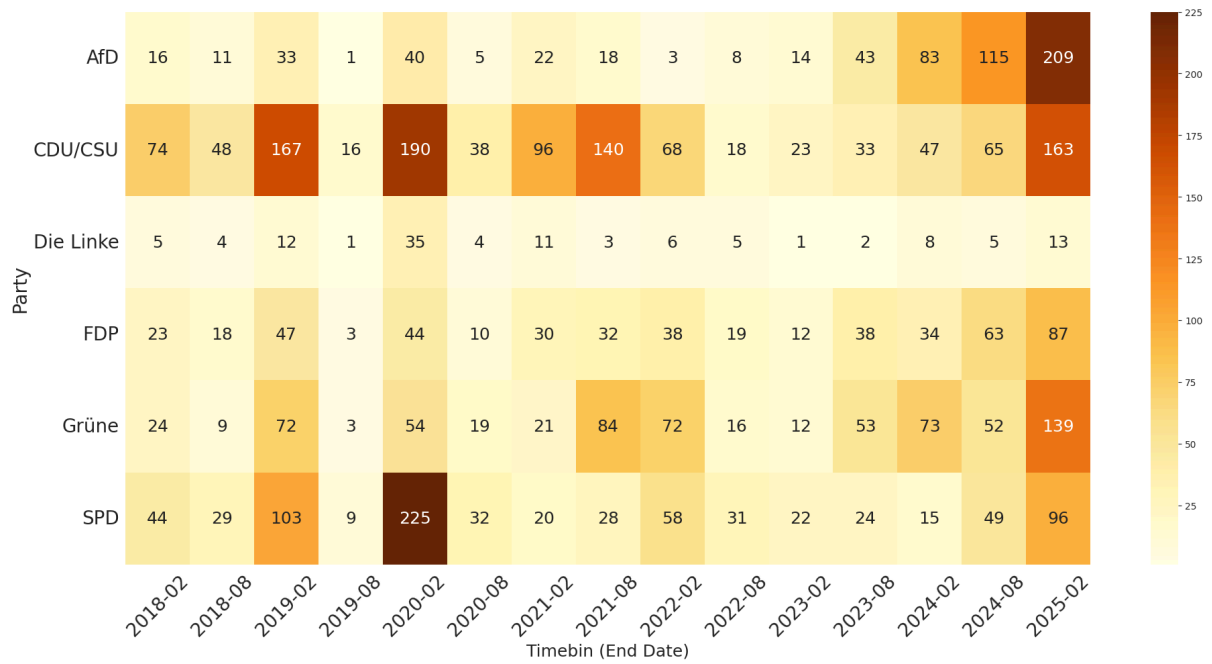
D.   Limitations

The methodological approach of this research has several limitations. First, this relates to the uneven distribution of talk show formats across the dataset. In particular, the period from 2017 to 2020 is predominantly composed of episodes from Frühschoppen and Presseclub. As outlined earlier, these shows differ in format and viewership from other evening talk shows such as Anne Will or Maybrit Illner, potentially influencing the nature and tone of discussions. This variation raises concerns about the comparability of early data with later periods. However, since all indicators were aggregated at the time-bin level, and given the significant increase in episode diversity and volume from 2020 to 2025, the results for the latter period are more robust and generalizable.

Second, the operationalization of tonality bias exclusively focuses on how political parties are talked about, rather than how they speak themselves during political talk shows. While this captures external perceptions and evaluations, it omits the tonality of political actors' own discourse. Analyzing this would require accurate speaker diarization, segmentation, and topic attribution. These technical challenges that exceed the current scope. However, such an approach could offer valuable insights into strategic communication and elite polarization, and is therefore recommended for future research.

Third, this study's approach (e.g. for statistical inference) relies on the assumption that episodes from different political talk shows on German Public Service Media (PSM) outlets are comparable and can be treated as originating from a single, homogeneous media environment. While all selected shows adhere to the same legal mandates of objectivity and balance under the Medienstaatsvertrag (2020), variation in editorial styles, guest selection, and framing decisions may nonetheless exist. Treating all shows as methodologically

equivalent might obscure format-specific nuances, and thus the findings should be interpreted with caution regarding their generalizability across individual talk shows.

Fourth, limitations arise due to concerns regarding the accuracy of automated data extraction methods, employed for the identification of political party mentions (discourse visibility), guest appearance (participation visibility), and sentiment classification (tonality). As outlined in the respective sections, each introduces potential sources of error. While these limitations caution against overinterpreting individual points, this should be mitigated given aggregation across large standardised time-bins, i.e. extraction errors should be randomly distributed over time and across political parties. Then, the comparative and longitudinal analysis should still offer a coherent and meaningful depiction of media bias in political talk shows.

Having summarized the limitations, table 9 provides a summary of the operationalization of each partisan media bias dimension, guiding the subsequent results section.

Table 9. Overview of Partisan Media Bias Dimensions and Indicators

Partisan Media Bias Dimension	Focus	Conceptualization	Partisan Media Bias if..
Participation visibility	Which political parties are present?	Systematic over-/ underrepresented among talk show guests (screentime)	Average Participation Visibility Gap in electoral period is statistically significant
Discourse visibility	Which parties are being talked about?	Systematic over-/underrepresented in political talk show discourse mentions	Average Discourse Visibility Gap in electoral period is statistically significant
Tonality (of discourse)	How are parties talked about?	Systematic (dis)favorability in sentiment expressed in political talk show discourse	Descriptive Analysis

VIII.   Results

In the following this thesis will present its findings on (1) the extent to which German political talk shows exhibit discourse visibility, participation visibility, and tonality bias towards each political party, and (2) the evolution of these biases as compared between the two electoral periods of 2017 - 2021 and 2021 - 2025.

To anticipate the findings: First, political parties exhibit consistent partisan media bias across several dimensions in at least one electoral period, though direction and magnitude of the bias vary. Notably, Die Grünen consistently benefits from strong positive partisan media bias, across both electoral cycles. Conversely, Die Linken and the AfD are consistently subject to negative bias. While discussed in depth in the following, appendix 1 and appendix 2 provide the t-statistics for discourse- respectively participation visibility gaps. Second, this

study finds qualified support for the incumbency benefit hypothesis, suggesting that governing parties indeed benefit from increased visibility both in terms of discourse- and participation visibility. However, here, the SPD is a notable exception, warranting further inquiry. This thesis now continues to provide an in-depth analysis of partisan media bias in German political talk shows for each political individual. This will be followed by a synthesis of the key themes and findings.

Table 10. Classification of analyzed German Political Parties based on the Comparative Manifesto Project.

Political Party	Classification	Description	Electoral Period	
			17 - 21	21 - 25
Die Linke	Socialist and Other Left Parties	Advocate for state intervention in the economy, social equality	10%	5%
Die Grünen	Ecological Parties	Emphasize environmental protection, grassroots democracy, and nonviolence	10%	16%
SPD	Social Democratic Parties	Support welfare state expansion, social justice, and regulated capitalism	22%	28%
CDU/CSU	Conservative Parties	Focus on traditional values, national sovereignty, and market-oriented policies	35%	27%
FDP	Liberal Parties	Prioritize individual freedoms, free markets, and limited government intervention	11%	12%
AfD	(Extreme) Right Populist Party	Focus on strict immigration control, law-and-order, and protection of national culture and identity	13%	11%

A.   Partisan Media Bias by Political Party

Before commencing the in-depth analysis per political party, non-German readers are pointed towards table 10, which provides a classification of the analyzed political parties based on the Comparative Manifesto Project (Volens et al., 2020). Further summary graphs plotting the evolution of discourse visibility- (figure 8), participation visibility- (figure 9), and tonality (figure 10) are provided.

1. Die Linken: Consistent Negative Bias

Political talk shows display a consistent pattern of moderate but statistically significant negative discourse and participation visibility bias against Die Linke, as well as on average negative tonality (see table 11). Die Linke is a Left Party (Volens et al., 2020), that did not hold a government position in the analysed electoral periods.

Table 11. Partisan Bias Summary - Die Linke

Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	-0.061 (***)	-0.052 (***)
Participation Visibility	-0.040 (**)	+0.015 (*)
Tonality	-0.03 (descriptive)	-0.14 (descriptive)

First, in terms of discourse visibility, in both election periods, Die Linke receives moderately but significantly less coverage than would be expected based on their electoral strength. The discourse visibility gap is –6.1% in 2017–2021 and –5.2% in 2021–2025, both statistically significant (p < .001). Second, in terms of participation visibility, die Linke is moderately but significantly underrepresented by 4% in 2017 and 2021, while gaining a slight overrepresentation by 1.5% between 2021 - 2025. This is interesting given the electoral success of Die Linke in the February 2025 elections, potentially suggesting that (slightly disproportionate) media attention, i.e. being visible but also having the opportunity to present their ideas - is associated with electoral outcomes. Third, clear conclusions regarding the tonality of discussions mentioning Die Linke are difficult due to the lack of observations (see figure 7). Descriptively, this research observes a moderate negative tonality bias of 3% for die Linke between 2017 and 2021, and a strong negative tonality bias of 14% more than neutral coverage would mandate between 2021 and 2025. This, however, is likely influenced through outliers.

Qualitatively analyzing the evolution of both participation and discourse visibility over 6 month time bins illustrates a constant and gradual evolution (see figure 11). This suggests that the Die Linke is relatively unaffected by issue salience. Tonality is subject to stark fluctuations, likely due to dominant outliers.

Figure 11. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for Die Linke.
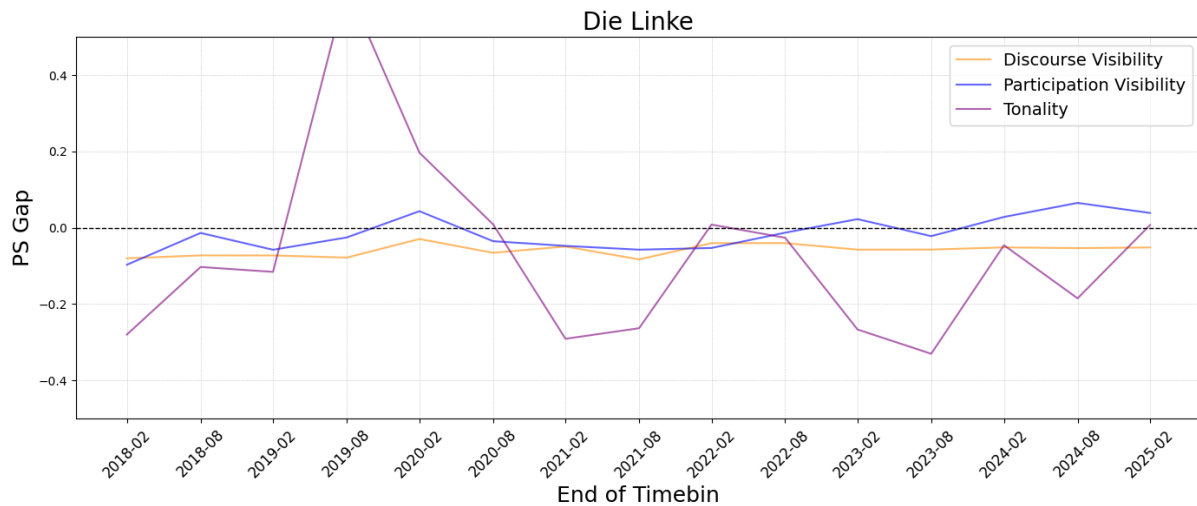
2. Die Grünen: Talk Show Favorite

Across all political parties, Die Grünen appears to be the political talk shows' clear favorite, consistently receiving strong, statistically significant, and positive bias in both discourse visibility and participation visibility, accompanied by a generally favorable tonality (see table 12). Die Grünen are classified as an ecological party, (originally) focussed on environmental protection (Volens et al., 2020). While initially in opposition between 2017 and 2021, die Grünen became incumbent between 2021 and 2025.

Table 12. Partisan Bias Summary - Grünen

Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	+0.087 (***)	+0.102 (***)
Participation Visibility	+0.044 (**)	+0.053 (***)
Tonality	0.13	0.06

Between 2017 and 2021, in terms of discourse visibility, they were overrepresented significantly by 8.7% relative to their electoral share. Similarly, although less pronounced, they also enjoyed a significant 4.4% overrepresentation in participation visibility, suggesting that they were invited to political talk shows more frequently than their electoral strength would mandate. Additionally, Die Grünen received 13% more positive tonality than a neutral benchmark, although results for this period should be interpreted with caution due to limited data density.

Between 2021 and 2025, their already high visibility further increased. Discourse visibility rose to a 10.2% overrepresentation, and participation visibility to 5.3%, both being statistically significant. Descriptively, this continued after Die Grünen entered government as a coalition partner. In terms of tonality, they receive 6% more positive mentions than neutral coverage would imply, decreasing by half compared to 2017 to 2021. Yet, low data density in the 2017 to 2021 period implies cautious analysis of tonality findings there.

The positive partisan media bias for Die Grüne between 2021 and 2025 provides descriptive support for H1 and H2, predicting that incumbent parties benefit from increased media visibility. First, Die Grünen already exhibited high visibility and positive coverage before entering government, indicating that their media prominence cannot be solely attributed to incumbency. Second, a comparison of the PS and MS (Polling Share) baselines pre 2021 reveal a divergence (see figure 12): while the party was overrepresented based on electoral strength (PS), their MS visibility gaps in fact indicate negative partisan media bias. Hence, their media visibility lagged behind their polling relevance. Thus, following an MS perspective - conceptualizing balance in terms of polling share -, Die Grünen in fact experienced an incumbent bonus after coming to government, thus offering qualified support for H1 and H2.

A qualification of these findings emerges when plotting each visibility gap for Die Grünen over time bins, which reveals strong fluctuations, with individual gaps shifting by up to 15 percentage points (see figure 12). This pattern contrasts with the more stable media coverage observed for Die Linke and potentially suggests that media salience for Die Grünen is more reactive to issue salience or other episodic factors, such as political scandals or changes in public opinion.

Moreover, these fluctuations highlight a key limitation of averaging media bias across electoral periods: significant variability within electoral periods may be masked when using aggregated scores. In other words, visibility shifts do occur within election cycles. Despite this volatility, however, the overarching finding remains intact: Die Grünen consistently receives positive partisan media bias, both in terms of coverage volume and tone, throughout the observed time frame.

Figure 12. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for Die Grünen.
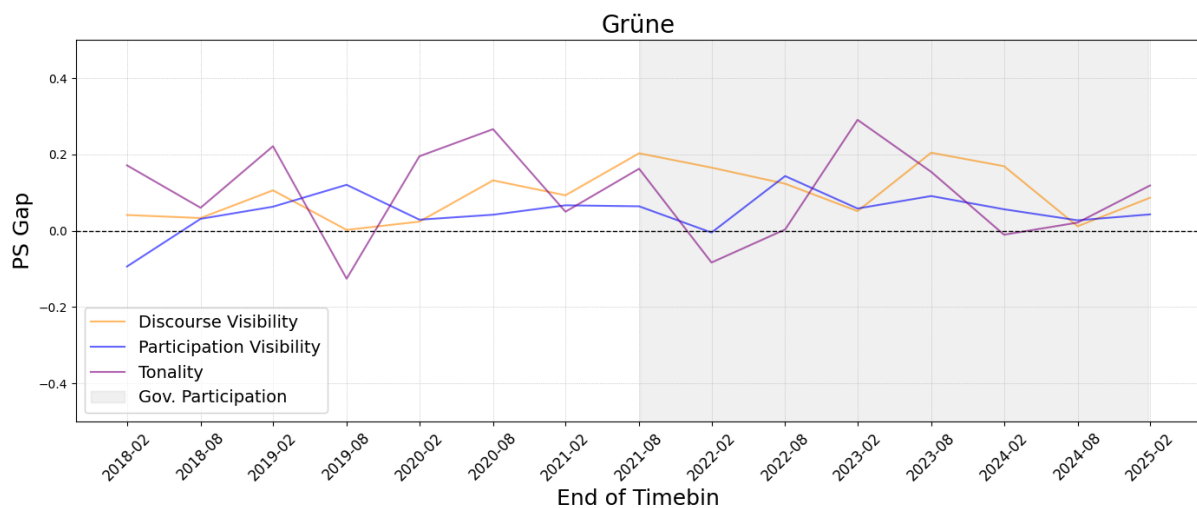
3. SPD: Incumbency Without Media Advantage

The Social Democratic party SPD does not benefit from being an incumbent party, despite holding office in both electoral periods, with balanced or negative discourse and participation visibility gaps. Tonality, too, is on average balanced.

Table 13. Partisan Bias Summary - SPD

Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	-0.001	-0.073 (***)
Participation Visibility*	+0.142 (***)	+0.009
Tonality	0.01 (descriptive)	-0.00 descriptive)

*in 2017 - 2021 SPD participation begins with a strong outlier, potentially biasing the result

Between 2017 and 2021, the SPD received balanced media coverage in both discourse visibility and participation visibility (see table 13). Discourse mentions closely matched their electoral share, indicating no significant bias. Hence, there is no incumbent bonus leading to the rejection of H1. Participation visibility, however, revealed a notable overrepresentation of +14%, meaning SPD representatives appeared significantly more often as guests on political talk shows than their proportional seat share would suggest. Yet, it has to be noted, that such a high positive partisan media bias, might be associated with data problems in 2018. Despite this, figure 13 reveals that participation visibility was constantly positive in the 2017 - 2021 period, hence necessitating the acceptance of H2.

Between 2021 and 2025, while leading the German government, the SPD experienced a statistically significant underrepresentation of –7.3% in discourse visibility, indicating that the party was discussed less frequently than would be expected based on its electoral strength. Participation visibility also declined sharply compared to the previous period, resulting in almost perfectly balanced guest presence. This reversal is particularly notable when compared with the SPD's prior participation advantage during 2017 - 2021.

Thus, contrary to expectations derived from H1 and H2, the SPD's incumbency did not translate into greater media visibility. Rather, their position as lead governing party coincided with reduced discourse representation, ultimately leading to the rejection of both hypotheses in this period. In fact, holding executive power appears to have had a negative effect on their media presence in political talk shows.

Interestingly, this pattern also holds when analyzing the MS gap, which accounts for differences between polling support and electoral results (see figure 8 & 9). In fact the MS-based discourse visibility gap is less pronounced than the PS-based one. While this suggests that coverage did partially reflect evolving relevance, the bias remains clearly negative, even when accounting for the party's polling trajectory. Hence there is a consistent pattern of negative partisan media bias against the SPD during their time in government. This raises a critical question for further research: why did the SPD experience the opposite of an incumbency bonus?

Qualifying these trends by analyzing the evolution of each gap per time bin (see figure 13), reveals that SPD in fact experienced a positive participation visibility bias in political talk shows surrounding its election into heading the German government, after which there was constant decrease in all gaps. Cross-referencing this with issues and public debates might be interesting in order to explain these temporal fluctuations, particularly why the SPD experienced the opposite of an incumbency bonus in media coverage.

Figure 13. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for the SPD.
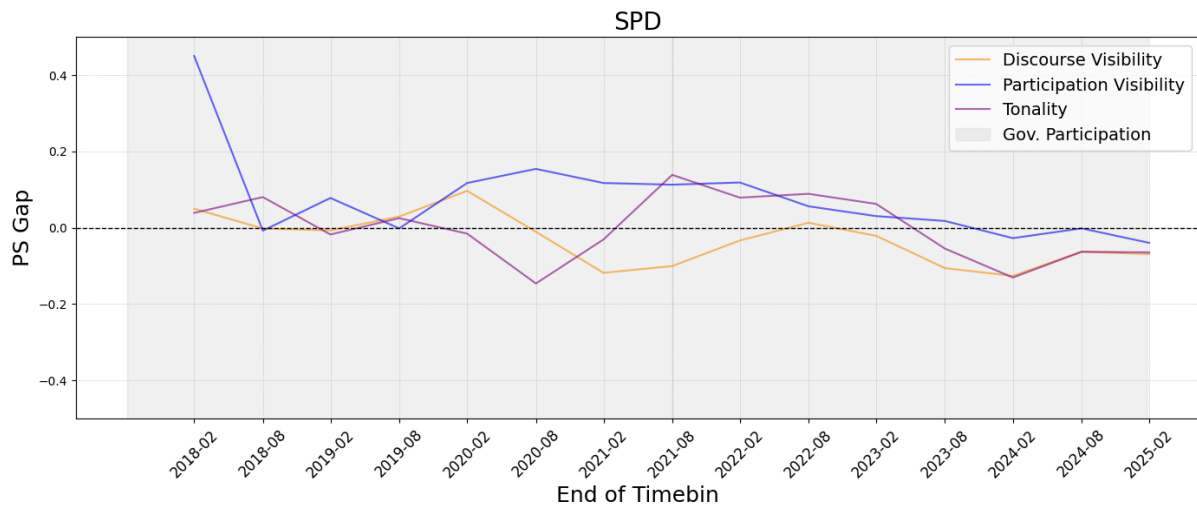
4. CDU/CSU: Clear Incumbency Effects

The conservative parties CDU/CSU's political talk show presence reflects a clear incumbency effect across both discourse and participation visibility dimensions, while the tone of coverage remains on average neutral across both electoral periods (see table 14).

Table 14. Partisan Bias Summary - CDU

Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	0.065 (***)	-0.051 (***)
Participation Visibility*	+0.012	-0.038 (***)
Tonality	-0.00	0.01

Between 2017 and 2021 - while heading the German government - the CDU/CSU benefited from a statistically significant overrepresentation in discourse visibility of 6.5%, indicating that the party was discussed more frequently in political talk shows than their electoral share would predict. This aligns with the expectation of an incumbency advantage as outlined in H1. In terms of participation visibility, the CDU/CSU maintained a balanced guest presence (gap: +0.01%), which does not meet the threshold for H2. Nevertheless, the high discourse visibility during this period, alongside government leadership, supports the acceptance of H1

and indicates that incumbency status boosted the party's prominence in televised political discourse.

Between 2021 and 2025, following the transition to opposition, this visibility pattern reversed. In discourse mentions the CDU/CSU is statistically significantly underrepresented with -5.1%. Further, the party experiences a -3.8% gap in participation visibility both indicating a notable decline in political talk show presence. Thus, while only H1 is accepted for the governing period, the reversal of media salience in opposition reaffirms the hypothesis that incumbency status conditions visibility patterns in political talk shows.

In terms of tonality of mentions, CDU/CSU coverage is on average neutral across both periods. Yet, notable fluctuations are revealed when looking at the temporal evolution of visibility over time (see figure 14). Conversely, participation visibility is remarkably stable and incremental, consistently evolving within a narrow range—typically around 0.05. This pattern might suggest the presence of a formalized media mechanism on guest selection, which seems to operate independently of short-term political developments or issue dynamics. By contrast, discourse visibility exhibits greater fluctuations. Interestingly during 2021 - 2025, the fluctuations seem to be inversely related to tonality: This might suggest a possible trade-off between presence and positivity, where being less frequently discussed may be associated with a more controlled or strategic framing, while greater visibility may open the party up to more critical coverage. Overall, however, the range of variation across all dimensions is narrower than for parties like Die Grünen, indicating more stability in how the CDU/CSU is treated in political talk shows.

Finally, the examination of the divergence of PS and MS gaps for CDU/ CSU (see figures 8 & 9) further nuances the analysis. Until mid-2023 both metrics closely aligned, but subsequently a divergence emerged: while the MS gap stagnated around -12%, reflecting polling-based relevance, the PS gap gradually increased. This signals that rising public support for the CDU/CSU was not yet mirrored in talk show visibility. This divergence suggests that relying solely on PS-based assessments during politically volatile periods - such as the run-up to elections - may obscure emergent trends in media bias.

Figure 14. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for the CDU/CSU.
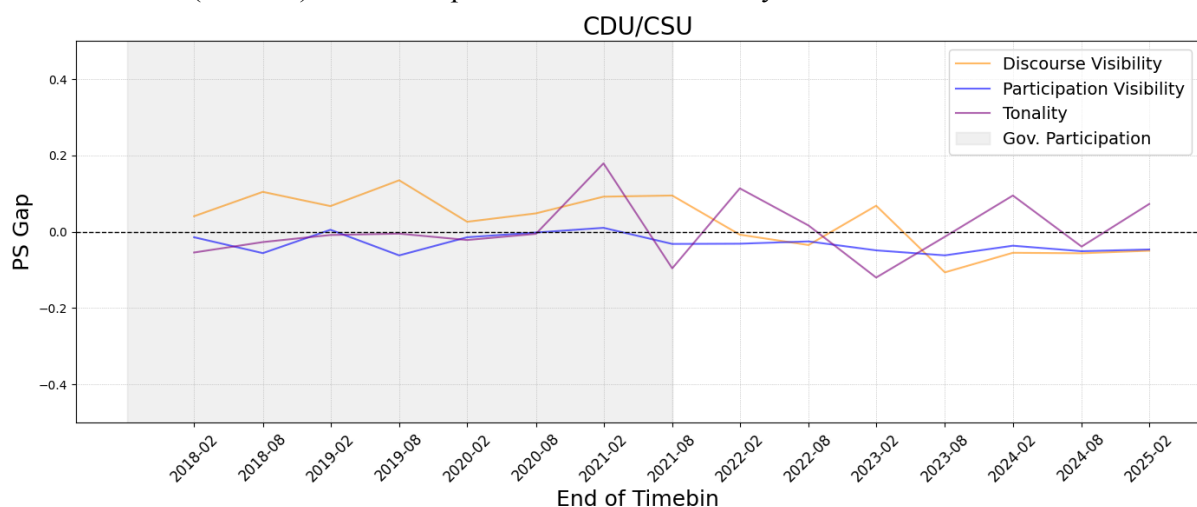
5. FDP: Clear Incumbency Bonus

The presence of the liberal party FDP in political talk shows reveals a clear pattern of incumbency bonus. Across both discourse and participation visibility, the party transitions from underrepresentation in opposition to overrepresentation in government, while tonality trends toward balance during its time in office (see table 15).

Table 15. Partisan Bias Summary - FDP

| Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	-0.025 (**)	0.021 (***)
Participation Visibility*	-0.048 (***)	0.074 (***)
Tonality	-0.06	-0.01

Between 2017 and 2021, while in opposition, the FDP was statistically underrepresented in both dimensions of visibility. The party experienced a slight discourse visibility gap of -2.5%, indicating that it was talked about less often than its electoral share would warrant. The significant -5% participation visibility gap, reflecting a systematic negative participation visibility bias. Tonality during this period was also mildly negative (-6%).

Between 2021 and 2025, after entering government as a coalition partner, the FDP experienced a significant increase in political talk show visibility. The discourse visibility gap turned positive (+2.9%), and the participation visibility gap shifted to +7%, indicating more frequent guest invitations and greater presence in political discussions. This highlights a clear incumbency effect and aligns with the predictions of H1 and H2, which are both accepted for this period. While the tonality gap was mildly negative on average (−1%), it was essentially neutral compared to the prior period, pointing to a more balanced or moderated tone during the FDP's time in government. Notably, the PS and MS balance perspectives for the FDP are largely aligned throughout both periods, indicating a stable reflection of its electoral and polling strength (see figures 8 & 9).

Analyzing the evolution of each type of bias gap over time for the FDP (see figure 15) reveals several noteworthy patterns. First, the discourse visibility gap and participation visibility gap tend to move in tandem, with increases or decreases in one dimension often accompanied by similar changes in the other. This suggests that presence and mentions in discourse are closely aligned, pointing towards the fact that if the FDP is present, discourse revolves around it. Second, compared to larger parties, the temporal development of visibility gaps for the FDP is relatively gradual with fewer abrupt spikes or declines. These mirror patterns seen among other smaller parties such as Die Linke, reflecting a potentially more stable role in political talk shows, to some extent detached from issue salience. Finally, it is notable that the tonality gap remains consistently lower than both discourse and participation visibility throughout the observed periods. Hence, while present discourse is more likely to revolve around the FDP, this does not mean that the discourse is positive. To conclude, the FDP trajectory reflects a clear incumbency reflected shift - from underrepresentation to overrepresentation, particularly in terms of participation, aligned with theoretical

expectations that holding office increases access to media platforms, here political talk shows.

Figure 15. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for the CDU/CSU.
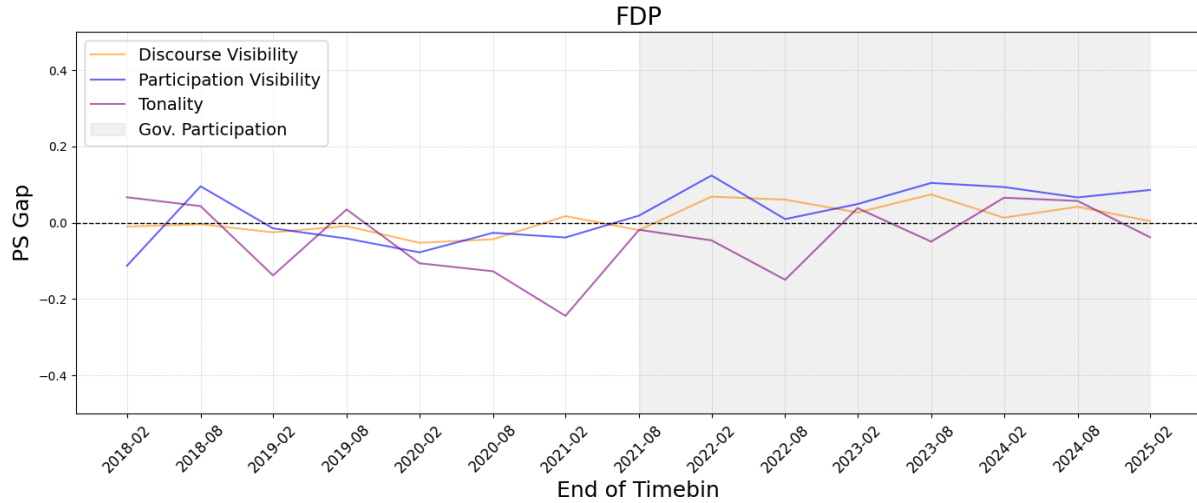
6. AfD From Marginalization to Gradual Discursive Inclusion?

Overall, political talk shows consistently exhibit a negative and statistically significant bias toward the extreme right populist AfD across both electoral periods; this applies to both discourse visibility and participation visibility. Tonality of mentions of the AfD too is disproportionately negative (see table 16).

Table 16. Partisan Bias Summary - AfD.

Mean Gap	2017 - 2021	2021 - 2025
Discourse Visibility	-0.066 (***)	H1: –0.075 (***) H2: +0.053 (***)
Participation Visibility*	-0.110 (***)	+0.113 (***)
Tonality	-0.05 (descriptive)	-0.07 (descriptive)

Between 2017 and 2021, the AfD faced a significant underrepresentation in discourse visibility, with a bias gap of -6.6%. This extended to participation visibility, where political talk shows exhibited a stable and significant gap of approximately -11%, reflecting a systematic lack of guest invitations. While both gaps were negative, AfD was in effect, talked about more than it was invited to speak. Tonality, too, was consistently negative, being around 5% more negative than neutral coverage & discussions would require.

Between 2021 and 2025, however, the AfD became the only party across both election periods that demonstrated a clear and continuous shift from a negative to positive discourse visibility gap, and also from a strong negative tonality gap of -0.02 towards a slightly positive one (see figure 16). Conducting a more granular analysis using a split-period

weighted t-test reveals a statistically significant reversal: from a -7.5% gap in the first half of the period to a +5.3% gap in the second half. Combined with the evolution towards a tonality that is more positive than the average party tonality - at least until August 2024, point towards a substantial transformation in how the party is treated in political talk shows discourse - potentially signalling a loosing of prior exclusion norms.

In addition, while the participation visibility gap persists at a stable negative level throughout both periods - reflecting media norms associated with the "Brandmauer" (Schroeder et al., 2025) - it too increases slightly in conjunction with discourse visibility and tonality starting in the second half of the second election period. Interestingly, the higher the rate of increase for the participation gate, the more discourse and tonality gaps start to decrease again.

The trend from negative to positive discourse visibility also persists, if less strongly, when applying the Media Salience (MS) balance baseline, which adjusts expected media visibility based on polling data rather than electoral results. Even when accounting for rising polling support, the AfD continues to experience positive partisan discourse visibility in the second half of the term (see grey line figure 8). This indicates that the increase in media presence cannot be fully explained by improved public support, suggesting that media gatekeeping practices themselves may be shifting. Additionally, the shift in tonality is particularly notable: while discourse visibility has become more favorable, the tone has moved from negative to balanced or even slightly positive, particularly when compared to the mean tone directed at other parties (see figure 16).

Thus, until mid-2022, the AfD was consistently underrepresented in political talk shows across all three dimensions of media partisan bias, discourse visibility, participation visibility, and tonality. This distinctly changed after mid-2022. This shift warrants further contextual analysis. Following the 2017 federal elections, the first in which the AfD entered the Bundestag, public criticism emerged regarding the party's portrayal in the media, leading public service media (PSM) to tone down direct coverage of the AfD (Heyen, 2020). As a result, the party turned to alternative platforms, such as social media (Serrano & Medina, 2020). Simultaneously, it relied on deliberate provocations to push issues like immigration onto the broader media agenda (Maurer et al., 2023).

In that sense, the findings here point towards a gradual relaxation of PSM discursive media "Brandmauer" towards the AfD. The AfD appears to be gaining increased discursive access to PSM talk shows, not necessarily as a result of electoral success alone. This trend deserves further investigation. Further research could focus on agenda setting dynamics (e.g. trace associated issues), as well as the implications of growing visibility and tonal neutrality for the public perception of the AfD.

Figure 16. Evolution of mean discourse visibility-, participation visibility- and tonality gaps over time bins (end date) between September 2017 and February 2025 for the CDU/CSU.
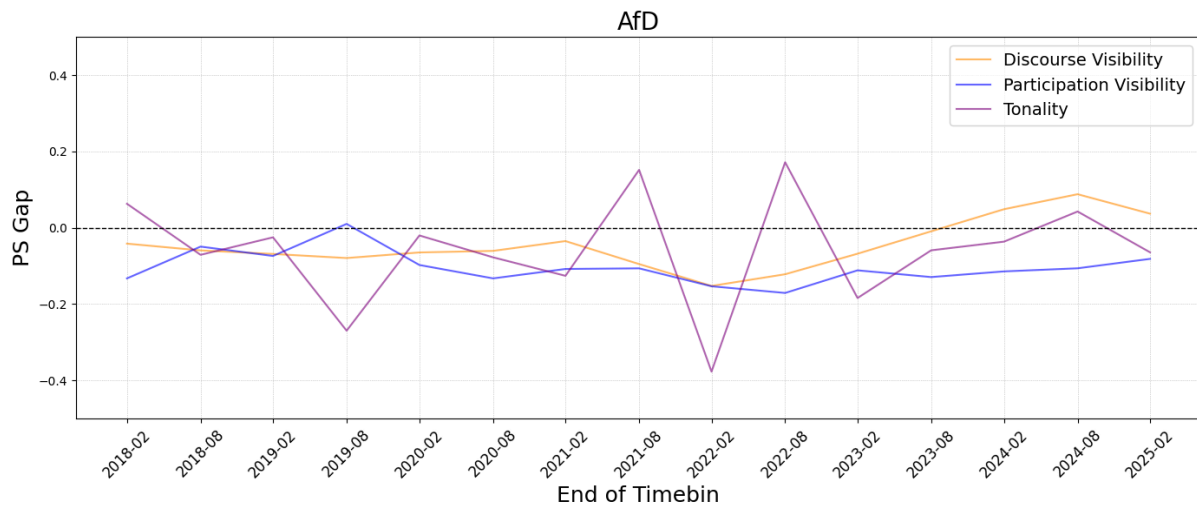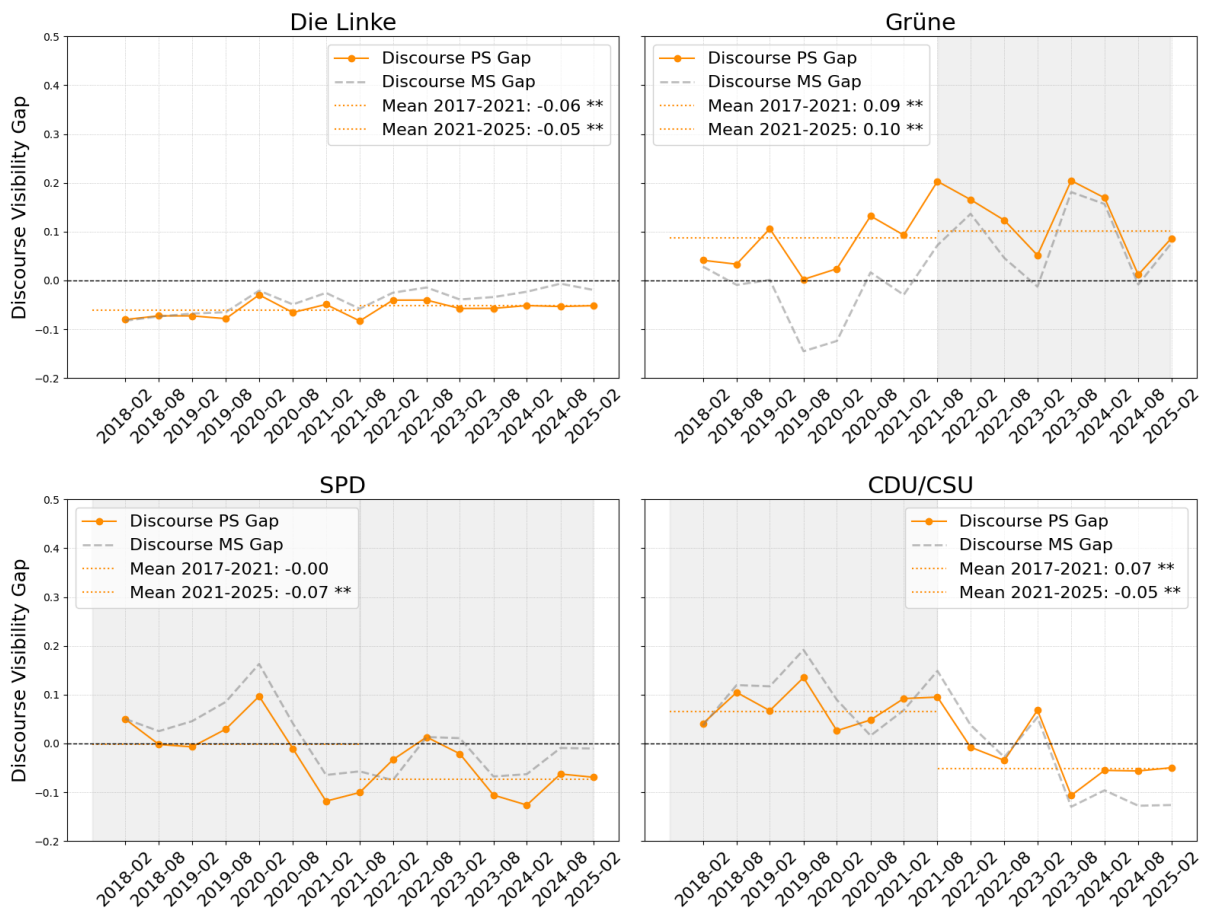

Figure 8. Discourse visibility PS and MS gaps for each political party by timebin (end date) between September 2017 and February 2025. Election cycles in grey.
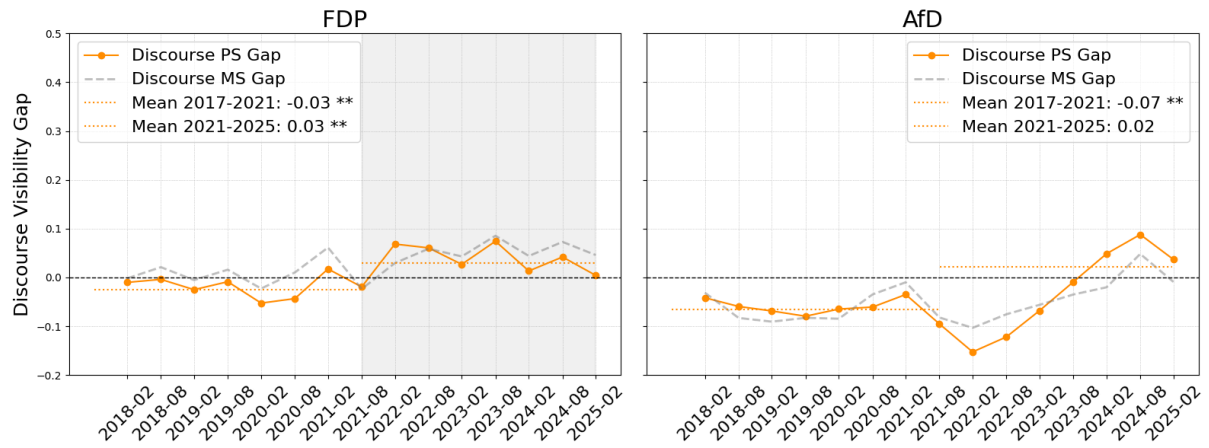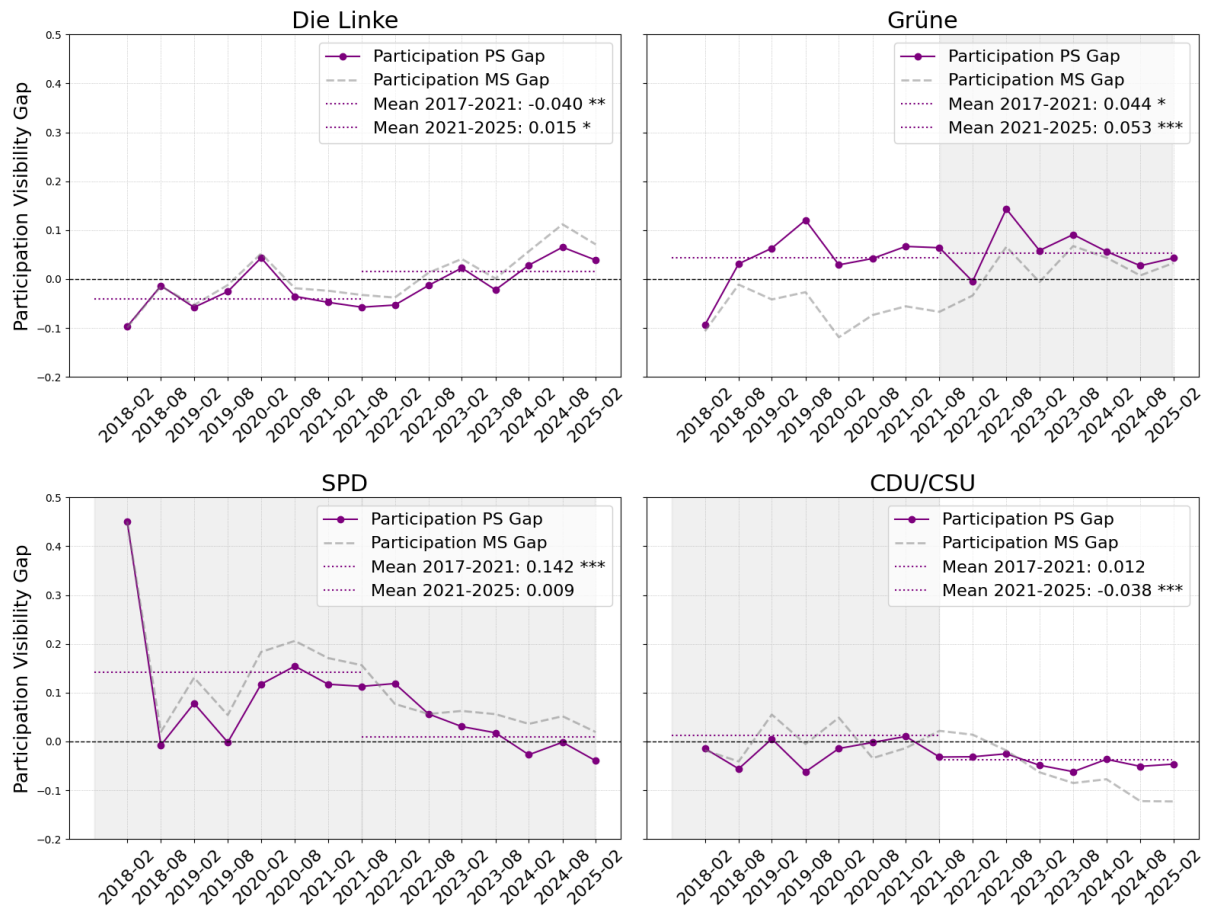
Figure 9. Participation visibility PS and Ms gaps for each political party by timebin (end date) between September 2017 and February 2025. Election cycles in grey.
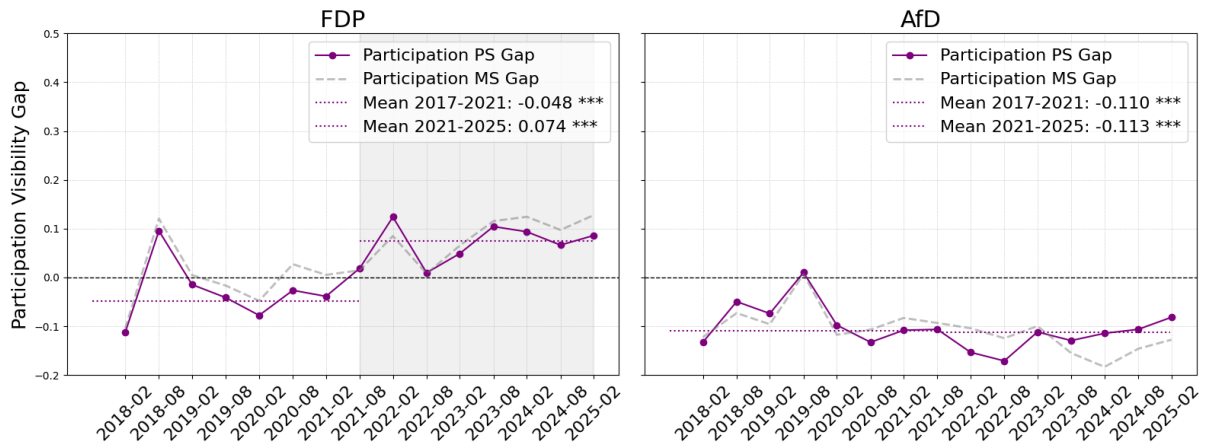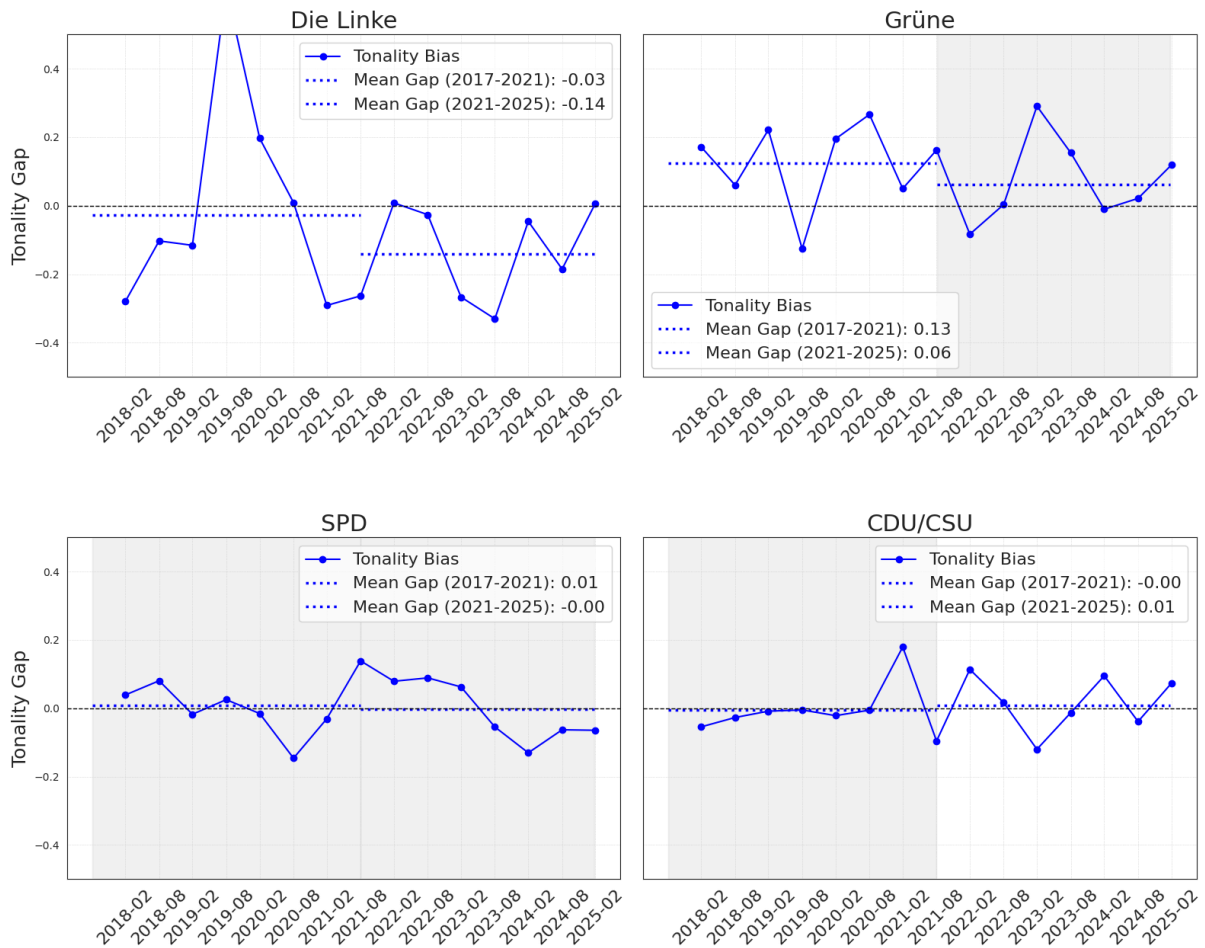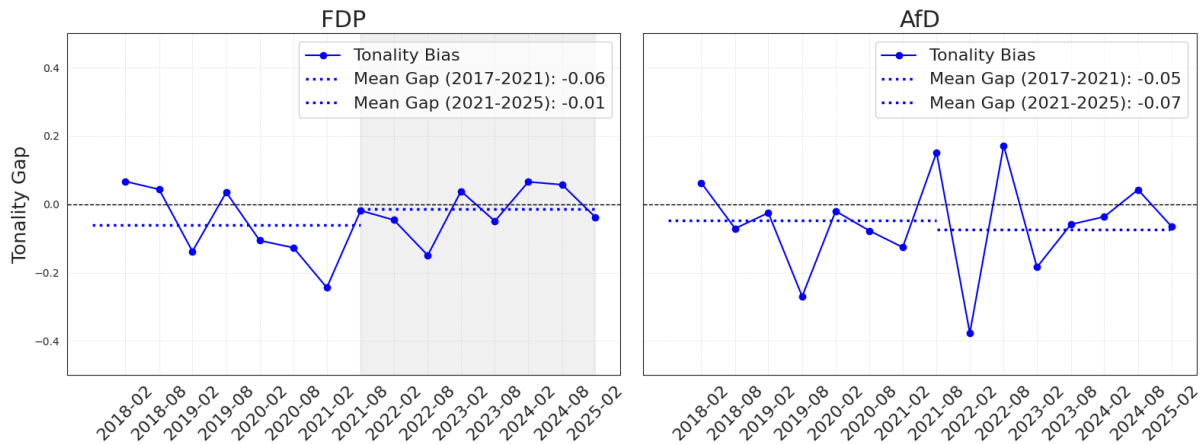
Figure 10. Tonality PS and MS gaps for each political party by timebin (end date) between September 2017 and February 2025. Election cycles in grey.

B.   Synthesis

Having described the extent and evolution of each type of partisan media bias for each party in political talk shows in the previous section, the following continues with providing a synthesis of the party-level results. First the evidence for H1 and H2 on an visibility incumbency bonus will be summarized. Second, this study presents an holistic overview of the size and direction of partisan media bias per party, thereby illustrating who benefits - and who does not. Third, implications regarding the use of both a PS and MS benchline are discussed.

1. Evidence for a Visibility Incumbency Bonus

First, In line with previous research, this analysis finds conditional descriptive support for the hypothesis that governing parties benefit from incumbency effects in political talk shows, specifically in terms of discourse visibility (H1) and participation visibility (H2) (see table 17). Overall, the findings provide qualified support for the incumbency benefit hypothesis.

While H2 is rejected for the CDU/CSU during their 2017 - 2021 term, their subsequent decline across both visibility dimensions during their time in opposition supports the idea that incumbency plays an explanatory role in structuring media access. The FDP presents a clear case of benefiting from incumbency: the party moved from significant underrepresentation in discourse and participation to positive visibility gaps once entering government.

For Die Grünen, this study also accepts both H1 and H2, though with important qualifications. From a Party System (PS) perspective, high visibility was already present in both electoral periods. However, comparison with the Media System (MS) perspective, which adjusts expectations according to polling strength, reveals a clearer increase in relative visibility during incumbency, affirming the effect.

In contrast, this study finds no evidence of an incumbency bonus for the SPD, the only party in government during both electoral periods. Despite holding executive power, the SPD experienced no increase, rather a decline, in both discourse and participation visibility.

This coincides with arguments regarding the electoral decline of social democratic parties (Polacko, 2022).

Table 17. Summary of H1 and H2 hypothesis outcomes by party and electoral period

	Party	H1: Discourse Visibility	H2: Participation Visibility
2017 - 2021	CDU/CSU	Confirmed	Rejected
	SPD	Rejected	Confirmed
2021 - 2025	SPD	Rejected	Rejected
	Grüne	Confirmed	Confirmed
	FDP	Confirmed	Confirmed

## 2. Ranking Partisan Media Bias: Who benefits and who does not?

Second, this study holistically compares the size and magnitude of partisan media bias exhibited towards political parties in political talk shows. To do so, figure 17 presents the ranking of German political parties based on their weighted partisan media bias scores across two periods: 2017 - 2021 and 2021 - 2025. The scores combine discourse visibility, participation visibility, and tonality (with the latter weighted at 0.5) to reflect each party's overall favorability and presence in political talk shows.

It is important to note that this is a simplification. Yet, given that the effect of partisan media bias on public opinion occurs in conjunction (Eberl et al., 2017; Geiß & Schäfer, 2017) this aims to simulate what a viewer of political talk shows sees. Although prior research suggests that tonality bias may exert a greater influence on opinion formation than visibility biases (Boomgaarden & Semetko, 2012; Geiß & Schäfer, 2017), a reduced weighting of tonality was chosen in this analysis. This decision derives from data sparsity in positive and negative sentiment observations for some parties, where outliers could disproportionately distort results. While this trade-off is open to methodological critique, the resulting rankings nonetheless offer a compelling snapshot of the relative media treatment of German political parties over time.

In addition to the previously derived results, such as the clear incumbency benefits for certain parties and the recent normalization of the AfD within political talk show discourse, this analysis further underscores the near-dominance of Die Grünen in the talk show landscape. Their consistently top-ranked visibility and favorability across both electoral periods illustrate a systematic positive partisan media bias towards Die Grünen.

Moreover, the slope chart might indicate an emerging negative partisan media bias against more traditional parties, notably the CDU/CSU and SPD. For the CDU/CSU, it remains an open question whether their potential return to government in 2025 will be accompanied by a renewed incumbency bonus, as was observed in the 2017–2021 period.

Finally, it is noteworthy that the parties positioned furthest from the political center, namely the AfD and Die Linke, consistently receive the least media coverage in political talk shows. This raises important questions about the deliberative inclusiveness of political talk shows and the normative implications of media gatekeeping in shaping democratic discourse.

Figure 17. Slope chart illustrating the evolution of party rankings in terms of partisan media bias in political talk shows between 2017–2021 and 2021–2025. The bias score is computed by averaging Discourse Visibility and Participation Visibility with Tonality, where Tonality is weighted at 0.5 due to its lower statistical significance in the analysis. Higher values indicate stronger bias presence.
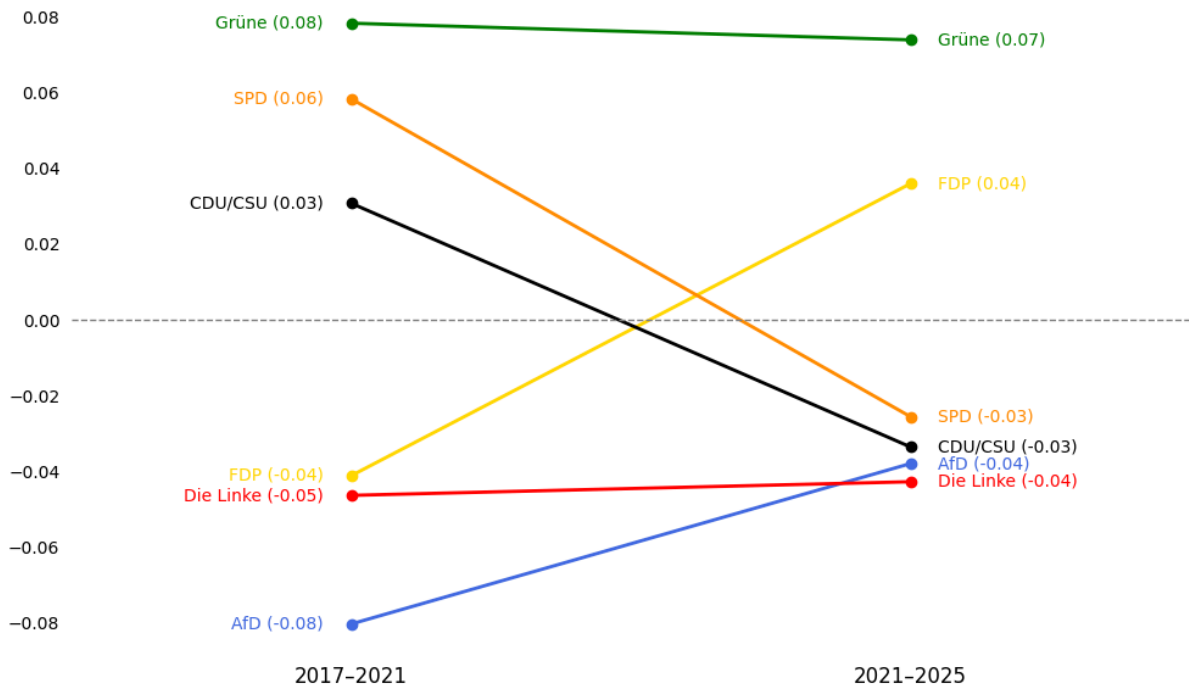
3. Balance Benchlines: Reflections

Finally, this analysis further reemphasizes the conceptual and empirical benefit of utilizing both a party system (PS) and media system (MS) perspective to assess partisan media bias. These two perspectives offer distinct yet complementary conceptualizations of balance in media coverage. To reiterate: the party system perspective argues that the visibility of political parties in media ought to reflect their electoral strength, typically operationalized through vote shares. By contrast, the media system perspective conceptualizes balance in terms of evolving media relevance (Hopmann et al., 2012b), approximated here through public opinion polling data.

Critically, these perspectives do not always align. This research has shown that MS and PS assessments of partisan media bias can in fact differ substantially, particularly (and logically) when a party's polling performance deviates strongly from its most recent electoral results. This seems to be especially pronounced in periods of political volatility, e.g. during election run-ups. For instance, as elaborated on before, this research has found that prior to 2021 Die Grünen were overrepresented relative to their electoral share (PS) yet underrepresented relative to their polling strength (MS).

More broadly the choice of a conceptual balance baseline is inherently normative, where the PS perspective emphasizes democratic representativeness based on formal political weight, while the MS perspective focuses on responsiveness to public salience. Combining and cross-referencing the two perspectives thus enables gaining a comprehensive understanding, satisfying different normative assumptions.

IX. Discussion & Future Research

This research has made several contributions to the study of partisan media bias. Empirically, for the first time, the extent - and evolution of - partisan media bias has been examined for German political talk shows. To do so, a comprehensive dataset of German political talk show transcripts and corresponding meta-data was created, whose utility extends upon the scope of partisan media bias. Subsequently a novel combination of computational methods in the field of partisan media bias was used to measure partisan media bias. Further, this research has analytically distinguished between two distinct kinds of partisan media visibility, namely discourse visibility and participation visibility. The former covers who is talked about, corresponding to traditional notions of partisan visibility (e.g., Eberl et al., 2017a). The latter, on the other hand refers to who is talking, stemming from the dialogical format of political talk shows. This nuances existing analytical frameworks, and might inform further research.

Doing so, this research has established systematic patterns of partisan over- and underrepresentation in political talk shows, and provided support to the incumbency visibility hypothesis. Further, the in depth discussion of individual political party partisan media manifestations over time has revealed interesting patterns suitable for further inquiry, such as the recent turning away from AfD underrepresentation in political talk show discourse, or the fact that the SPD - as the only party - does not benefit from an incumbency bonus. Yet, there are many things this research has not done. Possible research avenues include:

A. Understanding the Mechanisms Behind Partisan Media Bias in Political Talk Shows

First, it will be necessary to explain, rather than merely describe, the mechanisms underlying the observed visibility and tonality trends. For example, the recent systematic increase of the AfD's partisan media gaps, particularly their discourse visibility gap, is puzzling as it suggests integration into the PSM media system, despite previous systematic exclusion. The question thus is what changed and why? This not only relates to dynamics of media gatekeeping but might also contribute to broader debates in the literature on populism and political communication.

B. Interaction Among Media Bias Dimensions

Second, a significant question not answered by this research relates to the interaction of the different types of partisan media bias. Do the direction and magnitude of discourse,

participation visibility and tonality gaps tend to correlate? This is especially interesting as political talk shows are dialogical in nature, with political information being constructed through interactions between politicians and other guests, thus suggesting the interrelation of discourse visibility-, participation visibility- and tonality bias. In fact, the descriptive qualitative analysis here so far has suggested - for some parties and timeframes - that the three dimensions move together, or, at the very least, tend to be jointly positive or negative over extended time frames such as electoral periods.

From a theoretical standpoint it appears intuitively plausible at the talk show level: when a political party is present as a guest (participation visibility), it is more likely to speak about itself or become the subject of discussion (discourse visibility). Moreover, such participation offers the party a platform to frame itself in a favorable light, which may in turn influence the overall tone of the discussion (tonality). The preceding argument assumes participation visibility as the initiating factor in a self-reinforcing cycle: when a party participates, it is talked about more, and benefits from more favorable or at least more visible framing. Conversely, discourse visibility may act as the initiating trigger, with parties becoming the object of debate (due to external events) and only subsequently being invited to appear. The causality could thus flow in multiple directions.

Beyond the level of individual interactions, political discourse theory suggests that any act of political speech inherently constructs boundaries between "Us" and "Others" (Dunmire, 2012; Wirth-Koliba, 2016; Okulska & Cap, 2010). The broadly negative tonality observed across all parties in political talk shows supports the notion that boundary-drawing is inherent to political discourse. The question, then, is whether these boundaries are more frequently drawn in direct confrontation with other present political actors, or against absent parties, whose positions are defined externally. In that sense the former would assume that tonality tends to be more negative for political parties participating, while latter assumes that tonality is more negative for political parties that do not participate (of course acknowledging that there might be many other confounding factors). Here, further research might consider lagged regression models - or a qualitative analysis of selected talk show episodes.

C. Agenda Bias

Third, this research highlights the utility of linking the here analyzed partisan media biases with the developments of issue salience, through topic modeling. Empirically this is motivated by the fact that while FDP and Die Linke exhibit relative gradual and consistent trends in the evolution of their PS media bias gaps, Die Grünen, SPD and CDU/CSU display stronger fluctuations, i.e. sudden shifts in media visibility. This discrepancy might hint towards the fact that the more volatile group - linked to their in absolute terms greater media presence - exhibit a stronger sensitivity to issue-specific dynamics and event-driven spikes in their media salience. In contrast, the more stable evolution of gaps for the FDP and Die Linke may indicate that their media coverage is rather shaped by structural and long-term factors - such as ideological position or consistent policy focus. Here, future research could investigate the mechanisms behind these peaks and patterns. Specifically spikes in media visibility and tonality spikes could be linked to issue salience in political talk shows relying on topic Modeling (see Appendix 3 for possible BERTopic finetuning).

Conceptually, this would also extend focus towards agenda bias - the remaining type of partisan media bias, i.e. whether the issue selection in media itself reflects partisan favouritism (e.g. see Eberl et al., 2017). Especially as agenda bias shapes which issues dominate political discourse, thus indirectly influences which parties are made visibility - either in terms of being invited (Die Grünen on climate) - or in terms of being talked about (e.g. AfD on immigration) Concretely, one could link issues discussed in political talk shows with the party press release database compiled by Erfort et al. (2023) which offers a comprehensive collection of German party communication since 2010, serving as a proxy for political party issue agendas. Combined with Topic Modeling of talk show transcripts, such a design would enable systematic comparisons between party agendas and media agendas over time, thereby also contributing to the political agenda-setting literature (e.g. Langer & Gruber, 2022).

X.   Policy Recommendations

Finally, while this study has laid out what remains unknown and what future research should pursue, it is equally important to reflect on what ought to be done based on the empirical patterns already uncovered.

Political talk shows are consumed by millions of Germans (Statista, 20225), and are a primary arena for the dissemination of political information (Heyen, 2020). There is broad scholarly consensus that media coverage - especially agenda-setting formats such as political talk shows - affect political perceptions (McCombs & Valenzuela, 2020). Hence if political parties are systematically disproportionately represented in these shows, this influences how people perceive these parties and in turn vote (Gerber et al., 2009).

In detail this study establishes: (1) an incumbency bonus for governing parties, (2) a persistent and strong overrepresentation of Die Grünen, and (3) a consistent underrepresentation of Die Linke and the AfD. While the incumbent advantage may me defensible through a media system logic of dynamic relevance, the other patterns contradict both normative standards of media balance (Hopmann et al., 2012b), and crucially the legally enshrined PSM programmatic requirements of impartiality and balance (Medienstaatsvertrag, 2020).

The AfD presents a dilemma, being underrepresented but also a threat to liberal democracy, officially classified as a ''Verdachtsfall'' (suspected extremist) by the Federal Office for the Protection of the Constitution since 2021 (Holthus & Wisenthal, 2024). This research here does not seek to open Pandora's box and discuss whether the AfD should be represented - but seeks to put attention towards interpreting the recent increase in the AfDs media visibility and tonality, as this hints towards an erosion of the Brandmauer.

Yet, based on the findings, this thesis makes the following (preliminary and short) recommendations to ensure that PSM fulfills its normative and legal obligations in a politically balanced way.

First, the drivers behind the observed partisan bias patterns require further investigation. Standardised assessments of political talk show coverage should be

institutionalised to systematically track media bias over time. These assessments should extend to other PSM formats and be made publicly accessible to ensure transparency. Second, balance must be clearly defined and enforced. Editorial quotas based on both Party System (PS) and Media System (MS) baselines can ensure that guest selection reflects both democratic weight and evolving newsworthiness. Third, external audit mechanisms are needed to verify adherence to these quotas. Independent oversight by academic institutions or regulatory bodies would make disproportionate coverage visible and open to public scrutiny.

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Appendices

Appendix 1. Results of two-sided t-test on significance of weighted mean party-system discourse visibility gap (governing parties in bold, yellow for incumbency bias).

Election Period	Party	Number of episodes	Weighted N	Discourse visibility Gap	t_stat	P_value
2017 - 2021	Die Linke	432	135	-0.061	-10.21	< 0.001 (***)
	Grüne	432	135	0.087	5.70	< 0.001 (***)
	SPD	**432**	**135**	**-0.001**	**-0.08**	**0.939**
	CDU/CSU	**432**	**135**	**0.065**	**3.40**	**< 0.001 (***)**
	FDP	432	135	-0.025	-2.63	0.009 (**)
	AfD	432	135	-0.066	-7.46	< 0.001 (***)
2021 - 2025	Die Linke	746	346	-0.052	-19.83	< 0.001 (***)
	Grüne	**746**	**346**	**0.102**	**9.09**	**< 0.001 (***)**
	SPD	**746**	**346**	**-0.073**	**-8.68**	**< 0.001 (***)**
	CDU/CSU	746	346	-0.051	-5.81	< 0.001 (***)
	FDP	**746**	**346**	**0.029**	**3.52**	**< 0.001 (***)**
	AfD	746	346	0.021	1.91	0.057

Appendix 2. Results of two-sided t-test on significance of mean party-system participation visibility gap.

Election Period	Party	Number of episodes	Mean PS participation visibility Gap	t_stat	P_value
2017 - 2021	Die Linke	242	-0.040	-3.25	0.001 (**)
	Grüne	242	0.044	2.40	0.017 (*)
	SPD	**242**	**0.142**	**5.48**	**< 0.001 (***)**
	CDU/CSU	**242**	**0.012**	**0.46**	**0.645**
	FDP	242	-0.048	-4.24	< 0.001 (***)
	AfD	242	-0.110	-14.15	< 0.001 (***)
2021 - 2025	Die Linke	675	0.015	2.53	0.012 (*)
	Grüne	**675**	**0.053**	**5.91**	**< 0.001 (***)**
	SPD	**675**	**0.009**	**0.93**	**0.354**
	CDU/CSU	675	-0.038	-4.31	< 0.001 (***)
	FDP	**675**	**0.074**	**9.40**	**< 0.001 (***)**
	AfD	675	-0.113	-20.85	< 0.001 (***)

Appendix 3. Fine Tuning of BERTopic

Table xyz. Fine Tuning of BERTopic

N	Chunking Strategy	Timeframe	N Documents	Clustering Parameter	N Topics	N Outliers (%)	Qualitative Assessment
1	Token based	2011 - 2025	54250	Min_cluster = 200 Min_samples = 100	37	24051 (44.3)	
2				Min_cluster = 150 Min_samples = 75	40	21418 (39.4)	
3				Min_cluster = 100 Min_samples = 50	50	21830 (40.2)	Interpretable topic representations. Comparatively low number of outliers. Good overview of meta topics, sufficient number for time-series analysis
4				Min_cluster = 150 Min samples = 150	37	23903 (44)	
5				Min_cluster = 50 Min_samples = 25	81	25334 (46.7)	
6				Min_cluster = 100 Min_samples = 10	48	25067 (46.2)	
7	Token based	2020 - 2025		Min_cluster = 100 Min_sample = 50			
8	Sentence based	2020 - 2025	171280	Min_cluster = 400 Min_samples = 200	53	75774 (44)	One topic per month. Good density. Good interpretability.

9	Sentence based	2011 - 2025	246227	Min_cluster = 400 Min_samples = 200	72	102647 (41)	Good interpretability. Solid representations. Comparatively low amount of outliers.

9	Sentence based	2011 - 2025	246227	Min_cluster = 400 Min_samples = 200	72	102647 (41)	Good interpretability. Solid representations. Comparatively low amount of outliers.

Public Policy Master's Thesis Series

Partisan Media Bias in German Political Talk Shows: A Longitudinal Analysis (2017–2025)

Lukas, Brand

Abstract

Partisan media bias refers to the systematic and disproportionate media coverage of political parties relative to others. Such preferential, or limited, coverage can significantly influence political outcomes. Despite the central role political talk shows play in shaping public discourse in Germany, they have not yet been systematically examined in the political communication literature. Addressing this gap, this study investigates three dimensions of partisan media bias in German political talk shows between 2017 and 2025: (1) discourse visibility (who is talked about), (2) participation visibility (who talks), and (3) tonality bias (how parties are talked about). To do so, it constructs a novel dataset of over 1,500 talk show transcripts and applies a combination of computational text analysis and sentiment analysis. The findings reveal consistent advantages for incumbent parties, a persistent overrepresentation of Die Grünen, and notable underrepresentation of Die Linke and the AfD. However, the AfD recently gained visibility, suggesting a loosening of editorial gatekeeping norms over time. These patterns point toward structural imbalances in coverage that challenge normative expectations of political balance, particularly within Public Service Media. This thesis offers an empirical foundation for future research into the dynamics and consequences of media bias in political talk shows. It concludes by advocating for institutionalized monitoring mechanisms and editorial quotas to ensure media balance in talk shows.

Key words

Partisan Media Bias, Computational Social Sciences, Political Talk Shows, Text-as-Data