

Elite Rhetoric and the Running Tally of Party-Group Linkages[†]

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Parties' linkages to social groups are key to electoral competition. While traditionally explained in terms of long-standing social cleavages, newer theories assign some role to parties in shaping group linkages. We argue that party elites have even more influence over group linkages than afforded in existing accounts: citizens keep 'running tallies' of group linkages and continuously update them in response to group appeals in elite rhetoric. To test this theory, we develop a novel automated approach that uses language models to measure group appeals observationally. Using data from the UK, we connect citizens' perceived group linkages in surveys to group appeals in parliamentary speech spanning three decades. We find that group linkages robustly track party elites' rhetoric. Auxiliary analyses test heterogeneity across group types and the moderating role of policy information. Our findings imply that party elites have considerable power to shape group linkages, even in the short run.

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In early 2024 Keir Starmer, leader of the UK Labour Party, addressed members of Jewish Labour, a party membership organization representing the Jewish community. Starmer appealed directly to the Jewish community: “I dragged my party away from the abyss, and I will never let Britain go anywhere near it either. This country will be safe for you and your children”. With his speech, the Labour leader sought to signal to voters that the Labour Party looks after the interests of the Jewish community. More generally, the speech exemplifies politicians’ efforts to use rhetoric to forge party-group linkages, i.e. widely perceived links between parties and voter constituencies defined by shared group affiliation.

This and similar efforts to forge or strengthen linkages between parties and social groups is understandable in light of the centrality of groups in public opinion. (In the interest of fluency, we refer to party-group linkages in the following simply as ‘group linkages’.) Both classic (Converse 1964; Miller, Wlezien and Hildreth 1991) and more recent (Elder and O’Brian 2022; Mason, Wronski and Kane 2021) studies point to perceived group linkages as a key ingredient of party reputations. As a consequence, party leaders have an incentive to rhetorically portray their party as a steward of the interests of salient and well-liked social groups. But are such efforts likely to succeed?

Political scientists have tended to view this question with skepticism. Classical cleavage theory in the tradition of Lipset and Rokkan (1967) sees parties as stable expressions of social group conflict, and group linkages as reflections of these cleavages. Exemplifying this view, Lipset and Rokkan (1967) stress that once “established and entrenched, it will prove difficult to change” parties’ linkages with social groups (p. 30). As group linkages across Western democracies have nonetheless undergone substantial transformations since Lipset and Rokkan (1967), modern cleavage theory has sought to explain the variability of group linkages by emphasizing, e.g., changes in class structure (Oesch 2006), the developments of new cleavages beyond class (Bornschieer et al. 2021; Stubager 2009), and increasingly cross-cutting identities (Dassonneville 2022). Yet, these perspectives share an assumption that changes in group linkages are explained by ‘bottom-up’ changes in the underlying social structure rather than party repositioning (Evans 2013; Hooghe

and Marks 2018). Another newer theory, the ‘political choice’ approach, does emphasize the role of parties’ changing ideological platforms (Evans and Tilley 2012, 2017). Yet even here, changes in group linkages are seen as playing out at the level of electoral cycles (Westheuser and Zollinger 2024) and have mostly been studied in terms of larger shifts in party strategy. This implies that outside of these longer-run, gradual changes, parties are sharply limited in their ability to actively compete on this important dimension of electoral politics.

In this paper, we challenge this view from classical and modern cleavage theory, arguing instead that elite rhetoric can in fact induce meaningful short-run changes in group linkages. Specifically, we argue that group appeals, i.e. valenced references to social groups in public speech, offer an effective medium for parties to convey group linkages. Further, in response to these appeals, citizens notice and flexibly update what we, borrowing a term from Fiorina (1981), call ‘running tallies’ of group linkages. The key implication is that group linkages are quite malleable in response to elite rhetoric.

To test this theory, we examine how group linkages as expressed in British election surveys track party elites’ group appeals in speeches in the UK House of Commons. We measure the latter using a novel, automated approach to measuring group appeals in political rhetoric. Consistent with our expectations, we find that perceived group linkages in the electorate robustly track group appeals in parliamentary speech: we estimate that adding a single net positive appeal to a given group on a daily basis—e.g., shifting one existing group appeal from neutral to positive—over the course of 3 months improves perceived group-party linkages by around 7 percentage points. In further analyses, we find these effects to be driven by group appeals to especially religious, class and age groups, in line with research on the role of elites in shaping religion and class cleavages in Western democracies (Evans and Graaf 2013). We also provide a rare test of the theoretical claim that group appeals are more credible and thus effective when they are ‘substantive’, i.e. include a mention of policy (Thau 2021). While purely ‘symbolic’ appeals are effective on their own, we find substantive appeals to be more effective by an order of magnitude.

While we present novel theory and evidence, we build on recent work examining how elites

shape voter cleavages. Studies within the aforementioned ‘political choice’ approach emphasize the role of changing party platforms in shaping class voting in the UK (Evans and Tilley 2012, 2017) as well as class and religious voting across Western democracies (Evans 2013; Evans and Graaf 2013). Another body of work emphasizing the role of elites is the nascent literature on ‘group appeals’ (e.g., Dolinsky 2023; Horn et al. 2021; Stuckelberger and Tresch 2024; Thau 2023). We are thus not the first to consider the role of elite rhetoric in shaping group-based voting.

However, the existing literature has not directly linked party rhetoric with group linkages empirically. The group appeals literature has mostly focused on explaining parties’ use of group appeals as a dependent variable rather than its downstream effects (Huber 2022; Huber and Hasel-mayer 2024; Thau 2019). Some recent experimental work finds effects of group appeals, but is concerned with effects on either policy support (Huber, Meyer and Wagner 2024) or candidate-specific perceptions (Robison et al. 2021).

Most pertinently, Thau (2021) examines how the class gap in vote choice shrank as Labour party rhetoric turned away from the working class and towards business interests under Tony Blair. As the author argues, group appeals can affect voting since “as parties emphasize linkages with certain groups, citizens are primed to think about politics in terms of these same group categories and how they relate to parties” (p. 677). However, the study considers the ‘reduced-form’ association between party rhetoric and class-based voting without examining group linkages per se. More importantly, this and much other key evidence for the top-down perspective in both literatures comes from Tony Blair’s transformation of the UK Labour Party with respect to class groups, a special case of a large-scale party rebranding that was famously a years-long, highly costly, and intensely contested effort (Coates 2005). Thus, little remains known about the malleability of group linkages in the short term and outside of rare, major party rebranding efforts.

Taken together, we contribute to the existing literature on group appeals, party reputations, and group linkages in a number of ways. Empirically, we provide evidence indicating that group linkages are highly responsive to short-term changes in elite rhetoric, a finding that cuts against both classical and modern cleavage theories and goes further than earlier top-down accounts. We

also add evidence to an ongoing debate in the group appeals literature about the role of policy content in group appeals. Briefly put, we find that while purely symbolic appeals do in fact shape group linkages, the estimated effect of ‘substantial’ appeals including explicit references to policy is roughly an order of magnitude greater. Theoretically, we develop a concept of group linkages as a ‘running tally’ which helps explain the short-term malleability we uncover. Lastly, we contribute methodologically by developing a new approach using language models to capture group appeals in speech with high accuracy. This approach can be used by scholars to study group appeals observationally at large scale to address other substantive questions. To this end, we make our fine-tuned model publicly available.¹

We stress that while we find that group linkages are quite malleable, this does not imply that they are highly variable in practice. In fact, as we show below, group linkages are only moderately time-varying. How do our findings square with the relative stability of group linkages in practice? To the extent that group linkages are “sticky” (Hooghe and Marks 2018, p. 119), our results suggest this is not because parties cannot effectively change voters’ minds. Rather, it is because of constraints on what parties can credibly communicate. We revisit the question of constraints on group linkages below.

We proceed as follows. In the next section, we develop our theoretical account of how group appeals shape group linkages. In the following section, we present our strategy for eliciting group linkages from surveys and group appeals from parliamentary speech as well as our modeling strategy. We also present a validation exercise demonstrating that parliamentary speech is in our case a reliable proxy for public-facing communication. We then present descriptive results and regression estimates across varying model specifications. We also present auxiliary analyses testing heterogeneity across group types and the moderating role of explicit policy references. In the concluding section, we draw out the main implications of our findings and suggest possible directions for future work.

¹The model is available for use on the machine learning platform HuggingFace: [URL redacted for review]

How Group Appeals Shape Group Linkages

Political parties play a key structuring role in politics (Dalton, Farrell and McAllister 2011). By having distinct profiles on policy issues and connections to different groups in society, parties help citizens simplify complicated political decisions. By resorting to simplified “mental pictures” of what parties stand for and who they represent, voters need not know all the details about every issue position of every party to know who to vote for (Christensen, Skytte and Slothuus 2023; Lupia and McCubbins 1998). These collections of mental pictures, commonly known as *party reputations*, are ubiquitous in electorates across various countries and party systems (Ahler and Sood 2018; Brewer 2010; Dalton, Farrell and McAllister 2011; Goggin, Henderson and Theodoridis 2020; Nicholson and Segura 2012; Rothschild et al. 2019).

A key component of a party’s reputation is the perception of *whom* the party represents, what is sometimes known as its “constituency-based ownership” (Petrocik 1996; Stubager and Slothuus 2013) or *group linkages* (Miller, Wlezien and Hildreth 1991; Thau 2019). Going back to Converse (1964), a long line of research has found these perceived connections between parties and social groups to be central for voters’ reasoning about politics (Dalton 2018; Klar 2013; Miller, Wlezien and Hildreth 1991). Group linkages first and foremost shape party choice. When asked directly, perceptions of parties’ group ties are one of the main reasons voters cite for their vote choice (Dalton 2018). According to one influential theory, voters have long-standing symbolic attitudes towards various groups, and group linkages help them translate these affective stances to parties and policies (Sears 1993). On another account, group linkages are useful as a shortcut to informed political decision-making. Without closely following politics, voters can make an accurate decision by voting for a party that has an existing reputation for caring about their group interests. In this way, group linkages, as part of a party’s reputation, allow voters to simplify complicated voting decisions (Brady and Sniderman 1985; Converse 1964; Skytte, Slothuus and Christensen 2024).

Beyond vote choice, group linkages also shape how voters interpret policy and new issues emerging on the political agenda. If a new policy is opposed by a party with a reputation for representing e.g. the elderly, citizens are able to make accurate inferences about the policy’s con-

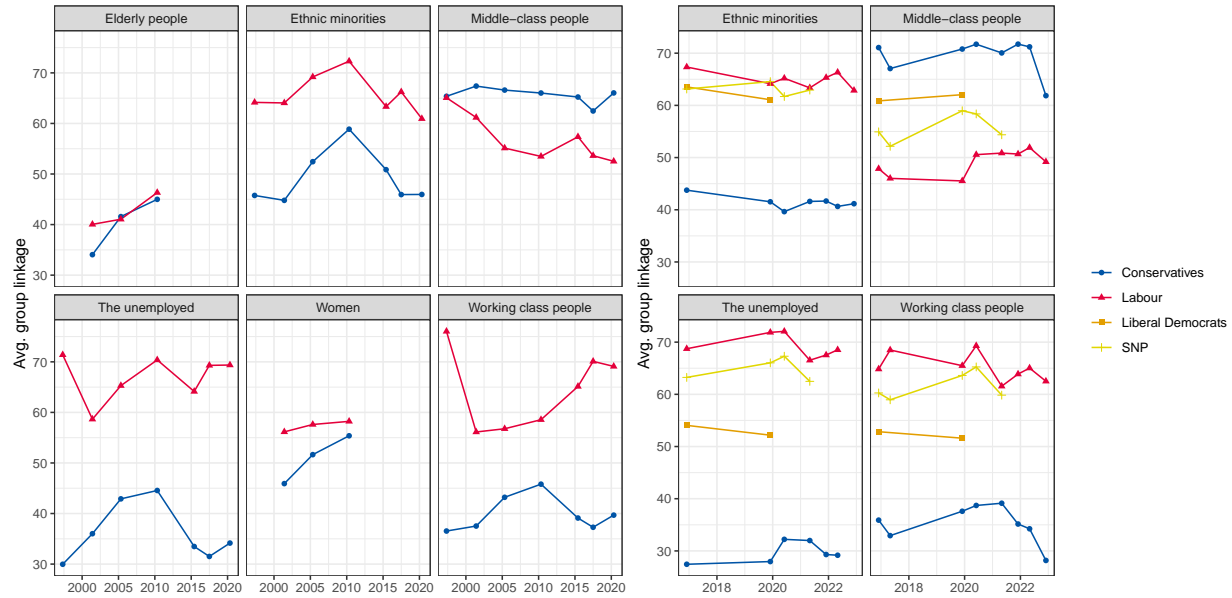
sequences for the elderly despite knowing little about the policy's substance (Brady and Sniderman 1985; Christensen, Skytte and Slothuus 2023; Lupia and McCubbins 1998). Group linkages are thus a powerful tool for citizens to reason not just about parties themselves but about politics more broadly.

How group linkages change

Given the importance of group linkages for political behavior, it is central to understand how they are formed and when and why they change. Consider Figure 1 which shows trends in group linkages in the two data sources we study here, the British Election Study (BES, left panel) and the BES Internet Panel (BESIP, right panel) covering the period 1997-2022. We elaborate on the measurement below, but briefly put, group linkages capture respondents' perception that a given party "looks after the interests of" a given group on a 0-100 scale. Because time scales, parties, and groups queried differ between the two data sources, we present them separately.

As shown in Figure 1, group linkages exhibit non-trivial variability over time. While the lines rarely cross, the changing size of the gaps between parties can carry substantial electoral implications. For instance, the narrowing of the gap between Labour and the Conservatives' working class linkages from 1997 to 2005 was famously electorally significant even as the lines remained far from crossing (Evans and Tilley 2012, 2017; Thau 2021). What drives such changes in group linkages?

While little empirical research has examined changes in group linkages directly, this question is closely related to the large literature on changes in group-based voting. Two competing perspectives dominate this literature. On the one hand, cleavage theory in the tradition of Lipset and Rokkan (1967) considers changes in group-based voting to be a matter of "epochal structural shifts" (Westheuser and Zollinger 2024, p. 4) and "gradual trends" (Evans 2013, p. 635) driven by 'bottom-up' changes in the social structure (Bornschieer et al. 2021; Oesch 2006; Stubager 2009). On the other hand, the 'political choice' perspective emphasizes the role of 'top-down' changes in party strategy, which can produce changes at the more granular level of electoral cycles (Evans 2013; Westheuser and Zollinger 2024).



(a) British Election Study (BES) data.

(b) BES Internet Panel (BESIP) data.

Figure 1: Group linkage trends in the British Election Study (BES, left panel) and the BES Internet Panel (BESIP, right panel), wave/survey averages. In each case, averages reflect answers to the question “How closely do you think the <party> looks after the interests of <group>” (rescaled to a 0-100 scale). For more details, see ‘Measuring group linkages’ below. Only parties and groups with observations across multiple years are plotted. Points and lines represent Labour (red), Conservatives (blue), Liberal Democrats (orange), and Scottish National Party (yellow).

Building on the top-down view, we propose that group linkages are in fact quite malleable as they are shaped largely by the way parties ordinarily talk about groups in public. Rhetorical appeals to groups are abundant in party communication (Dolinsky 2023; Huber 2022; Stuckelberger and Tresch 2024; Thau 2019) and they provide signals to voters of which groups a party cares about and represents, and which groups they do not. We theorize that these rhetorical signals are effective exactly because they are ubiquitous (Thau 2019) and require no or little political or subject-specific knowledge for citizens to make sense of. In addition, as instances of valenced speech, group appeals will typically have some emotional or moral charge making them more likely to leave a psychological impression (Lipsitz 2018; Potter, Lang and Bolls 2008; Scott, O’Donnell and Sereno 2012). Importantly, our running tally theory goes further than cleavage theory and the political choice perspective in its suggestion that group linkages can be shaped by elite behavior even in the short term and outside larger strategic shifts of party platforms.

This notion of group linkages as running tallies of elite rhetoric builds on the emerging literature on group appeals, as it essentially operationalizes a key mechanism (e.g., Dolinsky 2023; Horn et al. 2021; Stuckelberger and Tresch 2024; Thau 2019). As Thau (2021) argues, group appeals affect voting because they “prime [citizens] to think about politics in terms of these same group categories and how they relate to parties” (p. 677) and directly provide the “interstitial ‘linking’ information indicating why a given party or policy [proposed by that party] is relevant to [a given] group” (Converse 1964, p. 236-237, in Thau (2019)).

However, there is some ambiguity in the group appeals literature as to the scale on which this mechanism operates, both theoretically and empirically. The key evidence comes from Thau (2021)’s examination of class voting under Blair’s transformation of the UK Labour Party, which was famously a years-long effort that was accompanied by comprehensive changes to Labour’s ideological platform (Coates 2005). Thus, it is unclear to what extent elite rhetoric can shape party reputations on its own in the short term and outside of major party rebranding efforts.

More broadly, the group appeals literature has not empirically tested the effects of group appeals on group linkages directly. Besides Thau (2021), this literature has mostly been concerned with explaining elites’ strategic use of group appeals, often assuming their effectiveness (Huber 2022; Huber and Haselmayer 2024; Thau 2019). The only other studies on the downstream effects of group appeals are experimental and focus on effects on either policy support (Huber, Meyer and Wagner 2024) or candidate-specific perceptions (Robison et al. 2021). Hence whether group appeals can effectively change group linkages remains unclear.

The effectiveness of political rhetoric in shaping group linkages has important implications. According to classical and modern cleavage theory, parties are thought to be sharply limited in their ability to actively compete on this important dimension of electoral politics. In turn, given the purported stickiness of perceptions, parties have little incentive to make attempts at changing the group composition of their electoral coalitions. By contrast, our account suggests that parties have considerable latitude to shape electorally important perceptions among voters, even in the short term. As a consequence, group linkages appear all the more important as a dimension of electoral

competition.

Group linkages as running tallies

In the conceptual language of Fiorina's (1981) influential theory of party identification, we argue that parties' group linkages reflect 'running tallies' of parties' use of group appeals over time. As a given party makes positive and negative appeals to a given group, voters sum over them to understand the current valence of the party's linkage with the group. Much like the pocketbook, group appeals in political speech are easy to decode and hence this running tally constitutes a low-effort heuristic for the broad electorate to keep track of parties' group linkages over time. This leads to the main hypothesis:

Hypothesis 1 *When a party uses more positive appeals and/or fewer negative appeals to a group, voters become more likely to think the party is looking after the group's interests, and vice versa.*

Note that with this hypothesis, we expect the valence of group appeals to play a decisive role. Much existing work in this area focuses on how much parties talk about each group, implying that the rhetorical salience of groups is what drives group linkage perceptions (Horn et al. 2021; Riethmüller, Dehne and Al-Gaddooa 2024). On the running tally account, however, valence is key. Negative appeals to a group cancel out positive appeals, and unvalenced or ambiguous talk about groups lead voters to update group linkage perceptions less if at all. We test this key aspect of our theory directly in the analysis.

Importantly, we hypothesize that group appeals change perceived group linkages across the electorate as a whole. While members of the group in question naturally have more at stake and may be influenced more strongly by appeals to their own groups, party linkages to out-groups can also shape policy and party support. This aligns with existing work finding that voters like parties and policies that are perceived to fight for broadly liked, high-deservingness groups like 'the poor' and 'the elderly' (Bechtel and Mannino 2022; Guinaudeau et al. 2023; Schneider and Ingram 1993; Van Oorschot 2006) and that parties may even mobilize support in certain groups by making negative appeals to specific out-groups they dislike (Stuckelberger and Tresch 2024). Likewise,

group linkages are not limited to voters' self-identified party. In general, voters keep track of not only party reputations for the parties they support but regularly incorporate the reputations of out-parties in their political decision-making (Christensen, Skytte and Slothuus 2023; Skytte, Slothuus and Christensen 2024). As such, it matters how group linkages are shaped by group appeals in the electorate as a whole.

We follow Thau (2019) in defining a group appeal as “a party associating or dissociating itself (or another party) with a specific group category” (see also Thau 2023). Notably, Thau's influential definition does not specify the exact ways in which such (dis)association takes place, i.e. the forms group appeals can take. Some recent work has begun qualifying this (Huber and Dolinsky 2023). Here, we narrow Thau's definition and depart somewhat from Huber and Dolinsky (2023) in stressing the symbolic nature of group appeals and limiting them to political speech. There are innumerable ways for a party to “(dis)associate” themselves with a group, and including all of them in the concept risks stretching it to an extent where it ceases to be useful (Sartori 1970). In the absence of political speech, we do therefore not count e.g. a targeted policy on its own as a group appeal to the targeted group, nor the (deliberate) choice of a minority candidate in a party as an appeal to the minority group in itself.

Constraints on group linkages

A key implication of our ‘running tally’ theory of group linkages is that parties have substantial power to shape them. If, for instance, the Labour Party were to suddenly stop talking about issues facing Londoners, voters should register this and update their perceptions of Labour's linkages with urban people. This implication is broadly in line with claims that group linkages are not something for parties to take for granted (Mair 2013) and, more broadly, speaks to political elites' power to activate social cleavages (Robison et al. 2021).

This naturally raises the question: why not appeal maximally to all groups at once? Parties are naturally interested in maximizing their standing among voters, and have in other contexts been shown to strategically employ broad appeals in order to be ‘everything to everyone’ (Sommer-Topcu 2015). We highlight two reasons parties are nevertheless in practice constrained in their use of

group appeals. First of all, while parties can symbolically appeal to groups, repeated symbolic appeals without policy content are likely to engender public pressure for corresponding policy, lest they be accused of ‘cheap talk’. As parties respond to this pressure they must grapple with policy-relevant scarcities. Hence, group appeals will inevitably have some connection to binding policy tradeoffs. Second, group appeals are sometimes partially mutually exclusive. Within major categories such as gender, ethnicity, or region, voters are in some cases likely to make inferences across groups. For example, a politician repeatedly stressing her party’s focus on the interests of rural people can in doing so strengthen her party’s linkage to that constituency, but urban voters are likely to infer that this focus comes at their expense. These negative spillover effects mean that parties must in practice prioritize appealing to some groups over others in a somewhat consistent fashion.

Methods and Data

Our goal is to establish a causal link between parties’ group appeals and perceived group linkages. To do so, we examine how perceived group linkages expressed in survey data track group appeals in parliamentary speech. To be sure, this bivariate association in itself tells us little. For example, voters are likely to perceive Labour as a party representing working-class people due to the Labour Party’s historical role as a political movement for the working class. For the same reason, Labour MP’s will likely dedicate relatively more attention to the working class, and this alone would give rise to an association between group appeals and perceived group linkages.

To guard against this confounding from long-standing party reputations, our identification strategy rests on models using party fixed effects which isolate short-term within-party variation in group appeals and group linkages. Due to the richness of our data, we are able to further implement a host of other fixed effects including individual-level fixed effects for a large subset of our data. We describe our model specification in more detail below. Before then we describe our approaches to measuring group linkages and group appeals respectively.

Measuring group linkages

Our identification strategy requires a time-varying measure of citizens' perceptions of a diverse set of group linkages. In the following, we use the term *dyad* to refer to any specific party-group linkage: for example, we consider the link between Labour and working-class people as one dyad, the link between Labour and rural people as another dyad, and so on. To obtain time-varying measures of group linkages at the dyad level we turn to the British Election Study (BES). The BES comprises both a panel component, the BES Internet Panel (BESIP) running from 2015-2023, and a series of cross-sectional election surveys (BESES) going back to 1964. To maximize coverage, we pool them to obtain a combined dataset spanning 1997-2022 with a total of 17 surveys of which 9 are panel waves.² Our main results are based on the combined dataset but we conduct additional analyses on the panel data subset to leverage within-individual variation.

The included waves of BESIP and BESES all ask respondents the following question for each major political party: “*Some people say that all political parties look after certain groups and are not so concerned about others. How closely do you think the <party> looks after the interests of...*”, followed by a number of different groups. For each group, the respondent then answers on a four-point scale ranging from *Not at all closely* to *Very closely*.

Importantly, this survey item closely tracks our chosen theoretical definition of group linkages. It stands to reason that a respondent seeing a party as “looking after the interests of” a given group is thereby expressing that the party represents the interests of that group, corresponding to our definition of a group linkage. Hence, we consider this item a theoretically valid measure of each respondent's perception of dyad-level group linkages at a given time.

Each survey contains this measure of group linkage for several dyads across several UK political parties and distinct groups. While the dyads included vary from survey to survey, there is also substantial overlap. We choose here to focus on the four major political parties: Labour, the Conservatives, the Scottish National Party (SNP), and the Liberal Democrats. These all had more than

²Note that the current versions of the analyses are based on only 12 of these surveys as we do not yet have access to post-2020 data on our independent variables.

five seats in the House of Commons during the entire period under study. With respect to groups, we exclude only a few groups e.g. trade unions and big business, which are in a conceptual gray zone, as well as “people in my local area”, which cannot be linked directly to parliamentary speech.

Table 1 lists the parties, groups, and waves in the BES data that we use. This leaves us with a total of 55 party-group dyads observed across 16 surveys. See Appendix A for details on available dyads in each wave.

Table 1: Groups, parties, and surveys available for group linkage item in BESIP and BES data.

Groups	Parties	Surveys
<i>Class</i>	Labour	May-July 1997
Middle class people	Conservatives	June-September 2001
Working class people	SNP	February-May 2005
Unemployed people	Liberal Democrats	May-July 2005
<i>Religion</i>		May-September 2010
Jews		May-September 2015
Christians		November-December 2016*
Atheists		May-June 2017*
Muslims		June-October 2017
<i>Gender</i>		March 2019*
Women		December 2019*
Men		January-June 2020
<i>Age</i>		June 2020*
Young people		May 2021*
Retired people/pensioners		November-December 2021*
<i>Ethnicity</i>		May 2022*
Black and Asian people		
<i>Geography</i>		
People in London		

**BESIP panel waves.*

We combine these surveys by modeling each individual dyad-level response so that each re-

spondent is observed multiple times in each survey. After omitting nonresponses this yields a combined survey data set of 1,695,236 response-level observations from 83,504 unique respondents. Because of temporal variation in survey response, respondents at each date are exposed to a unique running tally of recent party-dyad-specific group appeals. We elaborate on our modeling strategy below. We now turn to how we connect these responses to parties' group appeals.

Measuring group appeals

To measure parties' group appeals we turn to parliamentary speech. To fix terminology, in the following, we use the term 'group mention' to refer to any mention of a group that may or may not constitute a proper group appeal. In broad strokes, our measurement approach proceeds in three stages: first, we identify all group mentions in a corpus of speeches from the UK House of Commons. Second, we create a summary measure of the valence of each reference, coding mentions that do not constitute a positive or negative group appeal as neutral. Third and lastly, we link each survey-based group linkage response as described above to a running tally of group appeals in the months preceding the survey response.

Our use of parliamentary data breaks with standard practice in observational studies of group appeals, the vast majority of which are instead based on party manifestos (e.g., Horn et al. 2021; Huber 2022; Huber, Meyer and Wagner 2024; Thau 2023, 2019, 2021). However, relative to manifestos parliamentary speech has far higher temporal resolution. This feature is critical for our identification strategy, which relies on tracking within-party changes in group linkages in response to changes in group appeals. In contrast, an approach linking surveys to manifesto data would need to track within-party changes across years or decades, with far fewer external factors held constant.

In addition to the high frequency of parliamentary speech, which is critical for capturing short-term fluctuations in group appeals, we consider parliamentary speech a useful window into party communication for two reasons. First of all, clips from parliamentary speeches are often circulated in traditional and on social media, and this is a likely channel through which voters are exposed to e.g. group appeals. Since some clips circulate, MPs speak in parliament knowing that any given excerpt of their speech may be picked up by the media. Second, parliamentary speech takes place

within the context of parties' overall communication strategies. Hence, a measure of parties' group appeals based on parliamentary speeches is to some extent a proxy for these parties' use of group appeals in their communication more broadly. To be sure, these are merely theoretical arguments. After describing our measurement strategy in more detail, we provide direct evidence of this proxy assumption, showing that group appeals in parliamentary speech and press releases correspond closely.

To collect group appeals from parliamentary speech we use the speech corpus for the House of Commons available in two parliamentary speech databases, *ParlSpeech V2* for speeches from 1997-2019 (Rauh and Schwalbach 2020), and *ParlaMint 3.0* for speeches from 2020-2022 (Erjavec et al. 2023). Jointly, these datasets contain the complete universe of more than 1.6 million House of Commons Speeches held in the 25-year period under study.

Identifying group mentions

The first task is to identify the set of potential group appeals. To do so, we first break the speeches down to the sentence level. Disaggregating speeches to the sentence level has the advantage that we are able to isolate the specific contexts of group appeals. This disaggregation step yields around 13.4 million sentences, each linked to speech and speaker characteristics.

Once speeches are disaggregated to the sentence level, we use a dictionary approach to find group mentions. We rely on the English-language group appeals dictionary developed in Dolinsky, Huber and Horne (2023) to retrieve group mentions. While this dictionary is carefully made, it is not developed specifically for parliamentary speech. To ensure that the dictionary retrieves group mentions with as high accuracy as possible, we read through a sample of sentences to identify commonly occurring false positives and filter them out. Our augmented dictionary identifies one or more mentions of our 13 groups in just shy of 550,000 sentences, corresponding to around 4 percent of all sentences. We present our augmented dictionary in Appendix B.

Capturing appeal valence

A purely dictionary-based approach would simply count each of these identified mentions as a group appeal. However, this approach is flawed for two reasons. First of all, many group mentions are not in any meaningful way group appeals. Consider for example this sentence, spoken by a Tory MP in November 1996: “Why be more Catholic than the Pope on this issue?”. The word ‘Catholic’ matches the dictionary for Christians but the phrase is clearly used in the idiomatic sense. Our measurement strategy needs to be able to weed out such false positives.

More importantly, group appeals cannot be assumed to be all positive. Following our theorization, the *valence* of group appeals is key to their function in associating and dissociating groups and parties (Thau 2019). Apart from positively valenced appeals, some appeals may be ambiguous or not straightforwardly about the mentioned group, and some may be outright negative. This is also clear from empirical inspection. Consider, for example, this sentence, spoken by a Labour MP in 2014: “Some 85% of the tax allowance will go to men”. From the context, it is clear that the Labour MP is critical of the fact that most of the tax allowance befalls men rather than a more gender-equal distribution. Hence, this sentence would not lead a voter to infer (to a greater degree) that Labour looks after the interests of men per se. In fact, by casual inspection mentions of ‘men’ quite rarely constitute positive appeals and are instead either residual false positives (e.g., phrases like ‘businessmen’) or outright negative (as in the example above). Hence, simple mention counts are not a reliable proxy for group appeals.

To solve this measurement problem, we turn to the literature on stance detection. In natural language processing, ‘stance detection’, usually considered as a subproblem of sentiment analysis, refers to the problem of detecting whether a given text’s stance toward a given target is positive, negative, or neutral (Küçük and Can 2020). Stance detection methods are relevant in this case because the theoretical valences of group appeals—positive, negative, or neutral—are closely related to what these methods are optimized to predict.

We implement this approach by building on *PoliStance*, a large language model trained for

zero-shot classification of stances towards political groups and people.³ PoliStance is itself built on DeBERTa, a transformer model developed for text classification (Laurer et al. 2023). While PoliStance can perform stance detection without any tuning or exemplification (i.e., ‘zero-shot’), performance improves greatly when the model is fine-tuned, i.e. allowed to learn from a set of annotated sentences.

We proceed in two separate steps. First, we manually annotate a set of sentences for group appeals. Consistent with the logic of stance detection, we annotate each sentence as either a negative appeal (-1), a positive appeal (1), or a fully neutral or non-appeal (0) based on a detailed coding scheme. To assess intercoder reliability, both authors independently code a subsample of 40 sentences. This test yields satisfactory intercoder reliability (Krippendorff’s $\alpha = .72$). An important implication of our coding scheme is that since we base our eventual independent variable on a running tally, non-appeals as well as any residual false positives from the dictionary-based group detection are coded to 0 and will therefore not affect the measure. Since appeals are empirically highly imbalanced, with far more positive appeals than negative ones, we prompt the large language model GPT-4 to predict valence labels for large samples of appeals and use these predictions to oversample likely negative appeals. We conduct multiple rounds of annotation to maximize balance across valence categories in the annotated set. In total, we manually annotate 2,534 sentences for fine-tuning. Appendix C presents examples of sentences annotated as positive and negative appeals.

In the second step, we use these annotated sentences to fine-tune PoliStance. Because appeals in the annotated set are imbalanced, even with the boosted subset of negative appeals, a multiclass prediction model performs badly. Instead, we fit two separate models, one predicting positive appeals (vs. neutral) and one predicting negative appeals (vs. neutral). Accuracy statistics for these models are shown in Table 2.

As shown in Table 2, both models perform very well, with precision, recall, and F1 score above .8. The negative valence model performs slightly less well, likely owing to the smaller proportion

³See <https://huggingface.co/mlburnham/deberta-v3-large-polistance-affect-v1.0>

Table 2: Accuracy Statistics for Group Appeal Valence Prediction Models

Model	Precision	Recall	F1 Score
Positive Valence Model	0.88	0.88	0.88
Negative Valence Model	0.82	0.82	0.82

of negative appeals in the training data (20 percent).

For each of the roughly 550,000 sentences in our data, we now have separate model predictions of whether the sentence has positive and negative valence respectively. Using these models, we define the *net valence* (NV) of sentence s as the predicted probability of a positive appeal minus the predicted probability of a negative appeal:

$$NV_s = Pr(v_s = 1) - Pr(v_s = -1)$$

The net valence measure captures our best estimate of whether each sentence is a negative or positive appeal. At the sentence level, net valence ranges from -1 (if the models are fully confident the sentence is negative) and 1 (if the opposite is true). Importantly, if the models are not confident an appeal is either positive or negative, net valence will equal zero and will thus not affect the running tally measure.

Validation: Group appeals in parliamentary speech vs public-facing communication

While parliamentary speeches are an attractive data source for the kind of fine-grained temporal analysis we need to test our theory, they also come with an important caveat: parliamentary speeches generally do not reach voters, at least not directly. Hence, group appeals in parliamentary speech are only useful to measure to the extent that they are conveyed to voters through the media, and/or constitute a proxy for group appeals in other, more visible communication. One such type of communication is parties’ press releases, which are intended to be widely publicized. If the way parties talk about groups differs widely between parliamentary speeches and press releases, our analysis may fail to capture the kind of communication that voters are attentive to. In turn, that

would raise concerns about our use of parliamentary speeches for testing our mechanism.

We therefore validate our measurements of group appeals in parliamentary speeches against press releases from the PARTYPRESS database (Erfort, Stoetzer and Klüver 2023). The database includes all press releases by the major parties in the UK, including the four parties we focus on, during ten years from 2010 to 2019. Using the same procedure as for the parliamentary speeches, as described in the previous section, we code all group appeals in press releases during this period for the same groups and parties. This results in a dataset of around 20,000 mentions. We then compute the average net valence for each group-party dyad by quarter in the nine year period we study. Figure 2 compares these two measures.

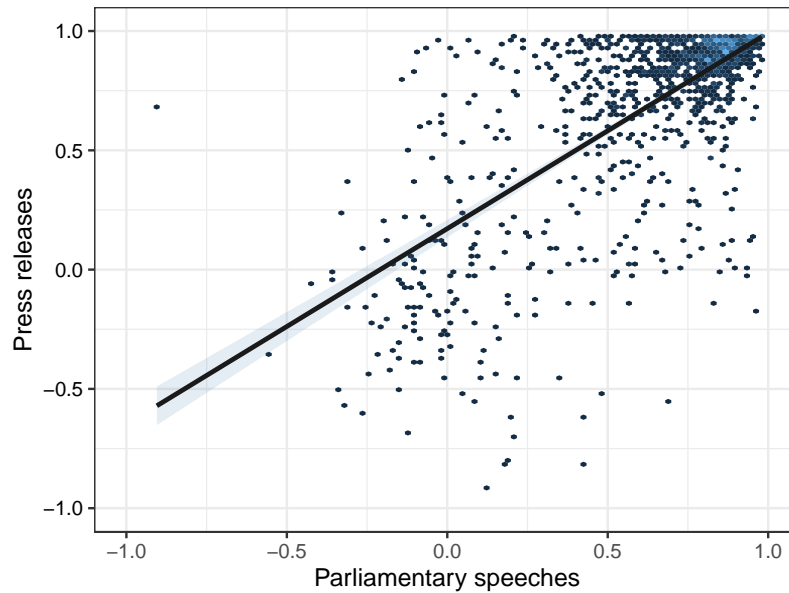


Figure 2: Quarterly average net valence by dyad for parliamentary speeches (x-axis) and party press releases (y-axis), 2010-2019. Overlaid linear regression line. Color shading reflects point density. Speech and press release dyad valences are correlated at $r = .68$ ($t = 31.3, p < .001$).

Figure 2 plots the relationship between quarterly average net valence for each dyad measured in each dataset. As shown, there is a strong positive relationship with a correlation coefficient of $r = .68$ ($t = 31.3, p < .001$). See Appendix D for regression estimates of this relationship. In sum, the valence of parties' group appeals in parliamentary speeches closely mirrors that in those parties' press releases. This bolsters confidence that the group appeals we capture in parliamentary

speech constitute a useful proxy measure for group appeals in public-facing party rhetoric more broadly.

Model specification

To estimate how group linkages track group appeals, we estimate a series of regression models using the following specification setup:

$$\text{Group linkage}_{ijkt} = \beta_1 \sum_{t=-90}^{t=-1} \text{NV}_{ijt} + \beta_2 n_{ijt} + \alpha_i + \delta_j + \gamma_k + \lambda_t \quad (1)$$

In this specification $\text{Group linkage}_{ijkt}$, our main dependent variable, is the linkage between party j and group i perceived by survey respondent k at time t . Our independent variable of interest is the net valence of sentences spoken by party j MPs about group i in the 90 days preceding the survey response. Note that corresponding to our theoretization of voters keeping running tallies of elite rhetoric, this measure is a literal running tally of group appeals for the dyad of interest preceding the survey response. Hence, our main estimate of interest across these models is β_1 .

It is important to clarify that the modeled variation in the independent variable occurs not at the level of unique respondents but rather at the level of unique 90-day exposure windows. This window-level variation is more granular than survey waves, as survey waves typically span between 1 and 4 months. Respondents interviewed at various points during each wave will therefore have different exposure windows for the same dyad. Yet, this variation is considerably less granular than individual-level observations since all respondents interviewed on the same date have identical exposure windows for each dyad. This is worth bearing in mind when interpreting the models, as there is somewhat less true variation than each model N would seem to suggest.

Estimation of β_1 is complicated by the fact that some groups are mentioned far more than others and this changes from one wave to the next: as a consequence, the possible range for net valence is very large for frequently mentioned groups and small for rarely mentioned groups. Failing to account for this heterogeneity would mean that variation in net valence would be driven nearly exclusively by which groups are mentioned more often at times of measurement. To account for

this heterogeneity, we include n_{ijt} , the number of dyad appeals in the exposure window, so that β_1 captures net valence holding the frequency of group mentions constant. This has the further benefit of turning the coefficient into an intuitive quantity that closely follows our theory: β_1 is the change in a party's linkage vis-a-vis a group from shifting one group mention from neutral to positive, or from negative to neutral, at a fixed number of group mentions. It thereby directly captures the impact of a change in the running average of appeal valence. We further add combinations of α_i , δ_j , γ_k , λ_t , fixed effects for group, party, time, and respondent, respectively, with the most restrictive specification including all fixed effects at once.

Finally, since we observe group linkages at the level of individual responses, while respondents are exposed to the same rhetoric about a given party-group dyad at any given time, our standard errors need to account for this nested structure. To do so, we cluster standard errors at the dyad-wave level.

Results

We now turn to results. Before presenting model estimates, we characterize descriptively how group appeals vary over time and across parties and groups in our data.

Descriptive results

We first consider overall variation in our independent variable, a net valence running tally across 90 days preceding each survey response. Figure 3 shows the distribution of this running tally.

As shown in Figure 3, the running tally is heavily right-skewed, which reflects that most group appeals are positive rather than negative and that most 3-month periods contain few if any valenced appeals. As indicated by the large share of NV's close to 0, much talk about groups is not valenced, underscoring the importance of accounting for valence when analyzing group appeals. To illustrate a meaningful change in the running tally, Figure 3 visualizes a change from 0 to 90, i.e. one additional net positive appeal per day during the exposure window, which in turn corresponds to just over one half standard deviation.

The skewed distribution in Figure 3 also reflects the fact that net valence varies considerably

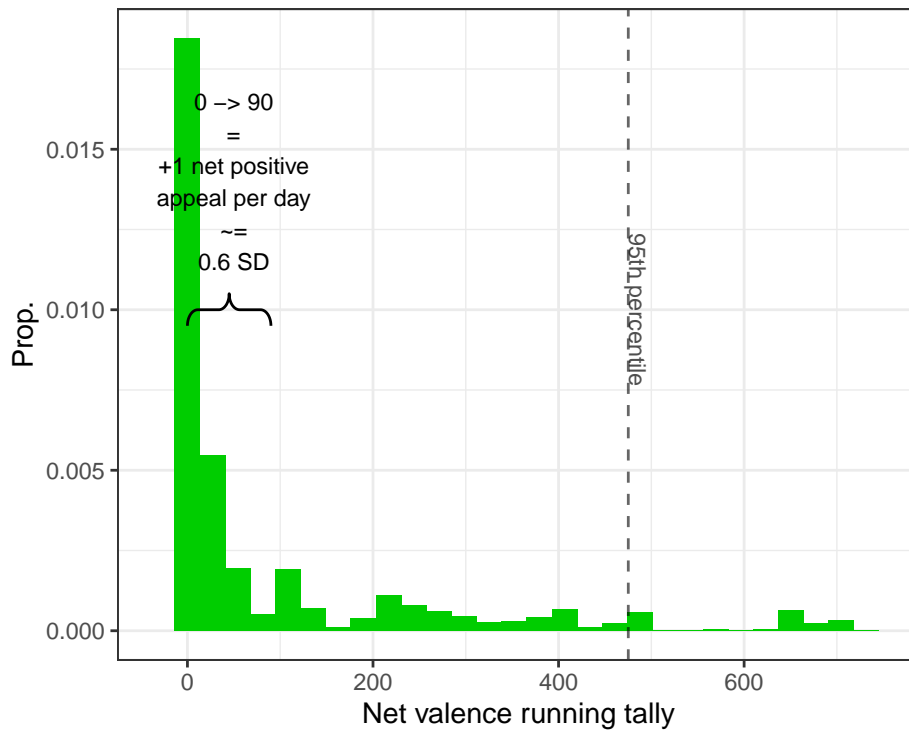


Figure 3: Histogram of net valence running tallies. Moving from 0-90 represents a net valence change of 90, i.e. one additional net positive appeal per day, which in turn corresponds to $\sim .56SD$. The dashed line shows the 95th percentile of the distribution.

between groups. In Appendix E we present the distribution for each group separately. Some groups (e.g., women) are targets of mostly positive appeals, others (e.g. young people) a mix of neutral and positive appeals, which translates into a more even distribution of net valences. Still, the skew of the variable gives rise to concerns that results could be driven by right tail outliers. We check for this by estimating a model excluding observations above the 95th percentile, shown by the dashed line.

We now consider how valence in group appeals varies across target groups. Figure 4 shows the average net valence across all appeals by target group.

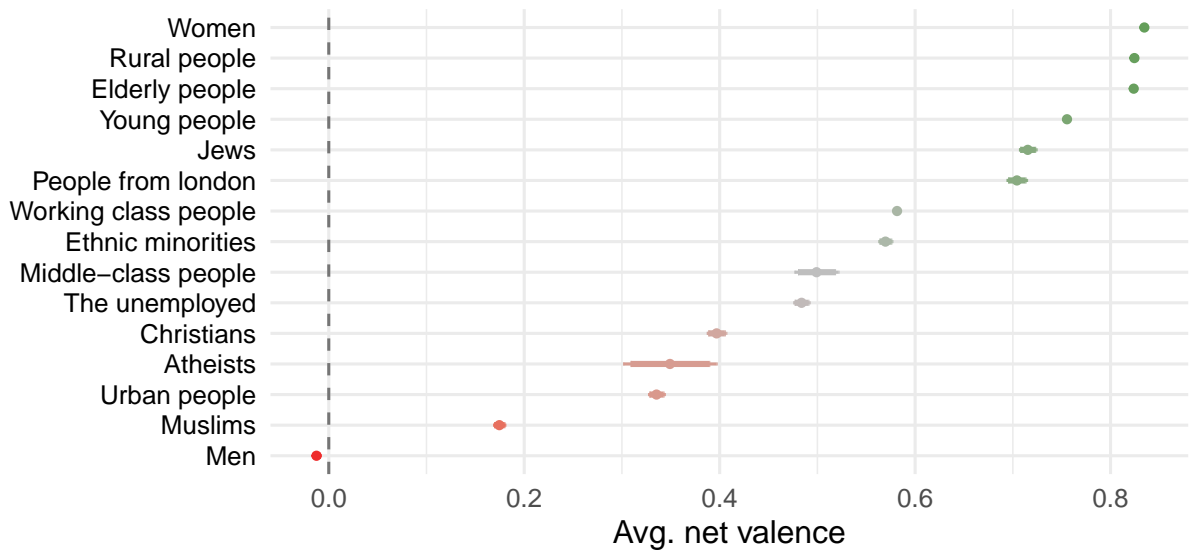


Figure 4: Average net valence by target group from 1997-2019. Color shading reflects average value. Each point is an estimate from a no-intercept regression of net valence on target group. Thick and thin error bars reflect 90 and 95 pct. confidence intervals respectively.

As seen in Figure 4, valence varies considerably across groups. While some groups are mentioned nearly universally positively (women, rural people, and the elderly), others have much lower average valence, implying they are often targets of negative appeals (men, Muslims, and urban people). On balance averages are positive, with men being the only group where negative valence slightly outnumbers positive valence. The highest group averages shown in Figure 4 are in fact close to the maximum possible average, indicating that these groups are referenced nearly unani-

mously positively.

As a last descriptive result, we consider partisan differences in group appeals. To simplify exposition, we focus on differences between Labour and Conservative MPs. Since these parties are the pillars of the traditional UK two-party system, theoretical expectations of to which groups they should be more likely to appeal are more well-defined. Moreover, due to their size, Labour and Conservatives account for the vast majority of the data: 88 pct. of group appeals in our data are by MPs from either of these parties. Figure 5 shows the average difference in valence between Conservatives and Labour for each group.

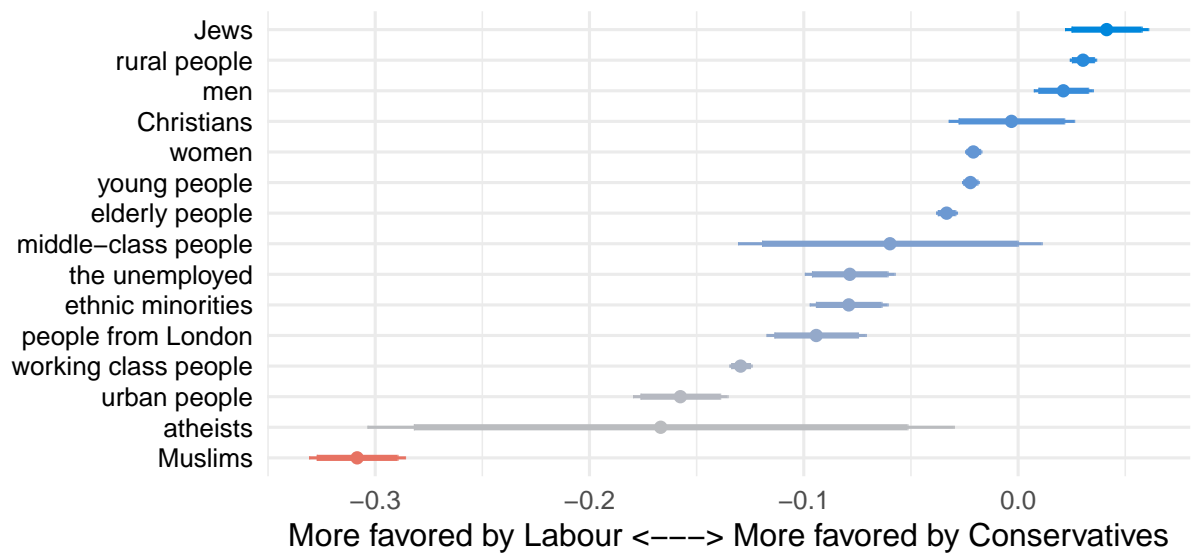


Figure 5: Conservative - Labour gaps in net valence by group. Each point is an estimate from a regression of net valence on an indicator of Conservative party affiliation among all appeals to the group in question. Thick and thin error bars reflect 90 and 95 pct. confidence intervals respectively.

Figure 5 reveals a very recognizable set of party-group linkages. Conservative MPs appeal relatively more positively to rural people, men, and Christians, all generally right-aligned groups in contemporary UK politics. The largest differential is for Jews, a group which while historically aligned with Labour has recently leaned Conservative (Barclay, Sobolewska and Ford 2019). Conversely, Labour MPs appeal relatively more positively to Muslims, atheists, urban people, and working-class people, all groups solidly embedded in the Labour electoral coalition. In other

words, two-party differences in group appeals very predictably reflect each party’s voter base.

Overall the descriptive variation in group valence, both overall and between parties, lends a high degree of face validity to our measure of group appeals. We now turn to estimates from our regression models linking group appeals to group linkages expressed in surveys.

Regression estimates

Table 3 presents estimates from various specifications of the model outlined in equation (1) above.

Table 3: Estimates from regressing group linkages on group appeals.

	Model 1	Model 2	Model 3	Model 4
Net valence (sum)	0.128*** (0.029)	0.059** (0.021)	0.071* (0.028)	0.087* (0.036)
Number of appeals	-0.093*** (0.019)	-0.044** (0.014)	-0.053* (0.020)	-0.060** (0.023)
N	1 325 239	1 325 239	1 325 239	1 285 515
Std.Errors	dyad-wave	dyad-wave	dyad-wave	dyad-wave
FE: Group	✓	✓	✓	✓
FE: Wave		✓	✓	✓
FE: Party			✓	✓
Restricted range				✓

Models 1-4 in Table 3 differ in terms of the number and composition of fixed effects. Model 4 is identical to Model 3 but excludes the 5% most extreme cases with respect to net valence. The estimate of interest, *Net valence*, is in the top row. As shown, the coefficient on net valence is consistently positive and statistically significant. The coefficient is fairly robust in terms of magnitude, ranging between .06 and .13 across specifications. As theorized, this is driven by the valence of appeals and not their quantity, as emphasized by the control for the number of group mentions in the models. This is further shown in Appendix F which presents results for a set of

alternative specifications, including 'naïve' models that regress group linkages just on counts of group mentions and estimate a precise and consistent null. It also reports results from a simple 'pooled' specification without any fixed effects, which results in a positive but small and noisy estimate. This is not too surprising given the vast heterogeneity in valence between dyads shown earlier. As we theorize running tallies to be group- and party-specific, we would not necessarily expect a positive overall correlation between dyad valence and group linkage.

The estimates shown in Table 3 treat all the survey responses as cross-sectional and do not make use of the fact that a subset of the survey data is panel data. In Appendix G we present a set of analyses that apply individual-level fixed effects to isolate within-respondent variation. In these models, coefficients are if anything larger and remain statistically significant.

It is worth noting that the estimates shown in Table 3 are based on windows of exposure to group appeals of 3 months. However, this assumption of window length does not matter much for the results. As we show in Appendix H, net valences tallied across varying window sizes produce similar point estimates (although precision is predictably weakened as the window is shortened).

To make sense of the magnitude of the coefficients, Figure 6 visualizes predicted levels of group linkage across the observed range of net valence. We base our calculations on the coefficient in Model 3 of Table 3, the most restrictive specification on the full sample.

The bracket in Figure 6 shows the predicted level of group linkage moving from 0 to 90, corresponding to adding one net positive mention every day over a given 90-day period, corresponding to just under one standard deviation. At the party level, one additional net mention of a group per day would seem feasible. We estimate that such a change is associated with group linkage for the relevant party-group dyad to improve by 6.4 percentage points, a non-trivial change. In sum, our estimates indicate that group linkages are responsive to short-run changes in group appeals from party elites.

We now present a set of auxiliary analyses to probe effect heterogeneity and test the robustness of the main result.

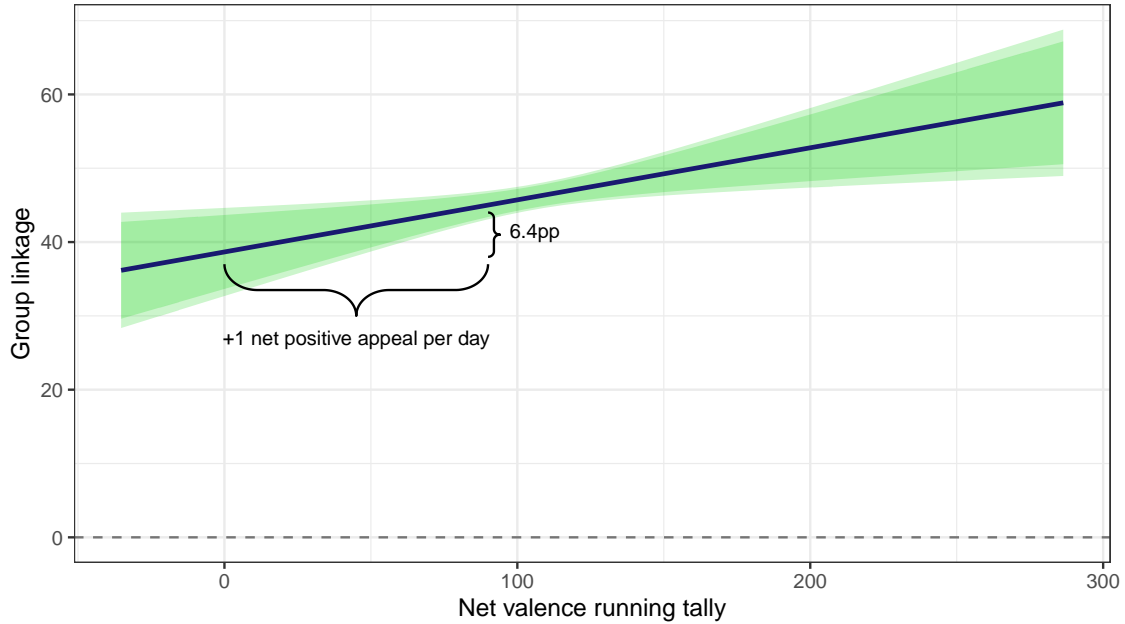


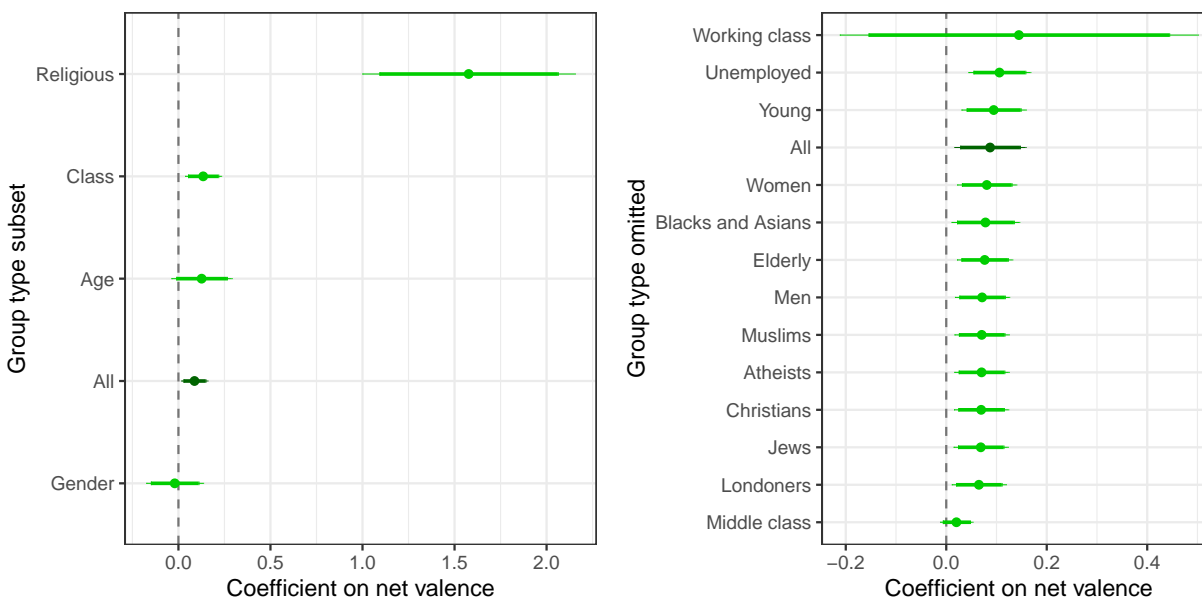
Figure 6: Predicted change in group linkage in response to changes in net valence. Based on Model 3 in Table 3. The plot shows predicted changes ranging from the minimum of the net valence running tally to 2 standard deviations above the minimum. One unit of the independent variable represents a +1 change in the valence of one net mention during 3 months.

Heterogeneity across group types

We first consider heterogeneity across the types of group to which party elites can appeal. This connects to concerns about external validity. For example, class has famously played a particular role in British politics (Evans and Tilley 2017) and has been the focus of key studies on the topic (Robison et al. 2021; Stubager and Thau 2023; Thau 2023, 2021). This naturally raises the concern that the overall result could be driven by British voters’ reactions to class appeals specifically.

To examine this, we consider heterogeneity across group types. Since sample coverage differs widely by group, we cannot carry out well-powered analyses for each single group. We therefore bundle the groups together according to their type as shown in Table 1, resulting in four group types: religious, class, age, and gender. To preserve power, we consider only groups which can be subsumed under an overarching group type. We then test for heterogeneity in two ways: by re-estimating the model for each group types separately, and a ‘jackknife’ type test re-estimating the model with each group omitted. Results are shown in Figure 7. All estimates rely on the most

restrictive model specification, i.e. Model 3 in Table 3.



(a) Estimates subsetting to each group type. (b) Estimates omitting each group.

Figure 7: Estimates when subsetting to each group type (left panel) and omitting each group (right panel). All estimates are based on the specification from Model 3 in Table 3. Light green dots are group (type)-specific estimates, the dark green ‘All’ estimate is the overall estimate presented in Table 3. Groups and group types are ordered by coefficient. Thin and thick error bars represent 95 and 90 pct. confidence intervals, respectively.

As shown in panel (a) of Figure 7 the main heterogeneity at the group type level is that the coefficient for religious groups is noticeably larger. While had no ex ante expectation of this, we speculate that group linkages by religion may be relatively more malleable because, unlike class, religion is not a central cleavage in contemporary British politics, leaving voters with weaker priors about religious group linkages. The other group type-specific estimates vary around the overall estimate. Estimates for class- and age-based groups are larger than the overall estimate, and the estimate for gender is smaller and indistinguishable from zero. Panel (b) reveals that coefficient magnitudes are robust to omitting each group from the data. Only when omitting class-based groups does the estimate not reach statistical significance, but this reflects the loss of power from dropping by far the most common group type in the data.

Explicit references to policy

Group appeals are sometimes used in conjunction with policy statements, as when a party criticizes a policy for harming a group or justifies policy changes on the grounds of helping a group. Existing research has debated whether such ‘substantial’ group appeals have stronger effects on group linkages than purely ‘symbolic’ ones (Horn et al. 2021; Huber 2022; Thau 2019, 2021) with, e.g., Thau (2021) arguing that “the most lucrative strategy probably lies in combining the two electoral appeals” (p. 686). Yet, this has mostly been subject of theoretical debate (although see Robison et al. 2021).

While our measure of group appeals does not differentiate between symbolic and substantial appeals, the respective importance of these two types does have a bearing on how to interpret our results. Specifically, if the effect is driven only by cases where policy is mentioned, it would imply that group appeals function as a complement to policy, providing “linking information” (Converse 1964) to voters about group linkages in policy. Conversely, if this is not the case, it would suggest group appeals are mainly shaping group linkages in their own right, irrespective of policy content.

To test this, we code all sentences in our data for explicit references to policy. We do so using a custom dictionary designed to capture words like ‘bill’, ‘law’, ‘legislation’, ‘policy’, and so on. In Appendix I we provide more details on the measure. We then re-estimate our preferred specification (Model 3 in Table 3) in two ways: one counting only group appeals with explicit references to policy, and one counting only appeals without references to policy. Figure 8 presents the results.

As shown in Figure 8, appeals with and without policy both yield significant coefficients, consistent with the main result. This suggests that the main result is not solely driven by references to policy which happen to coincide with group appeals. At the same time, Figure 8 indicates that group appeals accompanied by policy mentions are roughly an order of magnitude more effective compared to those without. This lends support to contentions in earlier work (e.g., Thau 2021) that while symbolic appeals are effective, tying them to policy can greatly enhance their effects on voters.

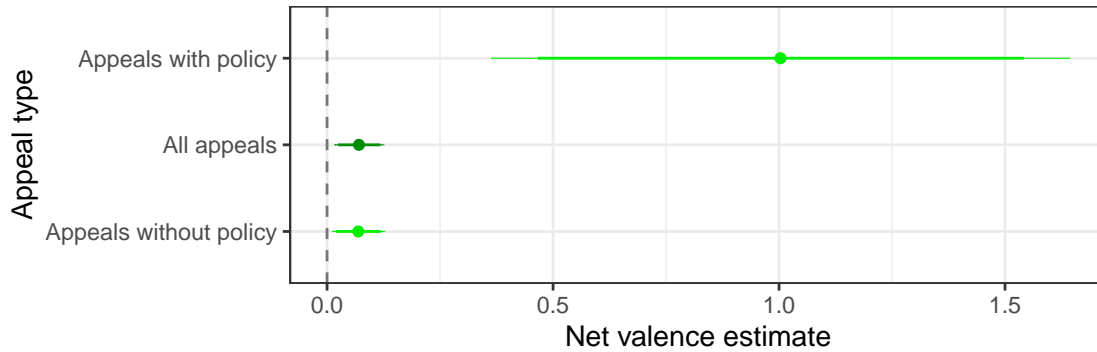


Figure 8: Estimates by whether the appeal includes an explicit reference to policy. All estimates are based on the specification from Model 4 in Table 3. Light green dots are estimates with and without policy references, the dark green ‘All’ estimate is the overall estimate presented in Table 3. Thin and thick error bars represent 95 and 90 pct. confidence intervals respectively.

Conclusion and Discussion

Shared perceptions of what parties stand for and who they represent play a key structuring role in politics (Dalton, Farrell and McAllister 2011). A key component of a party’s reputation is the perception of *whom* the party represents, i.e. its group linkages. Going back to Converse (1964), a long line of research has found these group linkages to be central to how voters reason about politics (Dalton 2018; Elder and O’Brian 2022; Klar 2013; Mason, Wronski and Kane 2021; Miller, Wlezien and Hildreth 1991). Cleavage theory sees group linkages as relatively stable and driven by ‘bottom-up’ changes in the social structure. On this view, party elites’ ability to shape group linkages in the short run is sharply limited (Hooghe and Marks 2018). Party elites thus have little to gain from strategic short-term repositioning.

In this paper, we have challenged this view and argued that group linkages are malleable even in the short run. We have proposed a theory of group linkages as ‘running tallies’ of parties’ use of rhetorical group appeals. When a party’s rhetoric on a given social group turns more positive or negative, voters pay attention and adjust their perceptions of the party-group linkage on a running basis. This builds on the emerging literature on group appeals (e.g., Dolinsky 2023; Stuckelberger and Tresch 2024; Thau 2023), operationalizing and testing a key assumption about their influence on voter behavior.

To study this, we examined how group linkages expressed in surveys track party elites' group appeals in 1.6 million parliamentary speeches in the UK House of Commons. To overcome limitations in common measurement approaches to group appeals, we use a language model to produce high-quality annotations of group appeals in political speech. Consistent with our running tally theory, we find that group linkages robustly track parties' use of group appeals. By our estimates, adding one daily net positive appeal to a given group over the course of 3 months improves a perceived group-party linkage by around 6 percentage points. These results challenge the conventional view of group linkages as sticky, suggesting instead that party elites have some latitude to change these in the short run.

Some limitations to our analysis remain. First, we exploit a unique data opportunity to link mass group linkages and elite group appeals in present-day UK. This naturally raises the question of how our findings generalize to other contexts. We provide evidence that our findings are fairly robust across group types, and thus not likely driven by a uniquely British attention to class. Still, we study an era of relative volatility in the UK party system, which may also make group linkages relatively less fixed. While this relative volatility is mirrored in European politics writ large (De Vries and Hobolt 2020), it is an open question how our findings generalize to more static party systems.

Second, our observational approach inevitably leaves residual concerns about causal inference. While we are able to include a rich set of controls including fixed effects for groups, parties, and survey waves, we cannot rule out all confounders. Moreover, because our data is observational, we observe group appeals 'along the equilibrium path', i.e. the appeals party elites choose to make, perhaps because they are perceived as more likely to work. Future experimental work could examine the efficacy of group appeals that are rarely seen in the wild.

Lastly, we stress that our measure of group appeals is designed to capture explicit appeals. This excludes implicit or 'dog whistle' appeals that are richly theorized (e.g., Tesler 2017), but in practice too subtle for our classifier to pick up. However, group appeals are likely to also operate at the implicit level. For example, while we find striking average negativity in explicit appeals to men,

it is possible that politicians mask positive appeals to men through gendered ‘group implicating’ phrases (Winter 2008) like ‘workers’, ‘troops’, or ‘motorists’. We consider the implicit level of group appeals an important avenue for future research.

These caveats notwithstanding, our results have several important implications. First and foremost, they suggest that a cornerstone assumption of the group appeals literature is warranted. While it has rarely been studied, and never in non-experimental settings, the link we have demonstrated is critical for claims that parties can use group appeals strategically to shape perceptions of group-party links and voter behavior (Huber 2022; Huber and Haselmayer 2024; Thau 2019). Our analyses also provide rare evidence on the effectiveness of group appeals with and without mentions of policy. Importantly, group appeals work even in absence of explicit references to policy, but their effectiveness is greatly enhanced when tied to policy. Jointly, these results underscores the importance of studying how parties use group appeals, with and without policy, for understanding electoral outcomes.

Secondly, our results suggest that party reputations are more malleable than is often assumed. If, for instance, the Labour Party were to suddenly stop talking about issues facing Londoners, voters should register this and immediately update their perceptions of Labour’s linkages with urban people. This stands in contrast to other major approaches to group linkages and group-based voting that emphasize either bottom-up “epochal structural shifts” (Westheuser and Zollinger 2024, p. 4) in the social structure (Bornschieer et al. 2021; Lipset and Rokkan 1967) or larger top-down shifts in party strategy (Evans 2013; Evans and Tilley 2012, 2017; Evans and Graaf 2013). The effectiveness of group appeals may seem surprising given inherent issues with the credibility of political rhetoric and ‘cheap talk’ (e.g. Fiorina 1981). Yet, it aligns with other work demonstrating political elites’ power to activate social cleavages (Klar 2013; Robison et al. 2021). Moreover, there are good reasons why group appeals would leave such strong impressions on voters, specifically their typical emotional or moral charge and ease of interpretation.

What does the malleability of group linkages mean for party competition? Most obviously, it suggests that the use of group appeals is an important element of party strategy and competition.

The flipside of this malleability, however, is that group linkages are not something parties can take for granted (Mair 2013). Connections between parties and groups must be maintained in party rhetoric to remain relevant and salient in voters' minds. This may also help explain why group appeals are so ubiquitous in political speech (Thau 2019).

Moreover, despite their effectiveness, the use of group appeals is importantly constrained in various ways in practice. Repeated symbolic appeals without policy content are likely to engender public pressure for corresponding policy, lest they be accused of 'cheap talk'. Hence, the use of group appeals will ultimately be constrained by inevitable policy tradeoffs. Moreover, our parties are unlikely to be successful in appealing maximally to all groups at once. Group appeals are sometimes partially mutually exclusive as voters are likely to make inferences across groups and e.g., negative appeals to one group can sometimes have a positive mobilizing effect on another (Stuckelberger and Tresch 2024). As such, politicians must sometimes choose whether to appeal to one or the other side of a given cleavage. Such constraints are an important area of future theoretical and empirical research.

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Appendix: For Online Publication

A	Overview of BES surveys	1
B	Group mention dictionary	3
C	Examples of annotated group appeals	4
D	Validating group appeal valence in parliamentary speeches against press releases	6
E	Distribution of net valence by group	7
F	Results from alternative specifications of the main model	8
G	BESIP estimates with individual-level fixed effects	9
H	Varying exposure windows	10
I	Measuring explicit references to policy	11

A Overview of BES surveys

Data collection [month(s)/year]	5-7/97	6-9/01	2-5/05	5-7/05	5-9/10	5-9/15	11-12/16	5-6/17	6-10/17	3/19	12/19	1-6/20	6/20	5/21	11-12/21	5/22
	1997 GE	2001 GE	2005 GE	2005 GE	2010 GE	2015 GE	w10	w12	2017 GE	w15	w19	2019 GE	w20	w21	w22	w23
BES election surveys																
BES internet panel																
Middle class people	3615	3900	4791	4791	1843	2987	30237	34394	2194	0	8105	3946	7902	30281	6975	30949
Working class people	3615	3900	4791	4791	1843	2987	30237	34394	2194	0	8105	3946	7902	30281	6975	30949
Unemployed people	3615	3900	4791	4791	1843	2987	30237	0	2194	0	8105	3946	7902	30281	6975	30949
Black and Asian people	3615	3900	4791	4791	1843	2987	30237	0	2194	0	8105	3946	7902	30281	6975	30949
Retired people/pensioners	0	3900	4791	4791	1843	0	0	0	0	0	0	0	0	0	6975	30949
Young people	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6975	30949
People in London	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6975	30949
Women	0	3900	4791	4791	1843	0	0	0	0	0	0	0	0	0	0	7878
Men	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7878
Muslims	0	0	0	0	0	0	0	0	0	6982	0	0	0	0	0	0
Jews	0	0	0	0	0	0	0	0	0	6982	0	0	0	0	0	0
Christians	0	0	0	0	0	0	0	0	0	6982	0	0	0	0	0	0
Atheists	0	0	0	0	0	0	0	0	0	6982	0	0	0	0	0	0

Table A1: Dependent variable coverage of each group by survey wave.

B Group mention dictionary

Middle class people: middle income earner*, middle class, average earner*, middle-income, white collar worker*, white-collar worker*

Working class people: working class, worker*, employee*, working famil*, chavs, manual labourer*, primary producer*, on low income*, poor people, the poor, on the poverty line, the lowest paid, lower class, lower-class, low income earner*, low income class, on social security, on lower incomes, on low wages, on poverty wages, on the dole, on or near the poverty line, low-income famil*, on modest income*, low-wage job*, the lowest-paid, zero-hours contract*, zero-hour contract*, wage-earner*, wage-earning, unskilled worker*, blue collar worker*, blue-collar worker*, pink collar worker*, pink-collar worker*

Unemployed people: unemployed people, without a job, the jobless, jobseeker*, without employment, long-term unemployed, unemployed person, the unemployed, who are unemployed

Retired people/pensioners: old people, older people, pensioner*, senior citizen*, elderly, retired people, retiree*, nearing retirement, reaching retirement, beyond retirement

Young people: student*, undergraduates, young people, youth*, teenager*, teens, adolescent*, young adult*, under-18s, under-21s, under-25s, under 18s, under 21s, under 25s, 13-year-old*, 14-year-old*, 15-year-old*, 16-year-old*, 17-year-old*, 18-year-old*, 19-year-old*, 20-year-old*, 21-year-old*, 22-year-old*, 23-year-old*, 24-year-old*, 25-year-old*

Rural people: country dweller*, rural resident*, rural area*, rural population, rural inhabitan*, rural communit*, commuter*, rural and coastal communit*, outside urban area*, countryside

People in London: city dweller*, urbanite*, urban resident*, city resident*, inner-city area*, urban area*, city area*, urban communit*, metropolitan area*, people in london, londoner*, inner-london, working in london, based in london

Black and Asian people: black british, africans, caribeans, BME, BAME, pakistani, bangladeshi, bengali, indian people, chinese people, black people, asian people, afro-caribbean, minority ethnic, black and asian, caribbean men, caribbean women, african men, african women, indian men, indian women, black men, black women, asians, chinese men, chinese women, indian british, asian british, pakistani british, bangladeshi british, chinese british, ethnic minorities, black communit*, asian communit*, ethnic communit*

Muslims: muslim*, islam*

Jews: jew*, judais*, judeo*

Christians: catholic*, protestant*, anglican*, evangelical*

Atheists: non-believer*, atheist*

Women: women*, female

Men: men, men's, male

C Examples of annotated group appeals

To augment our automated classification, we train our BERT-based model to classify sentences in the following format: “British politician from the <party> (in <government status>) mentioning a group (<group>): ’<sentence>’”. This has the advantage of supplying the model with contextually relevant information about each sentence, improving accuracy. We reproduce examples of annotated sentences in the same format here.

Table C1: Sample of sentences annotated as positive group appeals

	Text
1	British politician from the Conservative Party (in opposition) mentioning a group (urban people): ’The Attorney General is well aware that drug trafficking is an issue not just for urban areas, but for rural areas, villages and towns.’
2	British politician from the Conservative Party (in opposition) mentioning a group (rural people): ’Although I was a member of an Administration who by nature, support and backing were closer perhaps to rural areas than his, it was not always easy to win what I needed to win.’
3	British politician from the Conservative Party (in opposition) mentioning a group (working class people): ’I draw the attention of the House to early-day motion 1320 on Health and Safety Executive job cuts, which points out the lack of resources being made available for maintaining health and safety for UK workers, and the fact that staff numbers have fallen from 4,282 in April 2004 to 3,225 in March 2007.’
4	British politician from the Liberal Democrats (in opposition) mentioning a group (ethnic minorities): ’To follow up the point about ethnic minorities, it is interesting to note that 10 per cent. of the British Army is not British, with one in 10 soldiers belonging to one of 57 other nationalities.’
5	British politician from the Conservative Party (in opposition) mentioning a group (urban people): ’As the honorable Gentleman said, the proliferation of knives, particularly these unpleasant zombie knives, has caused a huge problem, particularly in urban areas and especially in London.’
6	British politician from the Liberal Democrats (in opposition) mentioning a group (middle-class people): ’Grandiose plans for public spending might help in the long term, but low and middle-income families need more money in their pockets right now.’
7	British politician from the Conservative Party (in opposition) mentioning a group (ethnic minorities): ’Should not the denial of women’s rights be a matter of concern to men, the denial of the rights of ethnic minorities be a matter of concern to those who do not belong to one, and the denial of the rights of gays be a matter of concern those who are not gay?’
8	British politician from the Conservative Party (in opposition) mentioning a group (Christians): ’We should recognise the feelings in the Muslim community about that, just as we should respect the position taken by Catholic and Jewish schools.’
9	British politician from the Scottish National Party (in opposition) mentioning a group (women): ’It is important to acknowledge, as other honorable Members have pointed out, that the vast majority of men are not violent towards women, but the evidence shows that such violence is perpetrated overwhelmingly by men.’
10	British politician from the Labour Party (in government) mentioning a group (elderly people): ’It is easy to poke fun at the Liberal Democrats for wanting to channel some of our existing resources to the oldest pensioners, but any serious person knows that that should be part of the new consensus.’

Table C2: Sample of sentences annotated as negative group appeals

	Text
1	British politician from the Labour Party (in government) mentioning a group (men): 'Women suffer horribly from violence at men's hands in the home and on the streets.'
2	British politician from the Labour Party (in government) mentioning a group (rural people): 'The power to put subsidy into rural areas is contained in the new Postal Services Bill, but the fund for deprived urban areas is exclusively for those areas, and will be ring-fenced accordingly.'
3	British politician from the Labour Party (in government) mentioning a group (young people): 'This new regime has reduced the number of institutions able to bring students to the UK from over 4,000 to approximately 2,000.'
4	British politician from the Labour Party (in government) mentioning a group (Muslims): 'In 1997 he ran Al-Ansar, an Arabic newspaper that supported the Algerian Armed Islamic Group-GIA.'
5	British politician from the Conservative Party (in opposition) mentioning a group (urban people): 'I know that the honorable Lady was not in this place during Labour's rule, but I would say gently to her that had she not been asleep under a tree like Ferdinand the Bull, she might have noticed that during the period from 1997 to 2010 a Labour Government exacerbated the educational funding gap between rural and urban areas.'
6	British politician from the Labour Party (in government) mentioning a group (Jews): 'Sharon's response to that is part ethnic cleansing-ensuring that it is impossible for people to live in the area because of the impact of the wall and the use of such things as the planning laws in and around Jerusalem, which have, in effect, judaised large parts of the outskirts of Jerusalem-and part hustling Palestinians into what can be described only as Bantustans in the west bank and Gaza.'
7	British politician from the Conservative Party (in opposition) mentioning a group (Muslims): 'It seeks the destruction of the state of Israel and the establishment of an Islamic republic in Lebanon.'
8	British politician from the Liberal Democrats (in opposition) mentioning a group (women): 'Regrettably, many of these offences are committed by women-Courtney Love being a case in point-who seem to have the same capacity to imbibe and behave badly as the men.'
9	British politician from the Conservative Party (in opposition) mentioning a group (Muslims): 'He will be aware from the ISC report that the tragic events of 7/7 followed years of failure, going back to before 1997, to appreciate the scale of the Islamist threat.'
10	British politician from the Labour Party (in government) mentioning a group (rural people): 'The Government have allocated an additional £30 million to rural policing when, on every comparison of crime between urban and rural areas, it is urban areas that should have that extra policing.'

D Validating group appeal valence in parliamentary speeches against press releases

To validate the valence of group appeals in parliamentary speeches, we compare it with group appeals in party press releases from the PARTYPRESS database (Erfort, Stoetzer and Klüver 2023). The database includes all press releases by the major parties in the UK, including the four parties we focus on, during ten years from 2010 to 2019. Using the same procedure as for the parliamentary speeches, we identify and code all group appeals in the period for the same groups and parties. Mirroring the key measure of interest in our analysis, we then compute the average net valence for each group-party dyad by quarter in the nine year period.

Table D1 presents estimates from regressing the measure of dyad-level quarterly average net valence for the parliamentary speeches unto the same measure for the press releases. Model 1 shows the bivariate coefficient. Models 2-4 include various fixed effects and varied error clustering. As shown, there is a robust relationship between how parties talk about each group in each quarterly period across the two data sources.

Table D1: Estimates from regressing quarterly group appeal valence in parliamentary speech on press releases.

	Model 1	Model 2	Model 3	Model 4
Net valence (average)	0.820*** (0.026)	0.232** (0.066)	0.180* (0.077)	0.180+ (0.096)
Intercept	0.172*** (0.019)			
N	1143	1143	1143	1143
Std.Errors	IID	group	group	dyad
FE: Group		✓	✓	✓
FE: Party			✓	✓

E Distribution of net valence by group

Figure E1 shows the distribution of net valence across a 30-day period separately for each group.



Figure E1: Distribution of net valence by group.

F Results from alternative specifications of the main model

Table F1 shows results from alternative model specifications. Model 1 shows the main specification from Table 3 without any fixed effects. Models 2-5 shows specifications with similar fixed effects as Table 3 but using only counts of group mentions as the independent variable, i.e. without accounting for valence.

Table F1: Alternative estimates from regressing group linkages on net valence and counts of group mentions.

	Model 1	Model 2	Model 3	Model 4	Model 5
Net valence (sum)	0.044 (0.032)				
Number of appeals	-0.043+ (0.023)	-0.012 (0.008)	-0.005 (0.010)	-0.005 (0.011)	-0.004 (0.007)
Intercept	55.421*** (1.956)	55.386*** (1.964)			
N	1 325 239	1 325 239	1 325 239	1 325 239	1 325 239
Std.Errors	dyad-wave	dyad-wave	dyad-wave	dyad-wave	dyad-wave
FE: group			✓	✓	✓
FE: wave				✓	✓
FE: party					✓

G BESIP estimates with individual-level fixed effects

Table G1 presents estimates from various specifications of the model on the panel subset of the data. The difference from Table 3 is therefore solely in the inclusion of individual-level fixed effects.

Table G1: Estimates from regressing group linkages on group appeals.

	Model 1	Model 2	Model 3	Model 4
Net valence (sum)	0.147*** (0.040)	0.156*** (0.041)	0.167*** (0.046)	0.084* (0.035)
Number of appeals	-0.101*** (0.023)	-0.109*** (0.023)	-0.118*** (0.028)	-0.059* (0.024)
N	1 157783	1 157783	1 157783	1 157783
Std.Errors	dyad-wave	dyad-wave	dyad-wave	dyad-wave
FE: Group	✓	✓	✓	✓
FE: ID		✓	✓	✓
FE: Wave			✓	✓
FE: Party				✓

Models 1-4 in Table G1 differ in terms of the number and composition of fixed effects. The estimate of interest, *Net valence*, is in the top row. As shown, the coefficient on net valence is consistently positive and statistically significant. The coefficient is fairly robust in terms of magnitude, ranging between .08 and .17 across specifications even as individual-level fixed effects are added.

H Varying exposure windows

Figure H1 shows estimated coefficients on net valence from our main specification (including group, party and wave fixed effects) across varying window sizes: 60 days, 75 days, 90 days (as in our main results), 105 days, and 120 days.

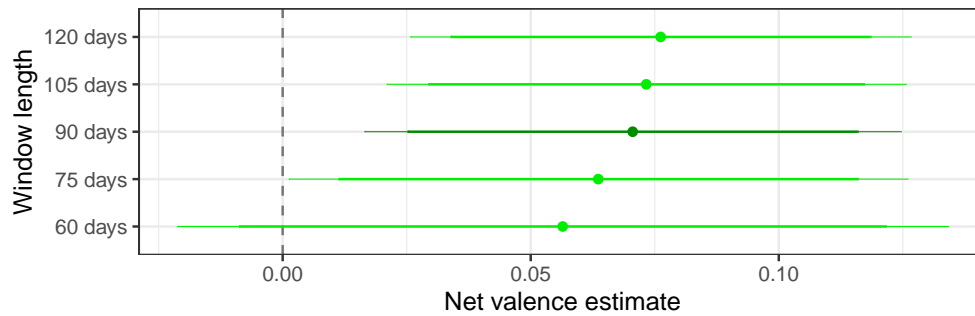


Figure H1: Estimates from regressing group linkages on net valences based on 2, 2.5, 3, 3.5, and 4 month exposure windows.

I Measuring explicit references to policy

Explicit policy mention codebook: bill*, legislat*, policy*, polici*, law*, amendment*

Appeals with explicit policy mention	Appeals without explicit policy mention
That provision, which is discriminatory and applies only to Roman Catholics, is wrong and should be removed from our statute law.	Our young men in particular are missing the boat, and the proportion of young males going to university is lower than it was in 1999.
Because of the Government's slash and burn policy, 70% of councils are having to cut social care, leaving old people to choose between help with washing and help with eating.	It is extraordinarily difficult for the elderly or the injured to get in and out of their home.
Reimbursement and other proposals in the Bill will lead to increased quality and choice for older people.	Tens of thousands of Catholics in Wales are in mourning, and we stand in sympathy and support with them.
All politicians talk about giving older people dignity and security, and a nationwide policy on pets could help lift one particular burden from many older people.	The honorable Gentleman says that he does not care whether 10% or 90% of MPs are women, but I care.
The Bill is not about men versus women, but about true equality between men and women, and I therefore commend it to the House.	One of my key ambitions in my new role is to raise the status of social workers in our society.
We have also invested in programmes and policies to respond to the specific needs of black, Asian, and minority ethnic groups-for example, through outreach programmes to help economically inactive minority ethnic women into work.	I know that there is concern about the potential, random industrialisation of the countryside.
The changes in the Bill will support the achievements of those young people from difficult backgrounds, such as those with special educational needs or disability.	That is the issue that the public and Jewish people have.
A 2019 report by the Women and Equalities Committee recognised that Gypsy, Roma, and Traveller communities are one of the most persecuted groups in Europe, yet the Government seek literally to persecute them further through the Bill.	I have no difficulty in reiterating, and joining the honorable Gentleman in acknowledging, the vast sacrifices made by the men of Ulster-it was men-during the first world war.

Table I1: Example sentences with and without explicit policy mentions