Article

From Policy Interest to Media Appearance: Interest Group Activity and Media Bias

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Abstract
Media attention is a scarce, yet attractive, resource for interest groups. Existing studies show that media attention is concentrated on a relatively small number of well-resourced groups, often representing economic interests. However, the literature still struggles to disentangle the reasons behind this bias in media attention. Is it explained by media selection practices or uneven interest group activity? We cannot separate these two possible mechanisms by simply studying aggregate levels of media attention. In this study, we therefore compare the set of groups that lobby in specific policy areas with the groups that appear in the news on issues related to those same policy areas. The investigation is based on data from Denmark and the United Kingdom. First, we use survey data to identify the policy areas in which groups actively lobby. Second, we identify groups' media appearances in news stories related to those same policy areas. Third, we compare diversity among the groups actively lobbying with the groups actually appearing in the news and investigate possible biases. We find that even when the analysis of media appearances is narrowed down to only those groups active in a policy area, the news media allow more access to well-resourced groups. However, in contrast to previous findings, differences in media appearances across interest group types are not reproduced. These results imply that media selection biases are mainly produced by varying lobbying resources rather than discrimination based on the type of interests that groups represent.

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Introduction

Media attention is crucial in modern politics. It allows political actors to influence the political agenda (Sciarini and Tresch 2019) and offers the opportunity to frame political problems (Jensen and Seeberg 2019). Therefore, the composition of political actors appearing in the media is of high democratic importance and carefully studied across multiple research fields (Andrews and Caren 2010; Danielian and Page 1994; Strömbäck and Van Aelst 2013). Knowing how many different voices are heard—in what volume and why—is crucial for evaluating the democratic quality of media coverage (Reese 2007; Wolfsfeld and Sheafer 2006).

Interest groups are among the central actors seeking media attention. Through the media, interest groups seek to increase attention toward the issues they care about, to influence political decisions and public opinion, and to promote the public's knowledge of and support for their organization (Binderkrantz et al. 2015; De Bruycker 2019). In this field of research, important progress has been made in recent years. One line of research investigates interest group appearances in the media in relation to specific policy proposals and finds limited diversity in media reporting and a focus on groups that oppose a given proposal (Bernhagen and Trani 2012; Danielian and Page 1994; De Bruycker and Beyers 2015). Another line of research investigates aggregate patterns of group media access, also showing limited diversity in media coverage and a general bias toward well-resourced economic groups (Binderkrantz et al. 2017; Dimitrova and Strömbäck 2009; Tiffen et al. 2013). Most often, these findings of limited diversity and significant biases are interpreted as results of selection practices in the news media.

A limitation of these two lines of research, however, is that observed patterns of media access are reported independent of knowledge of the groups active in the relevant policy areas. The identified biases and limited diversity may thus result from uneven interest group activity *as well* as from biased media selection (De Bruycker and Beyers 2015). This is an important limitation because an accurate understanding of the factors affecting biased media coverage is essential for interpreting the democratic consequences of news media coverage and of interest group representation. For example, findings of skewed patterns of aggregate media representation may simply reflect that some interest groups spread their activity broadly while others operate in only one or a limited number of policy areas (Halpin and Binderkrantz 2011).

To increase our understanding of the causes behind biased media coverage, we adopt a research strategy where we (1) identify the interest groups which actively try to influence a given policy area (such as health or finance), (2) identify all interest groups appearing in the news media on that policy area, and (3) compare the diversity among interest groups active in a policy area with interest groups that gain media attention on that same policy area. Hereby, we narrow the yardstick for evaluating

possible media biases down to groups active in a policy area, and then investigate to what extent the media limit diversity in interest representation and whom such discrimination may benefit.

In line with existing literature, we hypothesize that even among interest groups actively seeking to influence a policy area, those with more resources to lobby and those representing fundamental economic interests are more likely to appear in the media. We add to this line of reasoning by proposing that general biases are moderated by the policy area and state–society relations. Specifically, we hypothesize that interest groups representing economic interests are only better represented in news stories regarding economic policy areas and that the privileged media attention to interest groups representing economic interests is particularly pronounced in corporatist systems.

We test our expectations using data from Denmark and the United Kingdom. In both countries, we use interest group survey data to identify the policy areas in which each group actively lobbies, and newspaper coverage to identify interest groups' media appearances in relation to the same policy areas. A comparison of Denmark and the United Kingdom maximizes variation with regard to state–society relations. Denmark is a classic example of a relatively corporatist system that incorporates (some) interest groups in institutionalized forms of policy making and policy implementation, while the United Kingdom represents a more pluralist system with weaker institutionalized integration of interest group politics into the process of formulating and implementing public policies (Siaroff 1999). While these two countries provide the needed theoretical variation and allow us to test the generalizability of media coverage biases across two highly different countries, we cannot exclude all possible confounding factors when including only two countries. In the final discussion, we return to the implications of this limitation. In total, we use data on over 6,000 interest group appearances in the news media (UK = 3,266, DK = 3,672) and survey responses of almost 1,200 national interest groups (UK = 577, DK = 610).

Our analyses both reproduce and contradict existing findings regarding interest group appearances in the news media. In line with existing work, we find that media coverage limits diversity and that better resourced interest groups are more likely to translate their activity into high levels of media attention. In contrast to existing work, we do not find that interest groups representing economic interest are generally privileged when it comes to media coverage. These results imply that media selection biases are mainly produced by varying lobbying resources rather than discrimination based on the type of interest that groups represent.

What Causes Limited Diversity and Biases in Interest Group Media Attention?

Interest groups are defined from a collective action perspective and include membership organizations such as trade unions, business groups, and citizen groups, but exclude other lobbying actors such as firms or institutions (Halpin and Jordan 2012). Although news stories may sometimes cast a negative light on organized interests and

some political influence is better obtained outside the public eye, media visibility is typically highly advantageous for interest groups both in obtaining political influence and in managing relations with constituents (Andrews and Caren 2010; Berkhout 2013; De Bruycker 2019). In line with this understanding, interest group studies have consistently found that groups devote considerable time and organizational resources to gaining media prominence (Beyers 2004; Binderkrantz 2005; Dür and Mateo 2013; Kriesi et al. 2007).

Despite this commonly shared interest group preference, media coverage has consistently been shown to be concentrated on relatively few interest groups, and studies have questioned the level of diversity in interest group media representation (Bernhagen and Trani 2012; Binderkrantz et al. 2017; Danielian and Page 1994; De Bruycker and Beyers 2015; Dimitrova and Strömbäck 2009; Tiffen et al. 2013). Diversity refers to variation in the composition of interests represented in the media (Lowery et al. 2015; Lowery and Gray 2004) and is typically operationalized as the relative numerical dominance of different types of interests (Halpin and Thomas 2012).

Two main mechanisms may affect the identified limited diversity in aggregate media coverage of interest groups. First, it may be due to variation in the policy interests of a group. Interest groups represent causes ranging from workers' interests on the labor market, LGBT (lesbian, gay, bisexual, and transgender) people's formal and social status in society, business interests in the market, or support for endangered fauna. Depending on the type of interests that groups try to promote and the strategies they use, they may broaden their activities to more or fewer policy areas (Halpin and Binderkrantz 2011). If a group actively tries to win media attention across multiple policy areas, it is more likely to appear in the media than if it only tries to win attention on a single policy area. Biases in aggregate patterns of media attention may thus reflect variation in group activity. From this perspective, the diversity of groups appearing in the news related to a given policy area would reflect the diversity of groups actively trying to win attention on the same policy area.

> **Hypothesis 1 (H1a):** Diversity in the set of interest groups active on a policy area is similar to the diversity in the set of interest groups that appear in the media on that same policy area.

Most commonly, however, media bias is interpreted as the result of media selection practices rather than group activity. Because the carrying capacity of the news media is limited, media attention is a scarce resource political actors struggle to win (Wolfsfeld and Sheafer 2006). Editors and reporters act as gatekeepers by deciding which actors to include (Andrews and Caren 2010; Tresch 2009; Wolfsfeld and Sheafer 2006). This selection is based on factors that influence how newsworthy events and actors are (Galtung and Ruge 1965) and is reinforced by news routines where reporters come to rely on established relationships with sources capable of quickly providing them with relevant input to news stories (Andrews and Caren 2010). It follows that even where interest group activity on policy areas is taken into account, media selection practices should produce certain biases reducing diversity in media coverage.

Hypothesis 1 (H1b): Diversity in the set of interest groups active on a policy area is greater than the diversity in the set of interest groups that appear in the media on that same policy area.

The biases produced by media selection likely relate to resource differentials between groups. Interest groups endowed with abundant organizational resources are expected to gain more media attention than groups with fewer resources. Having resources to hire lobbyists and analysts makes well-resourced groups better equipped to monitor political processes, produce high-quality knowledge, and tailor their messages to journalistic demands. This fits reporters' and editors' preferences for reliable, newsworthy, and cleverly framed information. Group resources have thus been found important in explaining aggregate media access (Andrews and Caren 2010; Binderkrantz et al. 2015; Thrall 2006)—although not all studies confirm this (De Bruycker and Beyers 2015).

Hypothesis 2 (H2): Among interest groups active on a policy area, those with more resources are more likely to appear in the news on that policy area.

According to "indexing" theory, reporters systematically pay more attention to those actors identified as legitimate and reliable sources of high-quality information due to their centrality in insider politics (Bennett 1990; Cook 1998; Thrall 2006: 408). This typically works to the advantage of interest groups that represent core economic interests such as trade or business associations. These groups are privileged compared with interest groups representing more diffuse interests such as human rights, elderly care, or animal welfare, because economic groups more often enjoy insider status in policy making and have the potential to significantly influence the national economy by, for example, introducing general strikes or moving capital or production out of the country (Binderkrantz et al. 2017; Lindblom 1977). In effect, editors and reporters are likely to pay more attention to economic groups to get insider information and perspectives. Aggregate patterns of media visibility support this argument by showing a business group bias in media coverage (Binderkrantz 2012; Binderkrantz et al. 2017; Danielian and Page 1994; Dimitrova and Strömbäck 2009).

Hypothesis 3 (H3): Among interest groups active on a policy area, those representing economic interests are more likely to appear in the news on that policy area.

The centrality of economic interests may vary depending on the policy area (Lowi 1964; Rasmussen and Carroll 2014) and state–society system (Binderkrantz et al. 2017). Economic interests are particularly central on policy areas related to regulation of economic policies (Binderkrantz et al. 2014). Economic regulation policies include the labor market and business and consumer regulation, and place economic interests at center stage, as their insider status and powerful economic position are highly relevant for news coverage on such policies. In contrast, the outsider status and broadly appealing causes of many citizen groups will be more relevant for reporters and editors (Binderkrantz

et al. 2015) when the news relates to policy areas such as justice and immigration or health and education. We thus contrast economic regulation policies with general regulation policies (where costs and benefits are often diffuse; Wilson 1980), and with public-sector regulation policies related to public-sector organization and production of services, expecting to find a media bias toward economic interest groups only in news covering economic regulation policy areas.

> **Hypothesis 4 (H4):** Among interest groups active in a policy area related to economic regulation, those representing economic interests are more likely to appear in the news on that policy area.

The centrality of economic interests and the role of institutionalized state–society structures are generally stronger in corporatist systems compared with pluralist systems. Pluralist countries have relatively competitive and open systems of interest mediation, providing more equal access to different types of groups as decision makers establish looser bonds to a broader range of actors (Eising 2004). Corporatist systems are characterized by institutionalized structures integrating groups into public decision making (Öberg et al. 2011). This integration privileges key groups involved in policies of crucial importance to the coordination of the economy, such as employer and employee organizations (Eising 2008; Rokkan 1966). Consequently, some interest groups enjoy privileged access to information and political networks and are better placed to time their lobbying activities and obtain the maximum impact for their investment. The strong position of certain—typically economic—interest groups that corporatist systems promote will affect the indexing practices of reporters and editors seeking out the most powerful and knowledgeable actors. Therefore, we expect that media bias toward economic interest groups will be stronger in more corporatist systems.

> **Hypothesis 5 (H5):** Among interest groups active in a policy area in a corporatist system, those representing economic interests are more likely to appear in the news on that policy area.

Research Design and Data

Testing our hypotheses is demanding. We need to know the set of groups actively lobbying in a policy area as well as which groups appear in the news on that same policy area. This identification needs to be done across policy areas and across different political systems. Such data are available from the INTERARENA project, where data from interest group surveys can be linked with data on newspaper appearances.[1] While the United Kingdom is among the most pluralist countries in Western Europe, Denmark is considered relatively corporatist (Siaroff 1999), and this country comparison therefore allows us to examine differences in patterns of media appearances across contrasting state–society systems. According to H5, economic interest groups should be more dominant in the Danish media than in the British. However, the United Kingdom and Denmark vary in other respects; most importantly, for this study, their media

systems vary (Hallin and Mancini 2004). Therefore, with only two cases, we cannot make firm conclusions regarding reasons for possible differences, but, on the contrary, we increase the generalizability of our claims regarding media selection practices if similar media biases are identified across these two countries.

Identifying Policy Active Interest Groups

To identify the set of interest groups active on specific policy areas, we rely on survey data. The survey was sent to a population of interest groups identified as they appeared in a range of policy-relevant sources; this top-down strategy was used for both countries. Specifically, in Denmark, interest groups were traced in news stories, oral and written evidence to parliament, participation in public boards and committees, and responses to government consultations. Similarly, in the United Kingdom, groups were identified in news stories, oral and written evidence to parliament, meetings with government ministers, and responses to government consultations. With the use of a top-down strategy, we do not map the full population of all existing interest groups (i.e., the latent population). Rather, this population includes interest groups who have already mobilized and established contact with the political system (Halpin and Jordan 2012). In the United Kingdom, the response rate for the survey sent to these groups was 26 percent ($n = 577$), and in Denmark it was 69 percent ($n = 610$).[2] This difference in response rates corresponds to previous surveys with divergent response rates between national settings (see, for example, Rasmussen and Lindeboom 2013). The online appendix provides details on the distribution of survey answers across different types of interest groups (Figure SI-1). Differences in responsiveness across different interest group types are limited.

In the survey, interest groups were asked to indicate their level of activity across a list of 19 different policy areas. These policy areas were fixed to match previously conducted surveys. However, the list contains multiple salient and diverse political subjects such as labor market policies, immigration policy, foreign policy, and health policy. The online appendix lists all policy areas included in the survey (Table SI-1). Interest groups could report that they were "very active," "somewhat active," "a little active," or "not active" in each policy area. We define policy active groups as all interest groups reporting to be "very" or "somewhat" active in a policy area. A single group may appear multiple times in our data depending on how many policy areas in which it indicated it was "very" or "somewhat" active.

Identifying Interest Groups Appearing in the News Media

Interest group appearances in the media are measured by content coding of two national newspapers of different political leanings in each country. For the United Kingdom, the coded newspapers are *The Daily Telegraph*, a paper with a relatively conservative readership, and *The Guardian*, which tends to be left-leaning (Hallin and Mancini 2004). For Denmark, the coded newspapers are *Politiken*, considered to be left-leaning, and the *Jyllands-Posten*, which describes itself as an independent liberal

paper (Hjarvard 2008). In these newspapers, politically relevant articles across a full range of policy areas with interest group appearances were identified.

In the United Kingdom, data were collected from July 1, 2010, to June 30, 2011, and in Denmark from July 1, 2009, to June 30, 2010—two non-election years. To identify interest groups, all front pages of the selected newspapers were coded, and the first section and the business section were coded for half of the days in the period. Specifically, two full weeks were coded, then two weeks were skipped, and then another two weeks were coded throughout the period. This coding procedure potentially leaves out interest groups appearing in the "skipped" weeks, but, on the contrary, it increases the chance of coding a diverse set of news stories over the year, allowing many different interest groups to appear.[3] In the United Kingdom, 693 unique groups were identified in the media, and these appeared 3,266 times. In Denmark, 483 different groups were identified with 3,672 appearances.

News stories were coded using a typology of 26 different policy areas described in the Danish policy agenda project rather than the 19 policy areas included in the survey. Therefore, we had to make the policy match between news and policy active groups. Fortunately, many of the policy areas included in the two coding schemes are the same, such as the European Union (EU), immigration and refugees, health, traffic, and education. For others, we had to merge two policy areas from the media coding to match the policy areas in the survey. For instance, in the agenda-setting coding scheme, energy and environment had two separate codes, but they were combined into one area in the survey. Finally, for a limited number of media categories related to the royal family, politics in general and miscellaneous (about 2 percent), the corresponding policy area was not included in the survey and these therefore had to be omitted from the analysis. The online appendix supplies details on this policy matching in Table SI-1.

Measures of Diversity in Active Groups and Media Appearances

To determine differences in diversity across the set of interest groups active in a policy area and the set of interest groups appearing in the media on that policy area (H1a + H1b), we need a measure of diversity. Diversity refers to the variation in the composition of interests represented, and we order this composition into seven types of interests (Table 1). This follows the coding scheme developed in the INTERARENA project.[4] Each group in the dataset was hand-coded by research group members using this typology; 100 groups were sampled for reliability tests and recoded by one research group member. The inter-coder reliability tests resulted in a Cohen's kappa of .91 for Denmark and .76 for the United Kingdom.

We use Shannon's *H* to measure diversity. This measure is better suited than the alternatives to capture variation at relatively high and low levels of diversity (Boydstun et al. 2014; Halpin and Thomas 2012). Shannon's *H* is given by: $H = \sum [(p_i) \times \ln(p_i)]$. For the diversity measure of the set of interest groups active in a policy area, *pi* is the proportion of interest group type *i* out of the total number of active groups in the specific policy area. For the diversity measure of the set of interest groups appearing

Table 1. Interest Group Type Categorization.

Main Categories	Description	Examples
Trade unions	Groups that organize workers and handle salaries and work conditions on behalf of their members	Trade Union Congress (UK) Unite (UK) The Danish Confederation of Trade Unions (DK)
Business associations	Associations of businesses, industries, and employers	Confederation of British Industry (UK) Danish Chamber of Commerce
Institutional groups	Organize public institutions and authorities	Local Government Association (UK) Danish Universities
Professional groups	Organize professionals to facilitate professional development and networks, do not negotiate salaries or work conditions	Royal Colleges of Surgeons of England Association of High School Music Teachers (DK)
Identity groups	Organization of individuals with similar identity markers such as ethnicity, gender, or age	Royal National Institute of Blind People (UK) Danish Association of the Disabled
Public interest groups	Organization based on similar interests which will not only or mainly benefit members if realized	UK Youth Climate Coalition Keep Denmark Clean
Leisure groups	Organization based on private interests such as sports, hobbies, or religion	The Kennel Club (UK) The Sports Federation of Denmark

in the media, pi is the proportion of all media appearances of interest group type i out of the total number of group appearances on that policy area. Shannon's H increases as diversity increases. As is standard, we treat observations of zero as very small observations (0.0001) to include all seven types of interest groups in all analyses.

Measures of Variables for Multivariate Analyses

To investigate patterns of possible biases in media coverage (H2–H5), we constructed a dataset where dyads of active groups and policy areas are units of analysis. For each group reporting to be active in a policy area, we registered the number of media appearances of that same group in the area. Based on this, we constructed two different dependent variables. *Media access* is a binary measure of whether or not the group appeared in the media in relation to policy areas in which it reported to be active. *Media attention* is the count of appearances recorded for a group on a policy area in which it reported to be active.

Interest group resources (H2) was measured by the number of organization staff working in politics (logarithmically transformed), which was reported by the interest groups in the survey. We include staff numbers rather than group income, reasoning

that groups gain more media attention because they use their resources to monitor and contribute to the political process and because other studies show that—while group income and group staff are correlated—group staff has a stronger impact on media attention (Binderkrantz et al. 2015).

Economic interests (H3) is operationalized to include business groups, trade unions, and professional groups (see Table 1), and contrasted to citizen interests, including identity groups, leisure groups, and public interest groups. Institutional groups are omitted from this comparison due to ambiguity in their status as either economic or citizen groups.

Economic regulation (H4) is operationalized based on the nineteen policy areas discussed above. In the category of economic regulation, we include policy areas like agriculture, labor market, and business and consumer regulation. We contrast this type of regulation to two other types: general regulation and public-sector regulation. General regulation concerns issues of general societal relevance where costs and benefits are often diffuse (Wilson 1980). Here, we include policy areas such as macroeconomics, foreign affairs, and local and regional politics. Public-sector regulation is related to the administration and production of public services. This category encompasses policy areas like health, education, culture and sports, and traffic. The online appendix reports details on the classification of policy areas into types of regulation (Table SI-1).

Corporatist system (H5) is operationalized as a country dummy. Denmark is classified as a corporatist and the United Kingdom as a pluralist system of state–society relations, as explained above.

Estimation

We estimate two regression models to test the hypotheses regarding which interest groups are more likely to appear in the media. For the binary *Media access*, we use logistic regression to estimate the model. For *Media attention*, we use a zero-inflated negative binomial model. This latter model adjusts for a large number of zeros in the dependent variable and fits the data better than the standard negative binomial model according to both the Vuong test and a comparison of predicted counts against observed counts. Because each group appears multiple times in the dataset, we use robust standard errors clustered by individual groups. To account for potentially different dynamics within specific policy areas, we repeat the analysis with standard errors clustered for policy area and obtain the same results (see Table SI-4 in the online appendix).

Results

The analysis falls in two parts. First, we compare diversity in the set of interest groups active in a policy area to the set of interest groups appearing in the media on that policy area to test our first two competing hypotheses. Second, we investigate variation in media appearances among active groups to test our last three hypotheses.
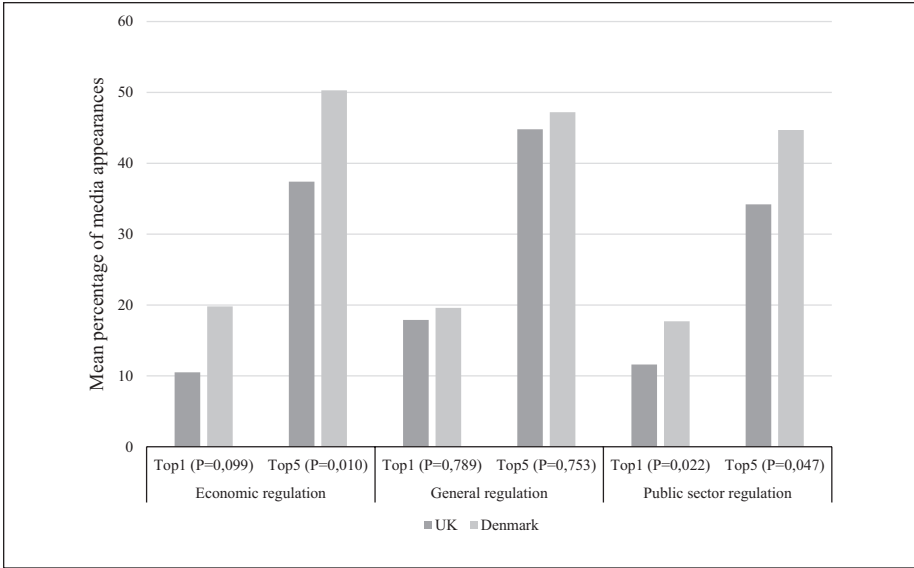
Figure 1. Concentration in media appearances.
Note. The figure reports the mean percentage of media appearances accounted for by the top one and the top five groups across the policy areas classified within each of the three types of regulation. The *p* values are estimated for differences across country means (two-sided *t*-tests).

Are the Type of Interests Seeking Access More Diverse than the Type of Interests Being Reported On?

Figure 1 shows that our data reproduce the generally observed pattern of highly concentrated media attention. For each country, the figure shows the percentage of total media appearances in each policy area accounted for by (1) the single group with the largest number of appearances and (2) the five groups with the largest number of appearances. Each individual interest group thus constitutes the unit of analysis. For instance, the figure shows that in Denmark, the single most prominent interest group accounts for 20 percent of all media attention on policy areas related to economic regulation, while in the United Kingdom, the most prominent interest group accounts for 10 percent. Among the most prominent interest groups in the different policy areas are Danish Industry, the Consumer Council, and the Trade Union Confederation in Denmark, and the Trade Union Congress, Royal College of Surgeons, and Confederation of British Industry in the United Kingdom.

It is notable that across all types of regulation, and in both countries, the most frequently mentioned group accounts for at least 10 percent of all media attention. Similarly, the five groups attracting most interest from reporters appear in more than one-third of news stories. Concentration is stronger in corporatist Denmark than in the pluralist United Kingdom but not significantly stronger on news related to general
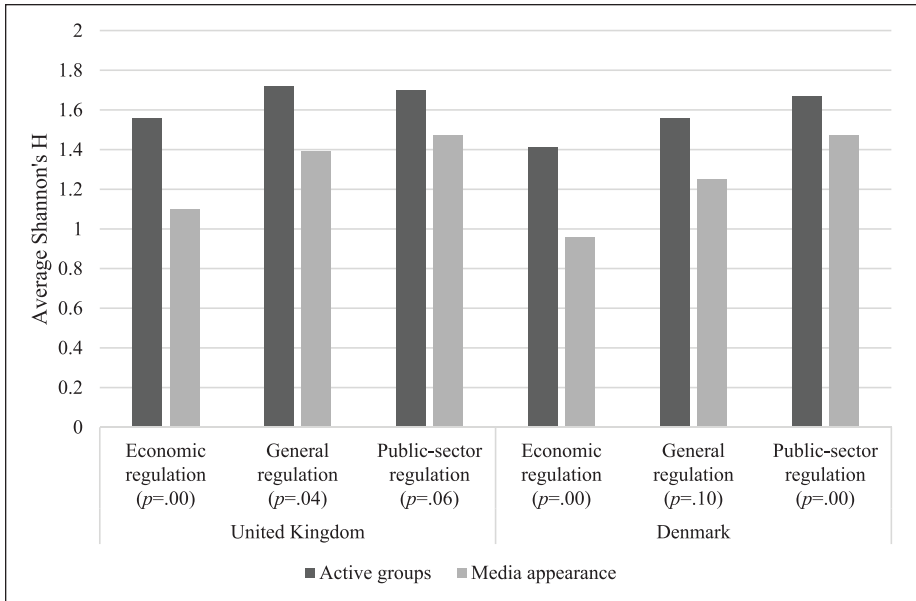
Figure 2. Comparing diversity across active interest groups and groups appearing in the media.
Note. The figure reports average measures of Shannon's *H* across the policy areas, classified as (1) economic regulation, (2) general regulation, and (3) public-sector regulation in each country. The *p* values are estimated for differences in the average diversity between the population of interest groups active in a policy area and the population of interest groups appearing in the media (two-sided *t*-tests).

regulation. Rather, the difference is particularly marked for news related to economic regulation, where corporatism is usually considered stronger (Blom-Hansen 2000).

Turning to a more direct comparison of diversity, Figure 2 presents average diversity measures for the interest groups active in a policy area and the interest groups appearing in the media on that same policy area. Diversity measures are calculated for each of the nineteen policy areas across the seven types of interest groups. For the sake of presentation, we cluster policy areas by type of regulation and report the mean diversity in Figure 2. The online appendix reports a more disaggregated analysis of seven prominent policy areas mentioned in the media (Table SI-2).[5]

The results presented support H1b and contradict H1a. Even when we narrow down the comparison to only groups actively lobbying in a policy area, media coverage is still less diverse than the set of active interest groups. This holds across both countries and across the three types of regulation. Differences in diversity are particularly evident on policies related to economic regulation. In fact, the difference is on average about twice as large for this type of regulation compared with the other two types ($p = .07$). Moreover, economic regulation displays the lowest level of diversity both with regard to the set of active interest groups and the types of interest appearing in the media. Figure 2 shows that media selection practices decrease diversity in the type of voices

heard in the public debate, and this is particularly pronounced when it comes to reporting on policies related to economic regulation.

This result may be influenced by the threshold decision we made when deciding whether an interest group was deemed active on a policy area. If we limit this threshold even further to only include groups that report being "very active" on a policy area, which may be what is required to enter the media, however, we obtain the same result: Diversity in the interests reported on in the media is more limited than the diversity in the set of interest groups very active in that policy area (the online appendix reports these results in Figure SI-2). Another concern could be that not all interest groups align with the general assumption that they strive to gain media attention. To accommodate such a concern, we take advantage of another question in the survey that asks interest groups to what degree they seek to affect the media agenda. Using this question, we limit the group of interest groups active on a policy area to those who also report seeking to influence the media agenda "to some degree" or "to a large degree." Also with this threshold, the result remains the same: Media coverage is less diverse than the set of interest groups active on a policy area and seeks media attention (see Figure SI-3 in the online appendix).

Explaining Variation in Media Appearance

Turning to our second set of hypotheses (H2–H5), Table 2 reports the results of two regressions where units of observation are dyads of group and policy area. First, the logistic regression (Model I) predicts *Media access*, namely, whether interest groups who claimed to be active on a policy area appeared at least once in news regarding that same policy area. Second, the zero-inflated negative binomial regression (Model II) predicts *Media appearances*, namely, the number of times a group claiming to be active appeared in the media. In this model, the first column reports the coefficients of the counts of media appearances, while the second column reports the zero-inflation. With respect to this latter column, coefficients can be interpreted as predicting the likelihood of an observation of zero. Figure 3 displays the predicted number of media appearances based on Model II for economic groups and citizen groups across different types of regulation (Panel A) and the two countries (Panel B).

Across both models, resources are positively related to groups' ability to attract the attention of the news media. This is consistent with H2 and previous research on aggregate levels of media attention (Andrews and Caren 2010). Importantly, because our analysis focuses on interest groups active in a given policy area, our finding is not a simple case of well-resourced groups being active across a wider range of policy areas than other groups. Rather, within the set of interest groups that are active on a given policy area, more resources help translate that activity into media appearances.

Second, with respect to the impact of representing economic interests (H3 and H4), we contrast the appearance of economic groups to the appearance of citizen groups within the three types of regulation. The logistic regression (Model I) offers support for H4, finding that economic groups are more likely to access the news at least once on policy areas related to economic regulation. As can be seen in Figure 3, Panel A, differences with

Table 2. Interest Group Appearances in the News, Logistic Regression, and Zero-Inflated Negative Binomial.

| | | Model I: Media Access | | | Model II: Media Appearances | | | | | |
| | | Logistic | | | Counts | | | Zero-Inflation | | |
		Odds Ratio	Robust SE	p	Coefficient	Robust SE	p	Coefficient	Robust SE	p
Resources	Political staff, log.	2.05	0.11	.000	0.66	0.05	.000	−0.69	0.11	.000
Group type (Reference = economic group)	Citizen group	1.30	0.24	.151	0.35	0.28	.209	0.06	0.56	.921
Policy area (Reference = economic regulation)	General regulation	0.40	0.05	.000	−0.61	0.19	.002	0.96	0.29	.001
	Public-sector regulation	0.69	0.09	.005	−0.68	0.26	.008	−0.32	0.46	.496
Country (Reference = UK)	Denmark	2.36	0.45	.000	0.13	0.20	.533	−1.42	0.33	.000
Interactions	UK#citizen group	0.68	0.18	.149	−0.92	0.35	.008	−0.28	0.53	.598
	Economic reg.#citizen group	0.58	0.14	.027	−0.24	0.40	.542	0.60	0.64	.348
	General reg.#citizen group	1.12	0.25	.627	−0.15	0.43	.732	−0.49	0.68	.475
Constant		0.04	0.01	.000	−1.03	0.38	.007	1.62	0.66	.015

Note. N = 3,670. Standard errors adjusted for 884 unique interest groups. The N includes one observation per group in each of the policy areas the group reported to be "very" or "somewhat" active in.
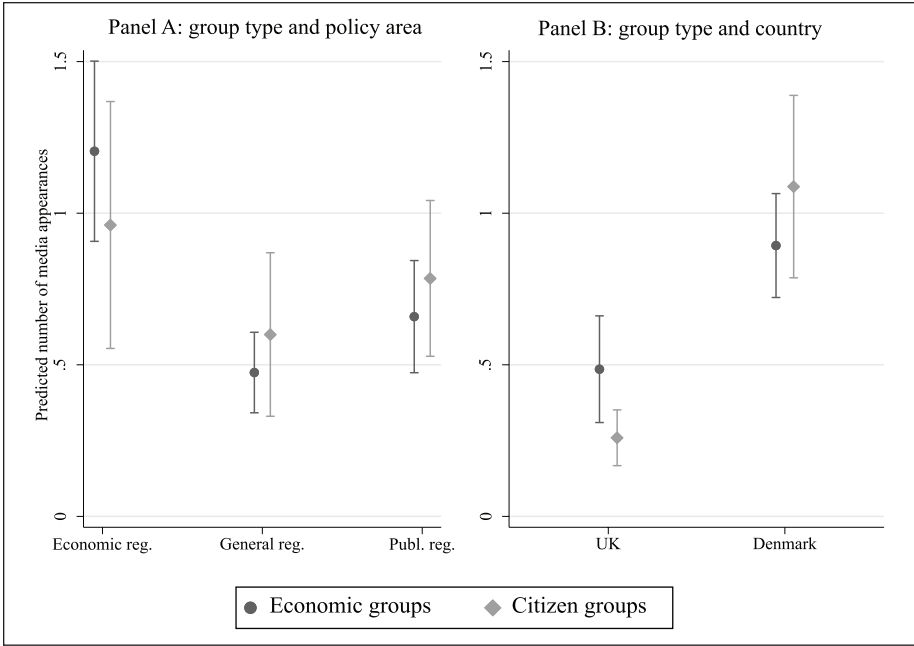
Figure 3. Predicted number of media appearances (based on Model II in Table 2). Panel A: Group type and policy area, and Panel B: Group type and country.

respect to the number of appearances are also in the expected direction—economic groups appear more often on issues related to economic sectors. This difference in media appearance across group types, however, is not statistically significant ($p = .542$ in count model). In contrast to previous findings regarding aggregate measures of media appearances, we cannot point to any significant advantage accruing to economic interests other than privileged access to the media for news on economic regulation. Our results thus contradict the impression of a general media stronghold by economic interests as suggested by H3 and identified in studies of aggregate media attention (Binderkrantz 2012; Binderkrantz et al. 2017; Danielian and Page 1994; Dimitrova and Strömbäck 2009).

Finally, we expected interest groups representing economic interests to be particularly successful in corporatist systems (H5). The results do indicate some differences across countries. In general, interest groups have more media access in Denmark than in the United Kingdom. However, with respect to the privileged position of economic interests in corporatist systems, the coefficient for the interaction between group type and country has a p value of .008 in the count model predicting media appearances but is insignificant in the logistic regression predicting media access. Furthermore, as illustrated in Figure 3 (Panel B), the direction of the effect is the opposite of our expectations: Economic groups are less privileged in corporatist Denmark. In general, groups operating in Denmark thus have a greater propensity to make it into the news, but the country difference is more marked for citizen groups than economic groups. This

finding runs counter to our expectation and to studies of interest groups' aggregate media appearances in pluralist versus corporatist countries (Binderkrantz et al. 2017).

Overall, our analyses regarding whether groups can turn activity into media appearances confirm the bias related to group resources. Even when we narrow the analysis down to groups active in a policy area, the news media tend to allow more access to well-resourced groups. However, differences across group types are less prevalent once we focus on active groups only. This suggests that media selection biases are mainly produced by varying lobbying resources rather than discrimination based on the type of interest represented by groups.

In line with the robustness test of the results with respect to diversity, we estimated our regression models limiting the set of interest groups classified as active to those (1) reporting to be "very active" and (2) reporting to seek media agenda influence. These robustness tests are reported in the online appendix (Table SI-3), and we reproduce our results with these limited samples of interest groups.

Discussion and Conclusion

Organized interests play a crucial role in representing citizen voices in media debates. Scholars have consistently argued that not all voices are equally represented due to bias in media selection practices. We have tried to overcome a central limitation of existing work: that patterns of interest group media appearances have not been linked with knowledge of the set of groups active in the relevant policy area. This has constrained the ability of previous studies to disentangle the role of media selection practices from factors related to group activity. We have therefore matched survey-based knowledge of the set of interest groups active in specific policy areas with data on the media appearances of interest groups on the same policy areas and asked (1) whether there is more diversity among the interest groups active on a policy area than among the types of interests that appear in the news media on that same policy area, and (2) whether well-resourced groups representing economic interests are more successful in turning activity in a policy area into media appearances in that same policy area.

With respect to the question of diversity, we show that diversity in media appearances is lower than in the set of interest groups active in a policy area. This is particularly marked in policy areas related to economic regulation. This shows, with more certainty than previous studies, that media selection practices are key to biases in media coverage. With respect to which groups benefit from these selection practices, our analyses reproduce the finding that well-resourced groups are more successful in turning activity into appearance; but we find slim evidence that economic interests are privileged. If anything, economic interests are only privileged on policy areas related to economic regulation. Economic groups are thus more likely than citizen groups to appear at least once in the news on issues related to economic regulation, but there is no statistically significant difference in the number of times citizen and economic groups appear and there is no general tendency across types of regulation for economic interests to be overrepresented in media coverage. These results imply that media selection biases are mainly produced by varying lobbying resources rather than discrimination based on the type of interest that groups represent.

Across countries, we find higher levels of media appearance in Denmark than in the United Kingdom, with citizen groups standing a better chance in corporatist Denmark than in pluralist United Kingdom—although differences within each country are limited. These country differences are not as expected. Given the comparison of only two countries that vary on more aspects than state–society relations, we are reluctant to make firm conclusions regarding this finding. Possibly, the liberal British media system (Hallin and Mancini 2004) evens out the pluralist interaction between organized interests and the state by strengthening the media selection bias toward powerful and well-organized economic interest groups, while the Danish democratic-corporatist media system with strong public service norms and obligations evens out the corporatist interaction between interest groups and the state securing voice opportunities for otherwise less privileged citizen groups (Binderkrantz et al. 2015; Strömbäck 2008). Further investigations are needed to disentangle the various system-level factors potentially influencing how easily interest groups can turn activity into media attention. However, our comparison of two highly different Western democracies allows us to reach stronger conclusions regarding the impact of media selection practices: Media selection decreases diversity in interests represented in the public debate to the benefit of interest groups able and willing to invest substantial resources in political staff.

Even with this result, we may underestimate the impact of media selection practices, as reporters and editors not only decide which groups to attend to but also which policy areas to cover. Depending on which policy areas are in focus, some interest groups are more or less likely to push their interests onto the agenda. Analysis over time has demonstrated, for example, that citizen groups have become more prominent media sources partially because the balance between reporting on different policy areas has turned to their advantage (Binderkrantz 2012). Still, this study demonstrates that for a given policy area, the attention toward different types of interests is shaped more by resource differentials and patterns of mobilization in different policy areas than by reporters systematically paying more attention to some interests rather than others.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. See www.interarena.dk.
2. The Danish survey was also distributed to a broader set of groups than those identified in documentary sources of political activity. The response rate reported here is for Danish groups identified in documentary sources only and therefore differs from the response rate reported in publications based on the full survey.
3. All material was used to identify interest group though a small number of appearances related to news of no political relevance such as anniversaries or obituaries (3 percent, $n = 197$) or to negative news on fraud or internal struggles of power (1 percent, $n = 98$) were excluded, because they are not counted as media attention interest groups find attractive.
4. For a description of the coding scheme, including sub-categories, see www.interarena.dk.
5. European Union (EU) policy and, for the United Kingdom, church policy were omitted from the analysis due to a very low number of articles on EU mentioning interest groups.

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