

## Beyond Policy Influence: A Deeper Dive into the Factors Driving Advocacy Group Prominence

### Abstract

This study explores the dynamics of prominence among advocacy organizations within the legislative process in democratic societies. Prominence refers to an advocacy organization that is perceived as a preeminent voice for a constituency and a valuable resource for policymakers. This concept embodies a form of soft power, signifying a unique type of interest group success. The paper examines why certain groups are accorded prominence by politicians over others and on specific issues, contributing to an under-explored area in the field of interest group success. The analysis challenges the traditional assumption that older advocacy organizations exert more influence, suggesting a more complex dynamic in gaining prominence. While advocacy groups with broader policy agendas show a likelihood of gaining prominence, the findings are not statistically significant, questioning the sole reliance on policy breadth. Despite initial hypotheses, organizations employing external lobbyists are found to have higher prominence, highlighting the significant role of professional intermediaries. Politician-specific factors show mixed results, questioning conventional assumptions around factors like seniority, term status, and number of bills sponsored. The findings provide valuable insights, suggesting a nuanced understanding of the factors contributing to an interest group's prominence and encouraging further research in this area.

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## Introduction

In democratic societies, advocacy organizations compete for attention and influence. They represent a wide array of constituencies and offer expertise on a range of issues, aiming to shape policies, discourses, and perceptions. Yet, within this landscape of advocacy groups, not all voices receive equal attention, and some are more relevant to politics and public policy than others. Some organizations are in the spotlight more frequently, and their perspectives and concerns are given more weight in political discourse. This can play out in a legislative context, where interest groups not only engage directly with the policy-making process but are also involved indirectly when politicians utilize a group's views or its position as representative of a specific constituency to legitimize their position. While this is not a traditional conception of success in influencing policy, this type of involvement in political debate is a metric of success that speaks to a group's taken-for-grantedness (Grossman, 2012). Hence, the connection between interest groups and politicians offers a valuable lens through which we can assess the relevance of an advocacy organization to the legislative process.

The relationship between interest groups and politicians and the impact of this relationship on interest groups' success is an under-researched topic (Ibenskas & Buena, 2021). The group-politician linkage offers unique insight into the groups that politicians consider most relevant and why this is the case. Determining which groups policymakers perceive as a valuable resource reveals a unique manifestation of interest group success (Halpin & Fraussen, 2017). Interest group literature refers to this type of success as prominence; that is, an advocacy organization that is accepted and invoked as a preeminent voice of a constituency and a source of expertise regarding an issue area (Halpin & Fraussen, 2017; Grossman, 2012). Prominence is unique and relevant because it speaks to a form of soft power that exists due to a group's exalted status. The implications for achieving such a status, largely precipitated by being noticed by those in power, are vast. It has the potential to put interest groups in a privileged position to engage in the policy process and put forth their interests or ideas with a degree of legitimacy and weight that other players do not enjoy (Fraussen, 2018). Given that prominence encapsulates a distinctive and crucial form of interest group success, it is important to identify the factors that lead to prominence. Accordingly, the central question of this study will be, why are some groups given prominence by some politicians and not others? Another, but related, question that this thesis will explore is: why are some groups given more prominence on certain issues by some politicians than others? By shedding light on these questions, we can widen our understanding of interest group success and focus on a softer and more subtle indicator of interest group success and power—a largely overlooked facet in the current interest group literature.

## Research Gap, Motivation, & Relevancy

To explore these questions, the concept of prominence is measured and quantified by examining the legislative debates from the 114th and 115th sessions of the U.S. Congress. To

assess prominence, a supervised machine learning technique is used to measure the concept. Subsequently, regression analysis is employed to analyze the factors contributing to the observed variations in prominence, as determined by the natural language processing classifier. Using the textual byproduct of legislative debates assists in sidestepping the common drawbacks of survey methodologies (Grossman, 2012; Fraussen, 2018). Automated text analysis, despite being a fairly recent methodology with its own challenges, facilitates the integration of data sets that are conventionally too massive to be manually coded. The deployment of this technique will provide a methodological contribution, shedding light on its merits and limitations to the broader discipline. Furthermore, investigating a subject that has thus far remained largely unaddressed will assist us in better understanding the dynamics of interest group politics by focusing on an indicator of success that highlights the agency of the politician.

This research tackles a series of complexities in the study of interest groups. Firstly, the concept of prominence addresses the intricate issue of gauging the triumphs of interest groups, especially in the context of shaping policy outcomes. It proposes an alternative to the challenging task of assessing influence by targeting an early form of policy engagement preceding the stage of influence in the policy-making cycle (Grossman, 2012). The dense landscape of interest groups, combined with the limits on policymakers' attention, yields mixed results for organizations (Grossman, 2012). These mixed results have motivated attempts to identify the factors causing the variations in influence, but these results have proven inconsistent, negligible, or inconclusive (Lowery, 2013). As a result, the field generally concurs that influence is most effectively assessed and quantified on a situational basis, tailored to individual policy contexts (Halpin & Fraussen, 2017; Grossman, 2012). By putting prominence into operational terms, we can more accurately assess the effectiveness of interest groups, acknowledging that success cannot solely be determined by influence.

Secondly, prominence signifies a unique form of success for interest groups. Amid a cluttered interest group environment, where numerous organizations function within the same policy sectors and represent a vast array of interests and constituencies, it is critical to identify the organizations that decision-makers perceive as relevant to their policy objectives. The theoretical foundations of prominence offer a pathway for making this distinction. Furthermore, by shifting the focus to a distinct version of success, prominence helps question the widespread presumption that influence is the ultimate aim of advocacy groups. Prior research has simplified the motivations of interest groups, assuming that their sole objective is to shape public policy (Lowery, 2017). In reality, organizations strive for influence for various reasons, such as maintaining or blocking specific laws or regulations, preserving membership, acquiring access, emphasizing an issue's importance, stifling competitors, and ensuring organizational survival (Lowery, 2017). Hence, if policy influence is not the exclusive goal of an organization, alternate metrics of success need to be quantified and understood. While aspects such as involvement and access, and attempts to quantify and explain them, have partially addressed this concern, prominence remains largely unexplored and under-studied.

Until recently, the field of interest group research lacked a comprehensive theoretical framework that distinguished prominence from other aggregate measures of interest group success. The framework crafted by Halpin and Fraussen (2017) offers a clear definition of prominence and posits a mechanism that drives it, i.e., the audience dynamic. However, prominence has not yet been explored empirically across a variety of sectors, such as politics, media, and citizens. There is one study that quantifies prominence and compares it with its conceptual counterparts to ascertain if it captures a unique concept; the study confirms it does (Fraussen, 2018). Moreover, there is no empirical investigation into the factors that foster prominence, leaving a significant gap in the literature on prominence and the general success of interest groups.

This omission is problematic. Prominence encapsulates a specific type of success that emerges when policymakers recognize an organization as paramount and, thus, beneficial to their policy agenda, e.g., in the context of legislative debates, an organization is not merely mentioned, but referred to in a way that positions it as a resource. Policymakers are presented with a multitude of advocacy organizations that represent a spectrum of interests and groups, which can sometimes overlap. Therefore, the organizations that policymakers publicly acknowledge are a deliberate choice rather than a random occurrence. When policymakers preferentially cite one organization over another, it signals the significance of that organization within a particular national policy discourse (Grossman, 2012). This does not equate to influencing policy outcomes, but the fact that policymakers perceive an organization as the default representation of a specific policy issue or the authoritative voice of a constituency indicates an alternate form of success (Halpin & Fraussen 2017; Grossman, 2012). By presenting an alternate interpretation of interest group success, prominence represents a broader expression of power that is not confined to directly influencing policy outcomes. Ultimately, this study advocates for a more nuanced understanding of the motivations of organizations, arguing that measuring success solely based on policy influence overlooks these varied goals.

### **Theoretical Framework and Conceptual Relevance**

Prominence, access, and involvement serve as alternate, indirect or proxy success measures for interest group studies, circumventing the challenges of broadly defining influence. These metrics target distinct manifestations of policy engagement before the final stage of influence. Involvement signifies an advocacy group's efforts to engage with policymakers and governmental institutions; this is a decision at the group's discretion. By attempting to interact with key political players, an organization can keep its issues and perspective relevant in the minds of policymakers and, perhaps, ultimately influence the direction of the policy discourse. Access, on the other hand, reflects a group's direct engagement with policymakers and hinges on policymakers or 'gatekeepers' more broadly. Consequently, access tends to be a privilege reserved for a select few organizations that have ingratiated themselves as relevant or important to the policy process (Binderkrantz, 2017).

Research on the influence of interest groups encounters limitations due to the inherent challenge in broadly operationalizing influence (Dür & Bièvre, 2007; Grossman, 2012). To circumvent this issue, substitute measures of success, such as prominence, access, and involvement, focus on earlier phases of policy engagement before the final stage of the influence production process (Grossman, 2012; Halpin and Fraussen, 2017). These concepts enable researchers to gauge an organization's overall level of success, with each one targeting a unique facet of policy engagement. Involvement denotes the intensity with which an advocacy organization engages with policymakers and institutions, e.g., through open consultations or by submitting arguments or evidence to legislative bodies; the organization has the autonomy to decide whether and how often to engage in such activities. Access, conversely, signifies the potential to interact directly with policymakers, e.g., being invited to federal advisory committees or participating in closed congressional hearings. While the degree of involvement is at the organization's discretion, access is granted by policymakers. One constant finding regarding these and other forms of policy engagement, such as lobbying activities or committee representation, is that policy engagement is disproportionately concentrated within a select group of advocacy organizations (e.g., Pedersen et al., 2015; Halpin & Thomas, 2012; Boehmke et al., 2013).

Contrastingly, prominence embodies a type of engagement that typically depends on factors beyond an interest group's immediate control (Halpin & Fraussen, 2017). Essentially, prominence is accorded to an organization by politicians, journalists, or the public. Although groups must act and invest resources to create opportunities for prominence, the ultimate degree of prominence is a product of what Halpin and Fraussen term as the 'audience dynamic'. In the context of this study, which focuses on congress, the 'audience dynamic' refers specifically to the political sphere and, more precisely, the legislature.

Prominence can be conceptualized based on three pivotal elements: the group(s), the politician(s), and the issue(s). These three elements mutually influence each other, and the interplay among them generates variations in the prominence levels of groups representing similar interests and across the broader interest group landscape. The literature on interest groups has largely overlooked prominence, particularly regarding explanations of why variations in prominence levels exist and empirical tests of such explanations. However, there is a small body of literature to build upon, enabling us to contemplate and critically assess factors known to explain variations in other forms of policy engagement.

## **Structure of the Study**

We begin by providing an overview of the pertinent literature and presenting the conceptual model. Subsequently, we explore the application of prominence within the legislative context of the United States and its relevance to political discourse in general. Moving forward, we delve into the methods of data collection and measurement techniques, followed by a detailed description of the primary data sources employed to construct the dataset that forms the foundation of this study. The subsequent section focuses on elaborating on the

classifier, encompassing methodological choices and addressing limitations. This leads us to a discussion on the results of the analysis and how it facilitated the assembly of the final dataset. After outlining the prominence measurement results, we briefly touch upon the operationalization of key variables, as well as the specifications of the models employed to test the hypotheses.

## **Literature Review and Conceptual Model**

### **Prominence**

The most substantial conceptual exploration of the concept of prominence was conducted by Halpin and Fraussen (2017). The authors provide a clear definition of prominence, distinguishing it from involvement and access. They describe prominence as the accepted authority that a group holds among certain audiences, such as politicians or journalists, regarding a specific issue or constituency. Moreover, prominence depends on how external actors perceive a group, reflecting the group's significance, perceived expertise, and utility (Halpin & Fraussen, 2017; Fraussen, 2018). High prominence denotes that an organization is viewed as the representative voice for a specific constituency within a particular audience. Despite possessing similar representational claims and comparable attributes, only a few groups gain prominence within an issue area (Grossman, 2012), whereas most are not regularly sought out by politicians. Similarly, some issues possess more prominent players than others (Fraussen, 2018).

Prominence results from factors largely external to interest groups. In the legislative context, this primarily equates to political elites' perceptions of groups. Perception is significant because policymakers, constrained by attention scarcity, cannot process all information emerging from a dense group landscape. Consequently, they resort to shortcuts when addressing or deflecting a range of interests, leading to variations in prominence (Halpin & Fraussen, 2017; Grossman, 2012). For instance, while debating healthcare policy, lawmakers are unable to reference all relevant interest groups to their position. Instead, they strategically decide which groups to invoke, if they invoke any at all. Moreover, not all policy areas receive equal attention in legislative debates, meaning that some issues inevitably have more prominent players. Fraussen and Halpin (2017) propose that lawmakers base this decision largely on their perception of a group's relevance, political usefulness, and authority as a spokesperson for an interest constituency. As such, the group chosen to represent a given interest at a specific time is revealing. It highlights the group's utility for a political purpose and raises the question: what determines a group's relevance or usefulness to a politician?

While the authors identify the audience dynamic as the primary explanatory factor for variations in prominence, they refrain from detailing what influences the audience dynamic and how it impacts prominence. An inspection of two related concepts, access and recognition, provides insight into the dynamics at work. Next, we look at each to explain differences in prominence affordance across the entire interest group and policy area landscape.

## **Access, its explanatory factors, and its relevance to prominence**

Binderkrantz & Pedersen (2017), in their paper, “What is Access? A Discussion of the Definition and Measurement of Interest Group Access”, defines access as the ability of interest groups to influence policy formulation through formal, informal, and political channels. Key to this conceptualization of access is that the interest group “gains attention from the gatekeepers in the relevant political arena” (Binderkrantz & Pedersen, 2017). This involves a variety of factors, with the socio-political context, public relevance, and the intricate workings of institutional structures being paramount. Though these elements are certainly significant to understanding prominence, it's crucial to note that access and prominence, while interconnected, are distinct facets of interest group dynamics, and the conflation of the two may obscure their unique nuances.

Access can be thought of as the 'invitation to the table'— an opportunity to be part of policy dialogues. Prominence, however, is about 'being relevant' or 'taken-for-granted'. Its emphasis is on the weight and visibility an organization commands within policy dialogues and the wider socio-political discourse without directly participating in it. Hence, it's plausible that prominence could exist without formal access. In an age of digital media and grassroots movements, some groups could become the taken-for-granted voice on an issue without traditional institutional access. In other words, a group might not be prominent in a legislative setting, but in the media or society at large.

Conversely, having access without prominence is also conceivable. An interest group may have connections and channels to policymakers (access), yet lack the broader visibility or recognition (prominence) within public discourse. This discrepancy can arise in situations where the issues the group advocates for are niche, thereby not attracting widespread public attention. Alternatively, this could be the case when the interests being represented are not of broad public concern but are instead specific to a certain subset of the population.

It is important to provide a brief overview of the two primary factors, socio-political backdrop and institutional frameworks, which are borrowed from the conceptualization of access above. The socio-political backdrop under which an act of prominence transpires in congress impacts the dynamics of prominence. For instance, in a political environment besieged by high inflation, it is probable that organizations focusing on business, labor, or economic issues would eclipse those focused on areas such as healthcare. This wouldn't necessarily correlate with the inherent value or necessity of these groups, but rather their relevancy to the given context. Similarly, the public's perception of issues heavily informs the propensity of politicians to prioritize them. Therefore, interest groups that champion issues resonating with public sentiment are naturally more inclined to achieve prominence.

This relationship between issue-area and political attention underscores a fundamental characteristic of democratic governance - the interplay between public opinion and political action. Since voters imbue policymakers with their legislative authority, it is possible that issues

of public importance will play a role in the distribution of political attention. In the context of the United States, there is evidence that this is indeed the case (Jones & Baumgartner, 2004). In other words, it is conceivable that policymakers will gravitate towards interest groups that best align with both their policy objectives and their constituents' priorities.

In this context, issue salience emerges as a potential correlate of group prominence. Interest groups that effectively advocate for issues of high public concern are more likely to gain the attention of decision-makers. This dynamic results in an uneven terrain of group prominence, with the recognition that not all policy areas carry the same weight in the eyes of the public or political gatekeepers. Moreover, this conceptual relationship suggests that due to issue attention, a group can have access, but not be prominent. A group can have a seat at the table, and participate in the policy-making process, but in an issue area that does not receive much public attention. Accordingly, the first hypothesis is Interest groups mentioned in policy-areas of high salience are more likely to be prominent. Next, we turn to an under-studied topic within interest group literature that explores the link between interest groups and individual politicians.

### **Interest-group politician Linkage**

Next, we turn to a under-studied topic of interest group literature that explores the link between interest groups and individual politicians. Ibenskas and Bunea (2021) provide a valuable analysis of this topic, whereby they analyze the interactions between members of the European Parliament (MEPs) and various interest organizations on Twitter. Their analysis centers around the concept of recognition, which they define as the attention given to an organization by a decision-maker, which in turn may pave the way for increased access to said decision-makers. Although recognition bears similarities to prominence, there are key distinctions. Recognition hinges on more subtle factors including political strategy, an evaluation of an interest group's qualities, and its effectiveness. Prominence, on the other hand, is tied to an organization's efficacy in representing a particular group or viewpoint and requires that an organization differentiates itself amongst its peers to warrant serious consideration by decision-makers (Ibenskas and Bunea, 2021).

Building on the theoretical framework proposed by Müller and Storm (1999), Ibenskas and Bunea argue that the recognition behavior exhibited by MEPs is fueled by several incentives: political (re-election), policy-related (realizing policy goals and influencing legislation), and career-oriented (securing influential roles on decision-making committees). They establish that MEPs use their recognition of groups to forward their legislative and electoral ambitions, demonstrating a clear preference for groups that share their political ideology, come from their home state, or play a significant role within policy fields the politician specializes in.

These revelations carry weighty implications for understanding the variance in prominence from a policymaker's perspective. For example, organizations from a congressional member's home



state play a crucial role in boosting their electoral appeal. Home-state organizations can provide congressional members with valuable information about their constituents' views on specific legislative proposals and by prominently mentioning them, this could establish a link that could aid re-election purposes. By affording prominence to these interest groups, members of Congress can improve their electoral chances.

The policy domain also plays an important role. Organizations that share a policy domain with legislators are more likely to gain prominence. Not only will the intersection of the issue area make it more probable, but also from the politician's perspective, there is an incentive to afford prominence in order to access policy goods. Legislators are inclined to pay attention to a manageable number of organizations that provide them with talking points, information, and legitimacy as they pursue their policy goals. Hence, it is plausible that legislators will afford prominence to organizations that share their policy domain.

These re-election incentives also speak to the research of Anthony Downs and his focus on politicians' re-election motives. From this perspective, re-election motives are the primary drivers of politicians' attention to interest groups. When a politician's primary goal is to retain their office, they're more likely to mention interest groups advocating for issues that resonate with the public. In this sense, public salience becomes a key determinant of an interest group's prominence, as politicians seek to engage with groups and issues that help secure their electoral fortunes. Politicians, who are constantly mindful of their need to appeal to constituents, are more likely to engage with interest groups that are associated with high salience issues. By aligning with these groups, they can position themselves as active participants in addressing the issues that voters care about, thereby enhancing their electoral prospects.

There are a few other relevant factors not covered in the previously discussed paper by Müller and Storm (1999) that could offer critical insights into politician-interest group linkages and that follow the logic of re-election and policy incentives. For example, as politicians gear up for re-election, the pursuit of public support gains importance. This could amplify the role of interest groups that represent specific constituencies or policy areas. By prominently mentioning these groups, politicians not only signal their active policy engagement but also portray an image of political legitimacy, which can resonate with constituents and even the interest group they are mentioning. This public alignment with interest groups can also unlock access to resources essential for their campaigns, like funding, volunteers, voter mobilization efforts, or endorsements.

Seniority and Legislative Activity are both crucial factors that could influence the extent to which a politician accords prominence to an organization. Senior politicians are typically more visible and active in legislative politics. They are more frequently involved in legislative debate, providing them with more opportunities to publicly recognize interest groups, and they have had years to solidify network relations across the political landscape, including with interest groups. On the other hand, legislative activity, which refers to the extent to which a

politician introduces bills, means more time spent interacting with interest groups and other parties, as well as more debates and hearings on the respective legislation. Moreover, it is plausible that Active legislators will have extensive networks among governmental and societal stakeholders, including interest groups.

This leads to general hypothesis for group-politician linkage: The degree to which a politician affords prominence to an interest group is influenced by a range of factors, including their re-election incentives, policy alignment with the group, and the group's significance to their constituents, along with their seniority and legislative activity. The combination of these factors determines the likelihood and degree of prominence a politician will afford to an interest group.

### **Institutional Pluralism**

Grossman's theory of institutionalized pluralism provides insight as to how and why some advocacy groups are successful and grounds the conceptual model from the interest group level. It holds that advocacy groups with specific traits will develop into institutionalized political leaders in policy making arenas. In general, the theory holds that political influence and power are distributed across several institutions rather than being concentrated in one, which provides opportunities for various interest groups to prosper. Accordingly, the success of an interest group should be evaluated in terms of other forms of engagement and recognition that come before influencing policy outcomes, such as prominence and access, rather than being solely measured in terms of policy outcomes (Grossman, 2012).

The expansive nature of the interest group landscape means that not all entities can achieve institutionalization and fulfill the 'legitimacy role'. Grossman explains that institutionalization is a form of success on its own, distinguishing an advocacy organization as a credible advocate and assumed representative of a public constituency. However, this recognition does not automatically equate to prominence (Grossman, 2012); it merely positions them for potential prominence. Certain organizational traits elucidate why some entities achieve institutionalization while others do not. Factors such as the organization's age, scale, member linkages, professional interests, political infrastructure, and the breadth of its agenda (Grossman, 2012) can contribute to its institutionalization, and consequently, its potential for institutionalization. The discrepancy in structural attributes, coupled with the limited attention capacity of policymakers and citizens, account for why not all groups achieve institutionalization and prominence.

It is pertinent to enumerate the specific attributes of advocacy groups that potentially influence their level of prominence. Given that these characteristics shape the perception of a group's relevance, usefulness, and authority, they can ultimately sway the decision of policymakers in selecting a group as a representative of a specific interest. Consequently, understanding these factors is critical to untangling the complexities of group prominence.

Starting with age, long-standing organizations often earn more recognition due to their consistent presence in the political landscape and established roles in policymaking. They are seen as stable entities with coherent purposes and are thus more likely to be institutionalized or prominent (Grossman, 2012). Furthermore, longevity provides experience and knowledge of the policy landscape and the ability to mobilize constituencies. This in turn increases their visibility and bolsters their prominence. Next, we consider the linkages to membership. Advocacy groups with strong connections to a public constituency are perceived as more legitimate, particularly when they have a sizeable individual membership (Grossman, 2012). This perception arises because these groups appear to act in a representative capacity, voicing the interests of their members. Furthermore, organizations connected to local or state chapters are viewed to have tangible ties with their supporters. This combination of national representation and local organization adds to their credibility, enhancing their institutionalization and prominence.

The breadth of an organization's political agenda also bears heavily on its prominence. Groups advocating a wide range of public policy goals are likely to be considered participants in an array of debates. This broad-spectrum involvement ensures frequent intersections with policymakers' considerations, increasing their visibility (Grossman, 2012). Niche organizations, on the other hand, which focus on narrower issues, risk reduced visibility in broader policy discussions. Professional interest is another determinant that can influence an organization's prominence, although it is thought to sometimes work against the group. Advocacy organizations primarily promoting professional development might face a disadvantage in being perceived as representatives of broader public interests (Grossman, 2012). Their focus on occupational advancement might lead them to be associated more with private interests, lacking wider political support. Lastly, the use of lobbyists, while seemingly a straightforward way to boost an organization's influence, may not contribute positively to its prominence or policy-making involvement. Relying heavily on external lobbyists might signal a lack of internal leadership, which could tarnish the organization's image (Grossman, 2012). External lobbyists aren't interchangeable with dedicated internal staff, who possess deep-seated knowledge and are driven by conviction in their organization's cause.

In summary, the study derives three hypotheses from this conceptual framework. First, it suggests a positive relationship between the age of an advocacy group and the likelihood of its prominent mention, theorizing that older organizations will have a higher probability of being prominently mentioned in policy debates. Second, the study hypothesizes a positive association between the breadth of an advocacy organization's agenda and its probability of prominent mention, proposing that organizations with broader policy agendas will feature more prominently in various policy debates. Lastly, it assumes no significant relationship between an organization's use of external lobbyists and the likelihood of its prominent mention, challenging the idea that the use of external lobbyists significantly increases an advocacy organization's likelihood of achieving prominence in policy discussions.

# Data, Operationalization, and Methods

## Application

Prominence is largely defined in the legislative context by a politician mentioning a specific interest group due to its relevance, political usefulness, and authority as a spokesperson for a constituency (Fraussen, 2018). Hence, to gain insights which organizations are deemed relevant and useful to by members of Congress, an approach is gauging a groups perceived importance is need. A promising avenue to achieve this is through the analysis of legislative debates, as they provide valuable information about the structure, content, and ideological positions of lawmakers and interest groups. They also illuminate the dynamics between politicians and interest groups.

Drawing on techniques from prior research, such as political speech analysis, one can examine the ideological positions, interactions, and confrontations in the political arena (Proksch & Slapin, 2012; Diermeier, 2012; Proksch & Slapin, 2010). This methodology has already proven successful in providing unique insights into political ideologies and conflicts. By analyzing the official transcripts of Congressional speeches, we can decipher the significance attributed to diverse organizations by politicians. Furthermore, we can investigate how this attribution process is influenced by the characteristics of politicians, interest groups, and policy areas.

Prominence in legislative debates emerges when politicians strategically use an organization's name as a rhetorical tool. According to Fraussen (2018), it is critical to differentiate between mere visibility, i.e., being mentioned, and true prominence, i.e., being referenced. The latter is our focal point, as we are primarily interested in pinpointing organizations that command high importance in the eyes of politicians. The methodology section will provide a more in-depth explanation of the techniques deployed to detect prominence. However, understanding the distinction between routine mentions and those that confer prominence is a crucial aspect of our theoretical approach. This nuanced understanding will allow us to better interpret the data and more accurately identify which organizations truly hold sway in legislative debates.

The distinction between a prominent a non-prominent mention is ultimately what the measurement and classification of prominence rests on. To achieve this, prominence is measured using supervised machine learning techniques. This method is ideal for analyzing vast amounts of textual data, eliminating the need for manual coding (Aizenberg & Binderkrantz, 2021). The approach is informed by Fraussen (2018), who was the first and only to measure prominence with a supervised machine learning (S.M.L) method. In supervised machine learning, the texts are manually categorized into pre-defined classes, which is then used to train the algorithm. The algorithm identifies patterns in the training data and connects the input

features (words in the text) to the target feature (human-coded categories). This approach requires a variety of data sources.

## **Classifier Data and Methodology**

The classifier is built the Congressional Record obtained from the GovInfo API for the 114<sup>th</sup> and 115<sup>th</sup> congress. The Congressional Record, published on the days of official proceedings, includes Senate and House Proceedings with verbatim transcripts. Each day's proceedings are split into granules, each representing a different activity of the day. The GovInfo API also provides bill data and member data endpoints, useful for defining the policy area of a specific granule and gathering data on individual politicians. The Congressional Record data was collected using a custom Python script through the GovInfo API, capturing Senate and House proceedings for every session day of the 114th and 115th Congresses, consisting of just under 78,000 individual documents.

The Washington Representative Study provides variables related to interest groups, along with a list of national interest groups. Despite the data being published in 2014, it is updated until 2011. The dataset was compiled using Washington Representatives directories (published by Columbia Books) from various years - 1981, 1991, 2001, and 2011. The dataset comprises 14,368 interest groups and a total of 43,012 cases. An interest group might be represented in multiple cases in the dataset constructed for this thesis when their policy goals span different categories. For instance, a group focusing on both education and health would appear twice in the dataset - once for each topic. However, a group can occur up to three times, taking at most three rows.

To simplify the dataset, it was restructured to limit one row per organization, meaning each organization can only belong to one category. Though this may lead to minor data loss and a slight decrease in precision, multi-category classification of interest groups is not central to the theoretical model. By reducing the categories, a group can belong to, we avoid unnecessary complexity in an area of secondary importance. Furthermore, the original dataset was trimmed and validated. Certain interest group categories were removed. The organizations removed were those that didn't fit the study's definition of an interest group: an association of organizations or individuals aiming to influence policy. Hence, organizations individual companies, international organizations, foreign governments, or local or state governments were removed.

The limitations of the dataset are worth noting. Primarily, it is somewhat outdated. The congressional record was compiled for the 114th and 115th Congress, meaning the interest group variables are not entirely up to date. However, this mainly impacts the lobbying statistics, while elements like membership status and age remain relatively stable. Another limitation is that the list of interest groups is exhaustive only until 2011. Thus, there might have been changes in names, discontinuation of groups, or mergers that the list does not capture. To

address this data quality issue, organizational names were cross verified via the Wikipedia API to track changes since 2011 or to determine if organizations had ceased operations or merged with other interest groups. This Wikipedia API information was then manually validated to guard against inaccuracies.

After collecting the congressional record for the 114<sup>th</sup> and 115<sup>th</sup> congress, 77,857 documents were searched for mentions of the 5,447 organizations. Before the search, the text underwent preprocessing steps like conversion to lowercase, removing non-alphabetic characters and stop words, and tokenization. This minimally processed text was then searched for mentions of interest groups in the trimmed list generated from the Washington Representative study. A python script identified passages in the text that refer to an interest group by name or acronym. It does so by generating a regular expression pattern for each respective name or acronym in the list, and then looking for these patterns in the text. If the script identifies a mention, the sentence containing the mention and surrounding sentences (three sentences before and four sentences following the reference) are saved. Finally, unique mentions were monitored throughout the search to avoid instances where the same sentence appears in multiple paragraphs for the same interest group, and, thus, situations where a mention is counted more than once. Overlap is possible because the extraction method involves capturing the three sentences before and the four sentences after the mention. Indexing the mentions in relation to specific organizations while the script runs minimizes over counting, while still allowing for the possibility that a paragraph will appear twice because it mentions more than one interest group.

The product is a dataset comprising 24,000 unique mentions of interest groups made by congressional members for the 114<sup>th</sup> and 115<sup>th</sup> congress. A mention, however, does not amount to an act of prominence. Hence, it is necessary to differentiate between prominent and non-prominent mentions. The size of the dataset makes manual coding unfeasible, so an automatic approach is employed. To implement a supervised machine learning technique, a labeled dataset is required. The labeling process began by assigning unique identifiers to each paragraph and indexing mentions of the respective interest group in that paragraph. If there was only one mention of a respective interest group, there is only one index in the paragraph. While a paragraph may contain multiple mentions of the same interest group, prominence is context-specific, with the overall context of the paragraph being crucial. Therefore, for a paragraph to be considered prominent, only one mention of an interest group within it needs to be classified as prominent.

A random sample of 1000 mentions were taken to create a labeled dataset. The criterion for a prominent mention follows the coding scheme develop by Fraussen (2018): a mention is prominent if (1) a groups views are adopted by a policymaker, (2) the group is mentioned as having a significant role in the policy-making process, (3) the group is used as a resource (to convey their argument), or (4) convey the importance of a group to the policymaking process. The mention of a group can only be regarded prominent if less than 10 other groups are

mentioned in the same sentence. If an organization is being listed among many others, it dilutes their importance and weight to a political debate as prominence alludes to the scarcity of attention. Ultimately, the supervised machine learning model's input features are the manually coded mentions, which are made up of the text itself. On the other hand, the binary prominence labels are used as the target variable for the model.

The next step in building a classifier is a step known as preprocessing. This included converting mentions to lowercase, removing non-alphabetic characters and stop words, and tokenization. The text then is transformed into numerical vectors so that it is machine readable. The training data is partitioned into a training and validation set, so the final model can be evaluated on unseen data. After partitioning the data, a grid search is conducted to compare the performance of different model-vectorizer combinations. Various classification algorithms, such as Multinomial Naive Bayes, Logistic Regression, Support Vector Machines, and Random Forests, are tested alongside count and tf-idf vectorizers. The evaluation metrics used include ROC AUC score, precision, recall, and F1-score.

In the end, a Support Vector Machine with a count vectorizer was chosen. It demonstrated a decent level of performance, with an accuracy of approximately 81%, indicating that the model correctly predicted prominence in 81% of the mentioned. The ROC AUC score (Receiver Operating Characteristic Area Under the Curve) is around 0.72. This measurement indicates a perfect model at a value of 1, so a score of 0.72 suggests that the model is reasonably good at distinguishing between prominent and non-prominent mentions. Precision and recall values differed between the two classes, with higher precision for prominent mentions (0.82) and higher recall for non-prominent mentions (0.90). The F1-score, which balances precision and recall, was 0.79 for prominent mentions and 0.65 for non-prominent mentions. These results indicate that the model fared better at identifying prominent mentions than non-prominent ones.

## **Data & Variable Operationalization**

With an overview of the prominence established, we turn to an overview of the final dataset and how central variables are operationalized and specified in the empirical model. The conceptual model highlighted three factors while explaining the dynamics of prominence: the interest group, the issue area, and the one affording prominence. In the context of legislative debates, this means the interest group being mentioned, the issue area under which the mention occurs, and the congressperson speaking. In other words, the particularities of each of these areas interact in instances of group mentions in legislative debate. One can think of these areas as the three main explanatory factors regarding why a mention is prominent or not. The literature review pinpointed specific variables to explain each.

The overall likelihood of receiving a prominent mention would across the entire interest group landscape will increase with area of high public salience, meaning the groups prominently

mentioned in policy areas of high public salience would be more prominent because these issues are more commonly debated. On the other hand, to explain why some groups are more likely to be prominently mentioned in specific issue area than others, the unique attributes of groups were highlighted, like age, membership status, group type, and expenditure on lobbying. Finally, the political attributes of a politician will also impact the dynamics of prominence through group-politician linkage. Accordingly, the theoretical model demands the operationalization of four main areas: prominence, issue area, public salience, group character variables, and speaker variables. How each was operationalized will be briefly explained. Since the classifier section explained how prominence was operationalized, we begin with issue area and public salience.

Issue-Area denotes a broad thematic category encompassing a set of related policy issues or topics. In the context of this study, it refers to the policy context of a specific mention. With a multitude of niche policy areas, a method of reduction is needed. This study applies the policy area schema established by the Comparative Agendas Project, rather than devising its own. It is necessary to identify the issue area of a mention to connect each mention to a measure of public saliency. The congressional record provided no such information, so an alternative means to identifying the issue area is necessary. The documents from which mentions were extracted contain a variety of meta data, including the relevant committee of a speech and any associated bill data. If a mention is associated with a committee, the committee is used to identify the policy area context. A committee to policy area mapping was created in order to contextualize mentions (see Appendix A). There are hundreds of committees and subcommittees, so there are multiple committees in each of the twenty-one-policy area. If no committee data is associated with a mention, but a specific bill is, the bill is used to identify the policy area.

However, these bills are not mapped to policy areas. Due to time and resources limitations, a congressional bill classifier developed by a partnership between USA Facts and Stanford University is used to classify the bills. The pre-trained classifier did not follow the policy area mapping of the comparative agendas project, so the thirty-one bill labels employed by the congressional bill classifier were mapped to the policy areas of the CAP. After these two methods, the policy context was still undetermined for a third of the observations. Rather than developing another classifier, or using a bag-of-words approach and a unsupervised clustering algorithm, the cases are dropped on the grounds that they adhered to a randomly distributed population.

Having identified the issue area of a particular mention, it is possible to position a mention within a wider societal context by capturing the saliency level of the respective issue relative to the others. Issue salience refers to the importance of policy areas as perceived by the public. To capture the relative saliency of the twenty-one-policy area, this study utilizes Google Trends, a Google service that tracks the popularity of specific search topics over time. Via the Pytrends Python package, one can make API calls to Google Trends and retrieve information



detailed in your request parameters. Hence, a small program was written to collect data regarding the popularity of search terms.

Terms were chosen through a manual interaction with the Google Trends website. A list of twenty-one search terms were chosen as latent representations of specific policy areas and requested via the API interface. A relative measure of each of the search terms is returned via the API call. This was done four times, with a different search term representing the issue area each time (this was done to minimize bias and misrepresentation). One can only search the relative popularity of six terms at once, so each request and each round of search terms, one term was kept constant. The raw data from Google Trends is normalized in terms of relative popularity and not absolute search volumes. Therefore, a value of 100 (the max value) signifies peak popularity for a search term within a given timeframe, indicating a comparison of relative popularity to the other terms in that timeframe. Consequently, trend scores must be transformed to create a public salience measurement. This was done by creating policy areas of low, medium, and high saliency and evenly splitting the policy areas into the categories.

The saliency measure derived from Google Trends data offers a unique approach to estimating public interest in various policy areas, representing an indirect barometer of public priorities based on online search behaviors. This measure primarily reflects the level of public attention to specific issues, which can be influenced by numerous factors including media coverage, events, and individual curiosity. As such, the measure does not necessarily denote public preference or priority, as the volume of searches for a topic does not directly signify its importance or the public's stance on it. This measure might heavily correlate with media attention, given the media's role in shaping public discourse, and is likely more reactive to short-term external stimuli than more stable measures of public preferences or priorities. It shares similarities with Most Important Problem (MIP) measures, but while MIP directly gauges public priorities, the Google Trends approach indirectly assesses interest or attention, making it more susceptible to transitory influences. Therefore, while this approach is beneficial for tracking shifts in public attention to different policy areas, its interpretation should be approached with caution.

There are a few major limitations with this method. Essentially, selected search terms might not accurately mirror public interest in a policy area. A term could be associated with multiple issue areas or citizens might use alternative search terms to research policy areas. To counter this, the study uses four search terms for each policy area. Second, the popularity of a search term does not necessarily reflect the salience of the associated policy area, as events or scandals could temporarily spike a search term's popularity. Despite these challenges, Google Trends data provides a way to empirically overcome obstacles in gathering public salience data.

Group Characteristics variables are operationalized as attributes that are relevant to positioning an organization as the pre-eminent choice for a specific constituency or viewpoint. The specific attributes included in the models are age, membership status, category, and lobbying expenditure. This data is borrowed from the Washington Representative Studies and is

only current to 2011. Hence, the model is forced to treat these variables as constant except for age. Among these variables, group category and membership status tend to remain stable over time. Therefore, the 2011 data can reasonably serve as a proxy for these characteristics in subsequent years, limiting the potential impact of the temporal data gap. The variable of lobbying expenditure, which is more prone to annual fluctuations, is the most affected by this limitation.

Politician characteristics variables are operationalized as attributes that are relevant to understanding the likelihood that a politician prominently mentions an interest group. The specific attributes included in the model are policy-domain overlap, election-year, seniority, and are party affiliation, policy domain, seniority, and bill sponsorship. This data was obtained from the ProPublica API. Next, an overview of the findings of the classifier

## Analysis

Overall, 20,699 mentions were identified in the data, involving 1,903 unique organizations. Interestingly, there was a substantial group of 3,421 organizations that were never mentioned. The number of mentions varied widely across groups, with an average of nearly 11 mentions per group (see appendix for tables). The spread ranged from a minimum of one mention to a maximum of 1,712 mentions, suggesting a high level of variation in the attention and prominence afforded to different organizations. Prominent mentions, a subset of total mentions, were identified 9,506 times in the data. The mean number of prominent mentions for groups stood at approximately 8.24, which, like the total mentions, varied significantly with a range from one to 642. This again highlights the considerable disparities in the level of prominence among different interest groups.

There is a strong correlation of 0.969 between the total number of mentions and the number of prominent mentions observed. This suggests that groups that are mentioned more frequently also tend to have a higher number of prominent mentions, reinforcing their influence in the discourse. Despite this, only about 45.92% of all mentions were classified as prominent. This indicates that while some organizations may be frequently mentioned, they are not necessarily highlighted in a way that conveys their importance to the policy-making process. The data also revealed that 247 organizations had 100% of their mentions classified as prominent, while 749 organizations had none of their mentions categorized as prominent. This further illustrates the wide disparities in prominence among interest groups. Interestingly, the range of mentions for groups with all prominent mentions was 27, while for groups with no prominent mentions it was lower at 19.

Tables and figures visualize this skewed distribution. Only 1% of the groups contribute to approximately 31.22% of the prominent mentions, while 5% of the groups account for roughly 54.07% of the mentions. Similarly, 10% of the groups represent about 66.48% of the prominent mentions, and 20% of the groups contribute to approximately 78.58% of the mentions.

Table 2 presents the top 20 groups with the highest number of prominent mentions. The Planned Parenthood Federation of America holds the top position, with a significant lead, having 1,712 mentions and 642 of those being prominent. The remainder of the list exhibits a diverse collection of groups representing various sectors and interests, each with prominent mentions ranging from 226 to 78. Occupational associations like American Bar Association, Fraternal Order of Police, American Medical Association, and American Society of Civil Engineers are also notable for their high prominence.

The third table describes the percentage and total number of "prominent mentions" for different interest groups categorized by political party affiliations: Democrat, Independent, and Republican. A few notable observations can be made: The 'Public interest' category has the highest prominent mentions for Democrats with ~18.89%, while the 'Trade and other business associations' category is most prominently mentioned among Republicans with ~17.05%. Independents have the most mentions in the 'Identity groups' category, comprising ~28.19% of their total mentions. In terms of raw numbers, Democrats have the most mentions in the 'Public interest' category, Republicans in the 'Trade and other business associations' category, and Independents in the 'Identity groups' category. Certain group types, such as 'Unions' and 'Education', don't have any mentions in the Independent party. The distribution of prominent mentions indicates the different areas of focus or interest each party may have, although further data, context, and more robust statistical analysis would be needed to draw more definitive conclusions.

Overall, these tables provide insight into the relationships between politicians, interest groups, and their collective influence and prominence. It indicates that certain interest groups (like Planned Parenthood Federation of America) have wide influence across different politicians and party lines. However, these are just insights, and more context and in-depth analysis are needed for a definitive interpretation.

## **Modeling and Results**

A Generalized linear mixed-effects model from the binomial family is used to assess the conceptual model. The model form is accommodating to a binary dependent variable, while accounting for both fixed and random effects. Although there is no time component to the model, hierarchical modeling is appropriate for your study because it allows for the separation of the effects at different levels of your data hierarchy. The data is comprised of three levels: the mention, the interest group, and the issue area. In this structure, a specific interest group's likelihood of being afforded prominence could be influenced by the specific issue area it is associated with and the specific politician-interest group linkage. Hierarchical modeling accounts for this structure by allowing for random intercepts for each level of the hierarchy (e.g., interest group and issue area). This means that baseline levels the likelihood of being afforded prominence can vary across issue areas and interest groups. Next, the results of the three fixed effects models are presented. The models are interpreted in terms of the odds ratios, which can be interpreted as the change in odds of being prominently mentioned (dependent variable) given a one-unit change in the corresponding independent variable. Tables are found in the appendix.

## **Model 1**

The First model includes variables related to the saliency of the issues the organization is involved in, the chamber in which the politician serves, their party history, and the specific congress term. This model is well-suited to test the second general hypothesis by examining how an organization's alignment with high salience issues and its level of access to policymakers influences its prominence.

Starting with Model 1 that address the policy saliency hypothesis, we observe that the Bayesian Information Criterion (BIC) for this model is 18803.6, higher than the BIC for the empty model (19752.2), which suggests that the empty model is preferable than Model 1 given the data. However, the difference is quite small. The odds ratio for Medium-Policy Saliency is above 1 (1.489), indicating that interest groups mentioned in policy areas of medium salience are more likely to be afforded prominence. On the other hand, the odds ratio for High Saliency is still below 1 (0.702), which contradicts the hypothesis for high salience policy areas. So, the models do seem to provide support for the hypothesis that interest groups mentioned in policy areas of medium salience are more likely to be afforded prominence. However, this contradicts the hypothesis when it comes to high salience policy areas. The models suggest that when policy areas are of high salience, interest groups are less likely to be given prominence.

## **Model 2**

The second model tests the influence of issue overlap, the term status of the politician, the number of bills sponsored, and the politician's seniority on the prominence of the interest group. This fits the third general hypothesis by allowing us to examine how factors related to the politician's reelection incentives, policy alignment with the group, and the group's significance to their constituents, as well as their seniority and legislative activity, influence the prominence afforded to an interest group.

Model 2 has a BIC of 9309.82, which is substantially lower than that of the empty model, suggesting that the full model has a better fit to the data. The variable representing overlap in the policy domains of the politician and the group has a positive effect size (OR=1.1058466) but is not statistically significant (p-value=0.1503), suggesting no strong support for this hypothesis. Next, the dummy variable for a mention happening in the first year of a term nor the last year does not have a significant effect (p-value=0.9329), and the dummy for a mention during the first before the end of the term has a positive effect size (OR=1.1107691) but is on the edge of statistical significance (p-value=0.0685), indicating weak evidence for this hypothesis. The seniority variable has a negative effect size (OR=0.9832424) and is statistically significant (p-value is very close to zero), suggesting strong evidence against this hypothesis. Finally, the number of bills sponsored has a negligible positive effect size (OR=1.0010380) and is not statistically significant (p-value=0.4675), indicating bill sponsorship is not a good indicator of prominence.

## **Model 3**

The third model is testing the influence of an organization's outside linkages, years of existence, and the unique issue areas it is involved in on its level of prominence. This aligns with the first general hypothesis by allowing us to understand how a politician's perception of the group might affect its prominence within an issue area. The model full model's BIC decreased from 19752 for the empty model

to 8675.1 for Model 3, and the AIC decreased from 19727.8 to 8586.3, suggesting that Model 3 is a better fit for the data than the empty model.

The variable organizational age, assumed to represent the age of the organization, has an odds ratio of 0.9982378. This suggests that older organizations have slightly lower odds of being prominently mentioned, contrary to the hypothesis. However, the p-value for this variable is not statistically significant (p-value = 0.219281), meaning that the effect of age on prominence is not clearly established in this data. The variable representing the scope of an organizations policy measurement -- measured by the number of policy area they were mentioned in -- is greater than 1, indicating that organizations with a broad policy agenda are indeed more likely to be prominently mentioned, consistent with the hypothesis. However, the p-value is not statistically significant (p-value = 0.135768), suggesting that the effect of policy breadth on prominence is not established. Finally, the variable representing external lobbying is greater than 1, suggesting that organizations engaging external lobbyists do have slightly higher odds of being prominently mentioned, contrary to the hypothesis. Moreover, the p-value for this variable is statistically significant (p-value = 0.001428), suggesting a significant effect of external lobbying on prominence.

## Discussion

The findings of the study offer novel insights into the relationship between politicians and interest groups in the context of prominence, contributing to an under-researched area in interest group literature. The results illuminate the dynamics that underpin the preferential attention given to certain groups by politicians, thereby providing a clearer understanding of a particular manifestation of interest group success.

The analysis supports some elements of the hypotheses while challenging others, expanding our knowledge about what factors contribute to an interest group's prominence. For instance, the study contests the conventional assumption that older advocacy organizations necessarily hold more sway in policy-making arenas. This suggests that the mechanisms of gaining prominence may not solely rely on historical presence or experience in the political arena, but rather are influenced by more complex dynamics.

In terms of organizational characteristics, the findings illustrate that advocacy groups with broad policy agendas were more likely to achieve prominence, albeit not statistically significantly. This may indicate that organizations able to address a wider range of issues can potentially resonate with a larger number of politicians, increasing their likelihood of being invoked in legislative debates. However, the fact that the influence of policy breadth wasn't statistically significant suggests that this factor alone may not be decisive.

The investigation showed that advocacy organizations employing external lobbyists tended to have higher prominence, contrary to the initial hypothesis. This finding suggests that lobbying resources may play a more significant role in gaining political attention than initially anticipated, highlighting the importance of professional intermediaries in the political process. The role of lobbyists in shaping policy discourses is thus reinforced, highlighting an aspect of prominence that warrants further exploration.

Turning to politician-specific factors, the results were mixed and complex. Seniority, an assumed key influence on the likelihood of an interest group gaining prominence, did not support the hypothesis.

This contradicts the conventional understanding that long-serving politicians wield more influence and are more likely to spotlight interest groups. Such findings indicate that the interplay between interest groups and politicians is more nuanced than initially thought, suggesting that there are possibly other unidentified factors at play.

The absence of significant findings around politician's term status, number of bills sponsored, or issue overlap with interest groups also challenges the initial assumptions. These results suggest that these factors may not be as influential in shaping prominence as previously thought. Overall, the findings of the study add valuable nuance to understanding of the factors that contribute to an interest group's prominence. The results challenge conventional assumptions and illuminate the complexities inherent in the relationship between politicians and advocacy groups. They provide impetus for further research in this area, particularly around the influence of lobbying resources and the nuanced roles politicians play in affording prominence to advocacy organizations.

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## Appendix

### Empty Model 1

BIC for the empty model: 19752.2434392014

Odds Ratios for the empty model:

(Intercept)  
0.5477278

AIC	BIC	logLik	Deviance	df.resid
19729.3	19752.2	-9861.6	19723.3	15639

#### Scaled Residuals:

Min	1Q	Median	3Q	Max
-3.2144	-0.7557	-0.4573	0.8573	3.3126

#### Fixed Effects:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.6020	0.1321	-4.557	5.2e-06***

#### Random Effects:

Groups	Name	Variance	Std. Dev.
Level1_org_id	(Intercept)	1.1954	1.0934
Level1_issue_area	(Intercept)	0,2814	0.5305

Number of obs: 15642, groups: level1\_org\_id, 1711; level1\_issue\_area, 21

*Signif. Codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1*

## **Full Model 1 :**

BIC for model 2: 18803.5675533824

Odds Ratios:

(Intercept)	0.2914985
Saliency_categorymedium	1.4892646
Saliency_categoryhigh	0.7022432
Level1_chamber_xHouseofRepresentatives	3.8305551
Level1_chamber_xSenate	3.9168808
Level1_partyHistoryDemocrat	1.0550341
Level1_partyHistoryIndependent	0.6276766

AIC	BIC	logLik	Deviance	df.resid
18734.6	18803.6	-9358.3	18716.6	15633

**Scaled Residuals:**

Min	1Q	Median	3Q	Max
-3.4689	-0.7313	-0.3956	0.7719	3.4920

**Fixed Effects:**

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.23272	0.14606	-8.440	<2e-16***
Saliency_categorymedium	0.39828	0.21952	1.814	0.0696
Saliency_categoryhigh	-0.35348	0.20286	-1.742	0.0814
Level1_chamber_xHouse ofRepresentatives	1.34301	0.05717	23.493	<2e-16***
Level1_chamber_xSenate	1.36530	0.06422	21.260	<2e-16***
Level1_partyHistoryDemocrat	0.05357	0.5534	0.968	0.3330
Level1_partyHistoryIndependent	-0.46573	0.28626	-1.627	0.1037

**Random Effect:**

Groups	Name	Variance	Std. Dev.
Level1_org_id	(Intercept)	0.9010	0.9492
Level1_issue_area	(Intercept)	0.1184	0.3441

Number of obs: 15642, groups: level1\_org\_id, 1711; level1\_issue\_area, 21

*Signif. Codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1*

## **Model 2**

BIC for model 3: 8675.07786306728

Odds Ratios:

(Intercept)	1.7161120
Level1_issue_maximal_overlap	1.1134653
Term_statusOther	0.9807843
Term_statusYear Before Term End	1.0867798
Level1_bills_sponsored	1.0005382
Level1_seniority	0.9839191
Level1_chamber_xSenate	1.0879503
Level1_partyHistoryIndependent	0.6245902
Level1_partyHistoryRepublican	0.8788550

AIC	BIC	logLik	Deviance	df.resid
8586.3	8675.1	-4280.2	8560.3	6798

**Scaled Residuals:**

Min	1Q	Median	3Q	Max
-3.6188	-0.8241	0.4837	0.7186	2.0228

**Fixed Effects:**

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.5400613	0.1482343	3.643	0.000269***
Level1_issue_maximal_overlap	0.1074771	0.0720482	1.492	0.135768
Term_statusOther	-0.0194028	0.3914722	-0.050	0.960470
Term_statusYear Before Term End	0.0832190	0.0596809	1.394	0.163197
Level1_bills_sponsored	0.0005381	0.0014787	0.364	0.715948
Level1_seniority	-0.0162116	0.0028855	-5.618	1.93e-08***
Level1_chamber_xSenate	0.0842855	0.0722673	1.166	0.243437
Level1_partyHistoryIndependent	-0.4706595	0.2952802	-1.594	0.110949
Level1_partyHistoryRepublican	-0.1291354	0.0607053	-2.127	0.033399*

**Random Effect:**

Groups	Name	Variance	Std. Dev.
Level1_org_id	(Intercept)	0.89020	0.9435
Level1_issue_area	(Intercept)	0.03707	0.1925

Number of obs: 6811, groups: level1\_org\_id, 929; level1\_issue\_area, 21

*Signif. Codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1*

## **Model 3**

BIC for model 3: 9309.82873209711

### **Odds Ratios:**

(Intercept)	1.6718530
Level1_issue_maximal_overlap	1.1058466
Term_statusOther	0.9693595
Term_statusYear Before Term End	1.1107691
Level1_bills_sponsored	1.0010380
Level1_seniority	0.9832424
Level1_chamber_xSenate	1.0885675
Level1_partyHistoryIndependent	0.6317363
Level1_partyHistoryRepublican	0.8899051

AIC	BIC	logLik	Deviance	df.resid
9233.9	9309.8	-4606.0	9211.9	7311

### **Scaled Residuals:**

Min	1Q	Median	3Q	Max
-3.7509	-0.8300	0.4878	0.7173	1.9829

### **Fixed Effects:**

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.513933	0.109711	4.684	2.81e-06***
Level1_issue_maximal_overlap	0.100611	0.069939	1.439	0.1503
Term_statusOther	-0.031120	0.369393	-0.084	0.9329
Term_statusYear Before Term End	0.105053	0.057668	1.822	0.0685
Level1_bills_sponsored	0.001037	0.001428	0.726	0.4675
Level1_seniority	-0.016900	0.002791	-6.055	1.41e-09***
Level1_chamber_xSenate	0.084863	0.069947	1.213	0.2250
Level1_partyHistoryIndependent	-0.459283	0.290221	-1.583	0.1135
Level1_partyHistoryRepublican	-0.116640	0.058742	-1.986	0.0471*

### **Random Effect:**

Groups	Name	Variance	Std. Dev.
Level1_org_id	(Intercept)	0.89117	0.9440
Level1_issue_area	(Intercept)	0.04791	0.2189

Number of obs: 7322, groups: level1\_org\_id, 1096; level1\_issue\_area, 21

*Signif. Codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1*

Figure 1.1

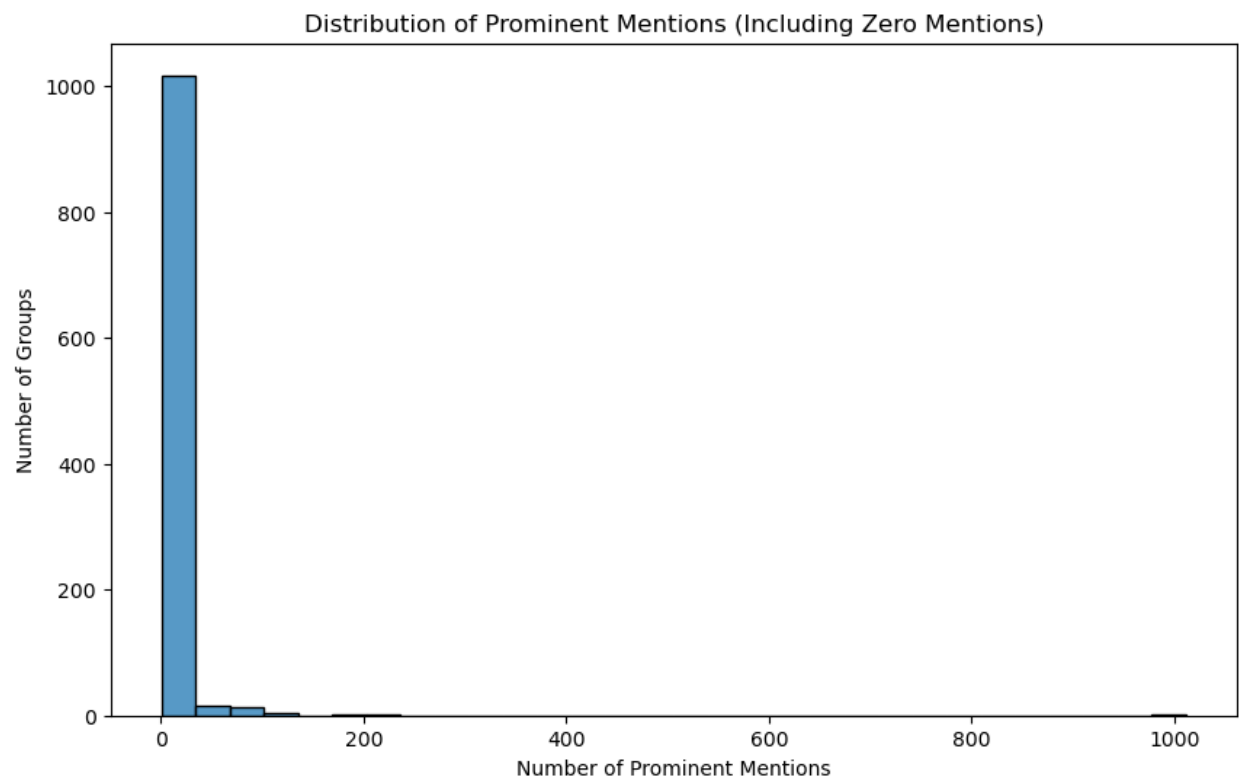


Figure 1.2

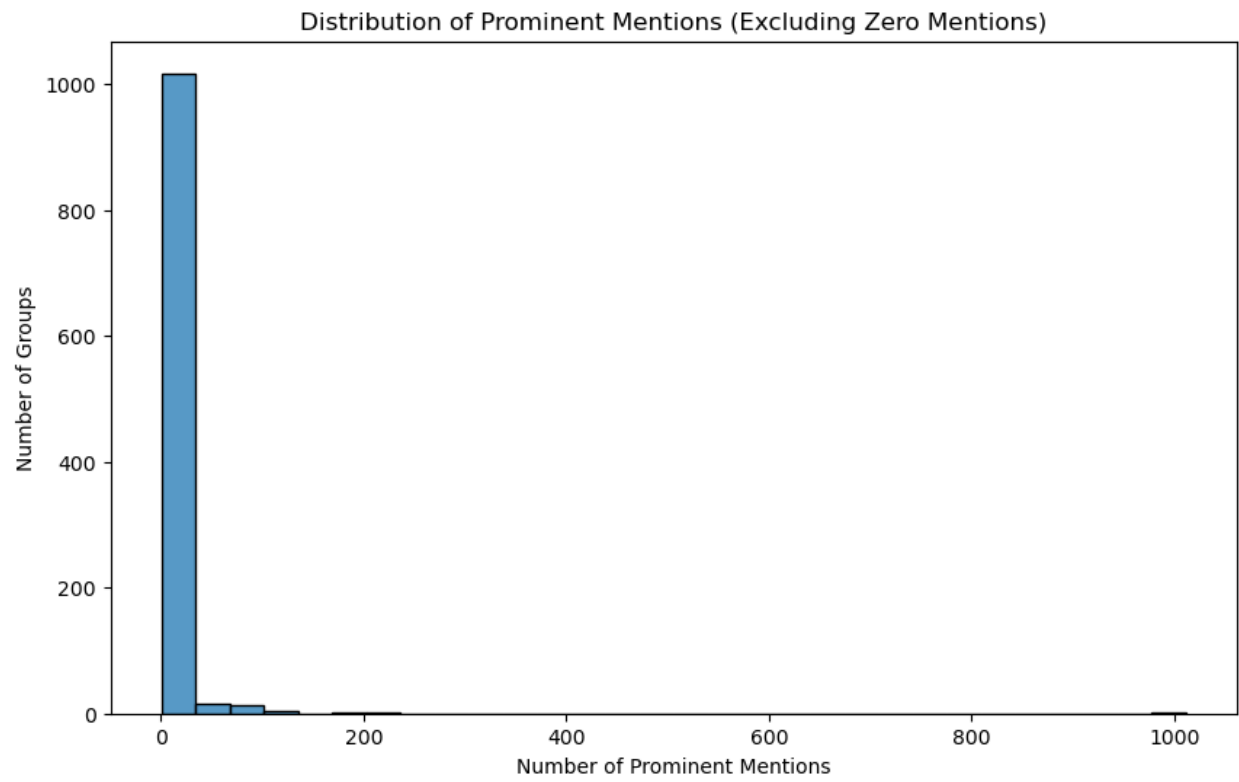


Figure 1.3

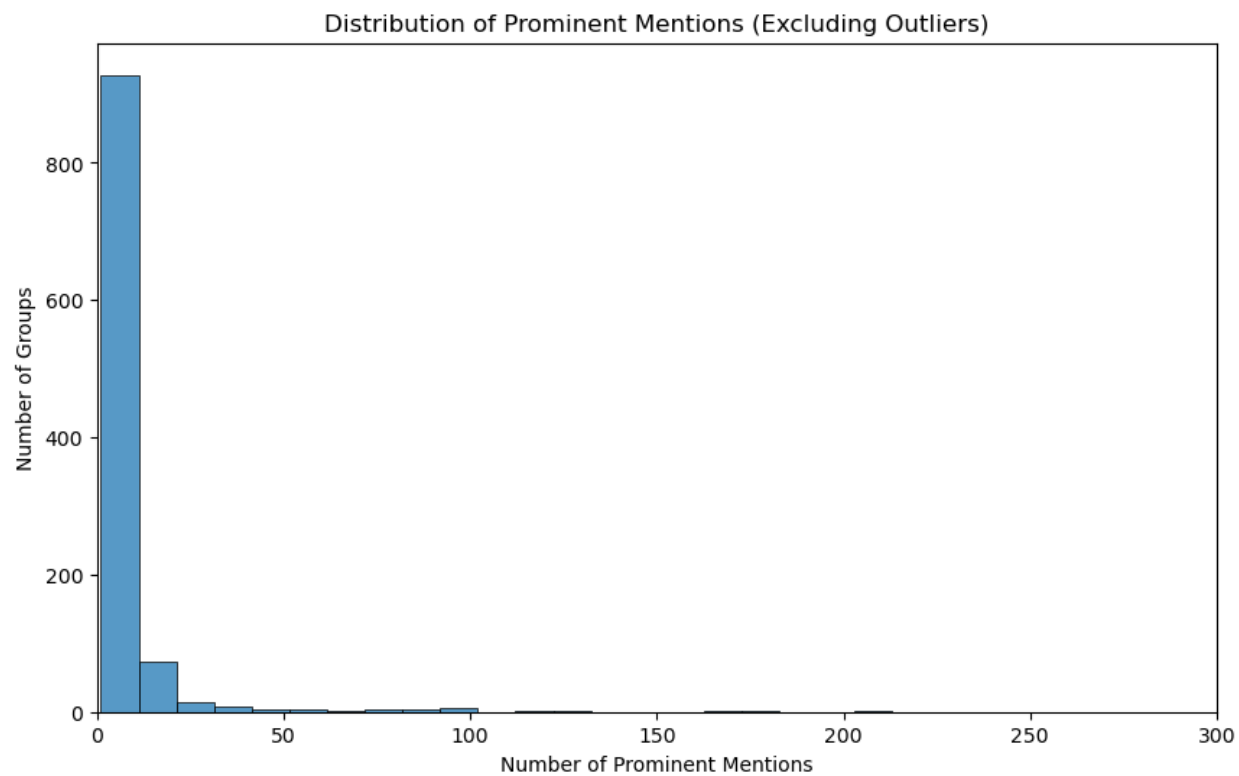




Table 2 - Top 20 Groups with the Most Prominent Mentions

level1_org_id	name	type	mentions	prominence
2853	Planned Parenthood Federation of America	Health	1957	1011
12	AARP (American Association of Retired Persons)	Identity groups	310	213
238	American Civil Liberties Union	Public interest	249	173
221	American Bar Association	Occupational associations	250	170
1453	Fraternal Order of Police	Occupational associations	226	132
1528	Goodwill Industries International, Inc.	Social welfare or poor	263	131
2130	National Association for the Advancement of Colored People	Identity groups	274	122
79195	Common Good	Public interest	192	118
59	AFL-CIO (American Federation of Labor and Congress of Industrial Organizations)	Unions	228	101
391	American Medical Association	Occupational associations	148	99
487	American Society of Civil Engineers	Occupational associations	132	99
2215	National Association of Manufacturers	Trade and other business associations	141	96
2339	National Center for Missing and Exploited Children	Other	149	96
2623	National Rifle Association of America	Public interest	131	94
2093	National Academy of Sciences	Other	312	89
106553	United States Chamber of Commerce	Trade and other business associations	162	83
378	American Legion	Other	409	82
3137	Tax Foundation, Inc.	Public interest	88	82
148	American Academy of Pediatrics	Occupational associations	111	78
7575	Kaiser Family Foundation	Health	100	74

Table 3 - Prominent Mentioned Groups versus Whole Population of Groups

	Population (No. Groups)	Prominence (No. Groups)	Prominence (Mentions)
Social welfare or poor	1019	971	380
State and local governments	457	365	142
Other	3647	3160	937
Trade and other business associations	3285	2526	1113
Occupational associations	2993	2594	1232
Unions	916	877	365
Education	537	451	113
Health	2456	2356	1224
Public interest	2893	2634	1339
Identity groups	2204	1919	820
Total	20409	17854	7665

	Population (Percent)	Prominence (No. Groups, Percent)	Prominence (Mentions Percent)
Social welfare or poor	4.9929	5.43856	4.9576
State and local governments	2.23921	2.04436	1.85258
Other	17.8696	17.6991	12.2244
Trade and other business associations	16.0958	14.1481	14.5205
Occupational associations	14.6651	14.529	16.0731
Unions	4.48822	4.91206	4.7619
Education	2.63119	2.52604	1.47423
Health	12.0339	13.1959	15.9687
Public interest	14.1751	14.753	17.469
Identity groups	10.7992	10.7483	10.698
Total	100	100	100

Table 4 - Percentage of Prominent Mentions by Party and Group Type

Party											Prominent Mentions (%)			Prominent Mentions (No.)		
											Democrat	Independent	Republican	Democrat	Independent	Republican
Org Category																
Social welfare or poor											4.984447	2.373887	5.034244	673.0	8.0	566.0
State and local governments											1.496075	1.186944	1.618785	202.0	4.0	182.0
Other											9.939268	7.715134	14.435649	1342.0	26.0	1623.0
Trade and other business associations											10.576211	10.385757	17.050609	1428.0	35.0	1917.0
Occupational associations											17.367797	12.462908	15.316197	2345.0	42.0	1722.0
Unions											6.139831	NaN	3.789024	829.0	NaN	426.0
Education											1.251666	NaN	1.076225	169.0	NaN	121.0
Health											17.752925	23.738872	18.873966	2397.0	80.0	2122.0
Public interest											18.886091	13.946588	13.937561	2550.0	47.0	1567.0
Identity groups											11.605688	28.189911	8.867740	1567.0	95.0	997.0
Total											100.000000	100.000000	100.000000	13502.0	337.0	11243.0

Table 5 – top ten

politicians by affordance, and bottom ten

prominence_affordance	party	state	interest_group_count	top_3_interest_groups
6	Democrat	CA	27	['Sierra Club 'American Legion 'Planned Parenthood Federation of America']
6	Democrat	CA	6	['Human Rights Watch 'National Housing Trust']
6	Republican	TX	39	['National Taxpayers Union 'Data Interchange Standards Association 'Civil Air Patrol']
6	Democrat	AZ	6	Advocates for Highway and Auto Safety
6	Republican	NV	22	['National Association of Manufacturers 'American Medical Association 'Arc, The']
20	Republican	SC	27	['Planned Parenthood Federation of America 'National Association of Realtors 'American Bankers Association']
20	Democrat	IL	43	['Planned Parenthood Federation of America 'American Society of Civil Engineers 'Goodwill Industries International, Inc.']
20	Republican	CA	62	['Planned Parenthood Federation of America 'National 4-H Council 'AMVETS']
20	Republican	FL	60	['Economic Development Commission of Florida's Space Coast 'Fraternal Order of Police 'Family Support Services']
20	Democrat	CA	67	['Planned Parenthood Federation of America 'Common Good 'Human Rights Campaign']
51	Democrat	VA	159	['National Federation of Independent Business 'Catholic News Service 'Credit Union National Association, Inc.']
51	Democrat	IL	102	['Planned Parenthood Federation of America 'Friends Committee on National Legislation 'Human Rights First']
49	Democrat	CA	342	['American Legion 'Disabled American Veterans 'Organic Trade Association']

Continued on next page...

49	Democrat	CO	89	['Planned Parenthood Federation of America 'Federal Law Enforcement Officers Association 'Association of American Medical Colleges ']
48	Democrat	WI	82	['Planned Parenthood Federation of America 'Center on Budget and Policy Priorities 'American Civil Liberties Union ']
1092	Democrat	TX	2068	['Planned Parenthood Federation of America 'National Association for the Advancement of Colored People 'American Civil Liberties Union ']
726	Democrat	IL	1488	['Planned Parenthood Federation of America 'American Medical Association 'AARP (American Association of Retired Persons) ']
667	Democrat	RI	1082	['American Petroleum Institute 'National Association of Manufacturers 'Americans for Prosperity Foundation ']
437	Democrat	VT	863	['Planned Parenthood Federation of America 'American Civil Liberties Union 'American Bar Association ']
421	Republican	OH	712	['National Center for Missing and Exploited Children 'Fraternal Order of Police 'Patient Services Incorporated ']

## Appendix A - MAPING

```
committee_to_policy_area_mapping = {
    'Committee on Small Business': ['Domestic Commerce', 1500],
    'Committee on Financial Services': ['Macroeconomics', 100],
    'Committee on Ways and Means': ['Macroeconomics', 100],
    'Joint Committee on Printing': ['Government Operations', 2000],
    'Committee on Agriculture': ['Agriculture', 400],
    'Committee on Armed Services': ['Armed Forces and National Security', 1600],
    'Committee on Transportation and Infrastructure': ['Transportation and Public Works', 1000],
    'Committee on Energy and Commerce': ['Energy', 800],
    'Select Investigative Panel of the Committee on Energy and Commerce': ['Energy', 800],
    'Joint Economic Committee': ['Macroeconomics', 100],
    'Committee on Appropriations': ['Macroeconomics', 100],
    'Committee on the Budget': ['Macroeconomics', 100],
    'Committee on the Judiciary': ['Crimes and Law Enforcement', 1200],
    'Committee on Foreign Affairs': ['International Affairs', 1900],
    'Committee on Education and Labor': ['Education', 600],
    'Committee on Oversight and Reform': ['Government Operations and Politics', 2000],
    'Committee on Homeland Security': ['Armed Forces and National Security', 1600],
    'Joint Committee on the Library': ['Arts, Culture, Religion', 2300],
    'Committee on Natural Resources': ['Public Lands and Natural Resources', 2100],
    'Committee on Science, Space, and Technology': ['Science, Technology, Communications', 1700],
    'Joint Committee on Taxation': ['Macroeconomics', 100],
    'Committee on Ethics': ['Government Operations and Politics', 2000],
    'Committee on Agriculture, Nutrition, and Forestry': ['Agriculture', 400],
}
```

'Committee on Commerce, Science, and Transportation': ['Domestic Commerce', 1500],  
"Committee on Veterans' Affairs": ['Government Operations and Politics', 2000],  
'Permanent Select Committee on Intelligence': ['Armed Forces and National Security', 1600],  
'Committee on Rules': ['Government Operations and Politics', 2000],  
'Committee on Administration': ['Government Operations and Politics', 2000],  
'Committee on Indian Affairs': ['Civil Rights and Liberties, Minority Issues', 200],  
'Committee Committee on Financial Serviceson Health, Education, Labor, and Pensions': ['Health', 300],  
'Special Committee on Aging': ['Social Welfare', 1300],  
'Commission on Security and Cooperation in Europe': ['International Affairs', 1900],  
'Committee on Banking, Housing, and Urban Affairs': ['Housing and Community Development', 1400],  
'Select Committee on Intelligence': ['Armed Forces and National Security', 1600],  
'Committee on Environment and Public Works': ['Environmental Protection', 700],  
'Select Committee on Ethics': ['Government Operations and Politics', 2000],  
'United States Caucus on International Narcotics Control': ['Crimes and Law Enforcement', 1200]  
}