Article

The Influence of Cause and Sectional Group Lobbying on Government Responsiveness

Political Research Quarterly
2019, Vol. 72(3) 623–636

DOI: 10.1177/1065912918796326
journals.sagepub.com/home/prq
SAGE

Vincent Hopkins[1], Heike Klüver[2], and Mark Pickup[1]

Abstract

Voters are increasingly concerned that special interests control the policy process. Yet, the literature on representation is more optimistic: elected officials face strong incentives to listen to voters—not just lobby groups—and this makes for more responsive policies. Building on recent work, we argue a more nuanced point: different types of groups have different effects on responsiveness. We show empirically that lobbying from "cause" groups—representing diffuse interests like climate change—strengthens responsiveness, while lobbying from "sectional" groups—representing industry and professional associations—has no observable effect. Our project uses a novel data set of Canadian lobbying registrations spanning fifteen policy areas from 1990 to 2009. Using a dynamic panel model, we test how interest group lobbying moderates the effect of voter issue attention on government spending. Our findings contribute to contemporary debates over the influence of organized groups, suggesting some interest groups may improve representation.

Keywords

interest groups, lobbying, responsiveness

Are voters right to be skeptical about who their government represents? Public opinion in the United States (Dyck and Lascher 2009; Hibbing and Theiss-Morse 2001, 2002; Jacobs and Matthews 2015; Judis 2001), the United Kingdom (Allen and Birch 2015; Webb 2013), Canada (Atkinson 2013; Young and Everitt 2011), and other democracies suggests there is anxiety about the way policy is made—specifically that powerful interest groups and hired lobbyists call the shots instead of voters. Part of this concern relates to the perceived failure of government to live up to an ideal of policy making that Stimson, MacKuen, and Erikson (1995) call "dynamic representation": the willingness of government to adjust its policy priorities in response to the changing priorities of the public. The academic literature emphasizes the responsiveness of policy making to public opinion. But this optimism is at odds with popular wisdom, which often holds that interest groups wield outsize influence in the policy process. Part of the disjuncture stems from a lack of knowledge: there remain considerable gaps in our understanding of whether lobbying strengthens or weakens the effect of voter issue attention on government priorities. This study aims to improve our knowledge of policy responsiveness through a longitudinal analysis of government spending, public opinion, and interest group lobbying.

Although some scholars suggest interest groups serve as a "transmission belt" that strengthens democracy by relaying the voices of the public to elected representatives (Bauer, Pool, and Dexter 1963; Miller and Stokes 1963; Presthus 1973; Scott and Hunt 1966), others claim the converse: interest groups are "special pleaders" who weaken democracy by prevailing on legislators to advance priorities not widely shared by the public (Lowi 1969; Olson 1965, 1982). In reality, generalization is difficult because interest groups have diverse interests and membership. As Stewart (1958, 25–27) notes, there are two broad categories of interest groups: cause and sectional. Cause groups represent broad segments of society and advocate for policies that are likely to diffuse benefits beyond the active membership. Sectional groups represent specific segments of society and advocate for policies that are likely to restrict benefits to active members. In recent years, scholars have incorporated this cause/sectional distinction into studies of

[1]Simon Fraser University, Burnaby, BC, Canada
[2]Humboldt University of Berlin, Germany

Corresponding Author:
Vincent Hopkins, Department of Political Science, Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada V5A 1S6.
Email: vrhopkin@sfu.ca

interest groups and policy making, but findings have been contradictory. Some (e.g., Dür, Bernhagen, and Marshall 2015; Giger and Klüver 2016; Yackee and Yackee 2006) conclude that sectional or business groups—which tend to vastly outnumber cause groups—bias public policy in favor of narrow, private interests. However, others (e.g., Bernhagen 2012; Klüver 2012; Mahoney 2008) find little evidence that sectional/business lobby groups are necessarily more successful than cause groups, despite their preponderance.

The uneven findings may result from the literature's enduring focus on influence—what Leech (2004, 534) calls "the Holy Grail of interest group studies." Questions about the influence of interest groups naturally lend to a focus on policy *congruence* rather than policy *responsiveness*. Congruence compares the popularity of a specific policy to the probability of its adoption by government. In contrast, responsiveness compares changes in voters' issue salience or policy priorities to changes in government activity (Canes-Wrone 2015, 148). Although both are valid measures of representation, interest group studies of congruence may more easily lead to contradictory findings. This is likely because the nature of the data required for a congruence study makes it difficult to build a comprehensive data set that comprises many interest groups across many policy areas.[1] The result is that most studies tend to focus on a narrow range of policies, prominent at the time of the study, and some issues may be more likely to exhibit congruence than others. The results of the study are consequentially dependent on the time period and the policies chosen. It is important to enlarge the focus beyond just the prominent issues. In terms of case selection, the researcher should select a broad range of issue areas over time (e.g., see Baumgartner et al. 2009; Burstein 2014). For the type of data required for responsiveness studies, this is easier to do using standardized indicators and replicable measurement, such as that permitted by the Policy/Comparative Agendas Projects (Baumgartner, Green-Pedersen, and Jones 2006). However, even with responsiveness studies this is not a simple task.

In this study, we propose an empirical model of policy responsiveness that tests the interaction of voter attention and interest group lobbying on government spending—both over time and among cause and sectional groups. Using a novel data set of lobbyist registrations in Canada spanning the fifteen policy areas that covered the vast majority of federal spending between 1990 and 2009, we find that governments are considerably more responsive to the demands of voters in policy areas with a high degree of cause group pressure, relative to policy areas with little or no cause group activity. However, sectional groups do not appear to have any influence on the responsiveness of policy spending to public opinion.

The paper proceeds in five parts. We review the literature on dynamic representation, paying special attention to the processes by which legislators come to recognize and respond to public preferences. Next, we consider the moderating influence of interest group lobbying on policy responsiveness, present interest group lobbying as a type of information exchange, and distinguish sectional from cause groups. We then present our hypotheses and research design. In our results section, we present the findings of a longitudinal analysis that explores the interaction between voter attention and lobbying and how this influences spending. We conclude the paper with a brief discussion of the implications of our analysis.

An online appendix provides additional important details about the main analysis. This includes a series of robustness checks about measurement and estimation. In terms of measurement, we use a different measure of lobbying activity and two alternative measures of government attention. In terms of estimation, we use a likelihood-based estimator that is somewhat less efficient than the random effects estimator but potentially less subject to bias when T is small. These robustness checks (and others) are highlighted at the relevant points in the analysis.

Dynamic Representation

Studies of democratic representation distinguish between procedural and substantive representation (Powell 2004). Procedural representation refers to correspondence in electoral support: between votes cast for political parties and those parties' preponderance in the legislature. Substantive representation refers to correspondence in policy priorities: between those of the public and those of their elected representatives. Early scholars of substantive representation, like Miller and Stokes (1963), focused on ideology to systematically map whether elected officials shared the same outlook and preferences as their constituents. In time, the focus on dyadic representation/ideological congruence shifted to policy responsiveness[2]: whether or not public policy responds to changes in public preferences and issue salience.

In an influential article, Stimson, MacKuen, and Erikson (1995) suggest that substantive representation may be "dynamic"—that is, governments may act in alignment with what citizens expect of them and are sensitive to changes in public opinion. Dynamic representation occurs through one of two mechanisms: *rational anticipation* and *electoral turnover*. In rational anticipation, an incumbent legislator faces intense pressure to adjust policy in response to changes in public sentiment. This is because incumbents are (boundedly) rational actors who believe that unresponsive elected officials face an increased risk of electoral defeat. To mitigate this risk, they seek information about public sentiment and act

on this information to maximize their chances of reelection. In electoral turnover, officials either fail to recognize shifts in sentiment within a necessary time frame or, for whatever reason, are unable to change policy. When an unresponsive government loses an election, it is replaced by a party with policy goals more closely aligned with those of the electorate and which faces strong incentives to implement more responsive policies and consolidate electoral gains.

In empirical work, "responsiveness" may describe a change in public policy or a change in public opinion. For example, Stimson, MacKuen, and Erikson (1995, 543, 556) write about dynamic representation through *policy* responsiveness and *government* responsiveness—that is, when a change in public attitudes precipitates a change in government activity. Hobolt and Klemmensen (2008, 312) describe *government* responsiveness as "the extent to which government priorities reflect the policy priorities of majority of the electorate." Pickup and Hobolt (2015) use this term in much the same way. Jennings and John (2009) consider *macro*-responsiveness and *agenda-opinion* responsiveness in a similar vein. Yet for others, responsiveness refers to changes in public opinion. For example, Soroka and Wlezien (2010, 88–106), *public* responsiveness refers to the change in public preferences given a change in public policy. They distinguish this from "policy representation," which is related to what others might call policy or government responsiveness. In this paper, we follow Stimson, MacKuen, and Erikson (1995). We use the terms "dynamic representation" and "policy responsiveness" to refer to the willingness of government to adjust its policy priorities in response to the changing priorities of the public.

Much of the literature on dynamic representation focuses on the institutional factors that favor responsiveness. For example, Soroka and Wlezien (2010) argue that unitary systems with separate executive and legislative branches are more responsive to changes in public opinion than federal, parliamentary systems. Similarly, Jennings and John (2009), Hakhverdian (2010), Bonafont and Palau (2011), and others (e.g., Pickup and Hobolt 2015) focus on the electoral and political conditions that promote responsiveness, such as variations in electoral rules and majority/minority government status. But institutions are not the only influence on responsiveness. Bevan and Jennings (2014, 39–41) also point out that the "scarcity of attention" among policy makers shapes their response to changes in public opinion. Political leaders can only process so much information at once. Governing institutions help them prioritize issues that require immediate attention (Baumgartner and Jones 2015; Jones and Baumgartner 2005); however, one might reasonably ask whether other, noninstitutional factors might play a similar role in signaling shifts in public opinion.

Interest Groups and Responsiveness

We argue that interest group lobbying is a key mechanism of policy responsiveness because it moderates the effect of other informational resources, particularly opinion polling. At the heart of dynamic representation is strategic thinking: each legislator is assumed to balance personal policy preferences (an "ideal point") with the perceived preferences of the public (an "expediency point") (Stimson, MacKuen, and Erikson 1995, 544). The model is dynamically responsive because it recognizes that ideal points are relatively stable but expediency points are not—that is, that public opinion moves over time. Political actors are never certain "where public opinion is going" and so rely on colleagues, journalists, academics, pundits, and lobbyists to debate the trends and provide some consensus (Stimson, MacKuen, and Erikson 1995, 545).

Lobby groups help elected officials anticipate public opinion by offering relevant information about the potential consequences of government decisions—a point also made by Stimson, MacKuen, and Erikson (1995, 562, note 6; see also Herbst 1998, 52–62, and Ainsworth and Sened 1993). Bouwen (2004, 339–40) draws on exchange and resource dependence theories to describe the relationship between legislators and lobbyists as one of interdependence: legislators communicate with lobbyists in exchange for "access goods" like expert knowledge and information. Hall and Deardorff (2006, 71–74) characterize the private and public information that comes from lobbying groups as a "legislative subsidy" that usually takes the form of constituency opinion, policy expertise, or legislative intelligence. Legislators accrue benefit from private information provided by lobbying groups—for example, a specially commissioned report on the closure of a military base or private polling about veterans in a rural constituency—because it mitigates information scarcity and is otherwise costly to generate (Austen-Smith 1993; Baumgartner et al. 2009; Hansen 1991). Legislators accrue benefit from public information provided by lobbying groups—for example, the repackaging of publicly available polling data into a politically useful format, such as speaking points during a budget review or committee meeting—because it mitigates information overload and is otherwise costly to synthesize.

To be sure, the provision of public/private information does not necessarily lead to influence (e.g., Ainsworth 1993; Bernhagen 2012; Bouwen 2004). But there are plausible reasons to think that such information can expand interest groups' influence via their intermediaries in the legislature. In a recent article, Schnakenberg (2017) builds on the work of Hall and Deardorff (2006), Ainsworth (1993, 1997), Austen-Smith and Wright (1994), and others to formally show that informational

lobbying can help "friendly" legislators persuade reluctant colleagues. As a legislative subsidy, interest group lobbying helps legislators conserve resources, advocate for a given cause, and provide better representation—at least for the best organized interests.

Researchers may differentiate among interest groups by examining the nature of their interests and the extent of their membership (Baroni et al. 2014). A popular approach is that of Stewart (1958), who distinguishes *cause* from *sectional* groups (e.g., Binderkrantz 2005; Klüver 2012). Cause groups represent broad segments of society and advocate for public goods—policies that are likely to diffuse benefits beyond the core membership. For example, cause groups may advocate for increased public health care spending, pollution reduction, or greater attention to social ills like poverty. These issues are often in the public eye and, from time to time, preoccupy voters' attention. Sudden changes in issue salience are an opportunity for under-resourced groups to grab the attention of decision makers (Kingdon 1984, 1989). As a result, legislators may be more responsive to shifts in public opinion when they are accompanied by significant cause group pressure.

By contrast, sectional groups advocate for issues with far fewer beneficiaries, such as industrial/agricultural subsidies or preferential access to government contracts. These issues are typically of little concern to most voters. It is therefore possible that increased sectional group pressure may shift government spending away from those issues that preoccupy voters and toward those that preoccupy industry. Consequently, legislators may be less responsive to shifts in public opinion when they are accompanied by sectional group pressure.[3] Sectional groups represent specific segments of society and advocate for private goods—policies that are likely to restrict benefits to active members. Sectional groups tend to outnumber cause groups, and their relative distribution reflects the fact that not all interests in society are equally able to overcome the collective action problem, according to which the diffuse benefits of group action discourage mass political participation (Olson 1965).

The cause/sectional distinction has considerable overlap with the advocacy group versus business distinction usually used in the American politics literature. One of the important takeaways of this literature is that resources matter a lot. Much of this literature suggests sectional groups (also called "business groups") are more likely than cause groups (also called "public interest groups") to use information to influence policy. Inside government, resources permit groups to hire professional lobbyists, gather and prepare information, and provide that information to decision makers (Andrews and Edwards 2004; Baumgartner and Leech 1998, 163–64; Walker 1991). Outside government, resources help groups overcome collective action problems and mobilize interested citizens. For example, Gais and Walker (1991) distinguish between "insider" and "outsider" strategies for interest group influence. Whereas insider strategies rely on lobbying, outsider strategies rely on grassroots mobilizing.

Cause groups possess fewer resources than sectional groups and are less likely to adopt "insider" strategies. However, for those cause groups that are able to participate, inside lobbying can yield real policy influence. Cause groups advocate for issues with many beneficiaries (e.g., health care, the environment), and so their priority issues are more likely to resonate with the public than the priority issues of sectional groups (e.g., agriculture, telecommunications). For example, Andrews (2001) looks at civil rights groups in the United States to argue direct communication with government officials resulted in increased government attention to poverty. Similarly, Baumgartner and Leech (1998) show nonprofit groups enjoy less access to government than business groups, but that such access can influence policy change, particularly in the early stages of the policy process.

From a sociological perspective, policy makers may see cause groups—even those that lack resources—as representatives of public concern. Politicians want to represent public opinion but often lack "ground truth" about what voters care about. For example, Herbst (1998, 58) interviews state legislators and their staff in Illinois to show political actors often distrust polling data and rely on information from interest groups. Over time, legislators and their staff may identify such groups as "not simply as indicators of public opinion, but as synonymous with the notion of public opinion." In this way, cause groups help "construct" public opinion for decision makers.

From a utility maximization perspective, it is not necessarily irrational for reelection-seeking legislators to communicate with cause groups that possess relatively fewer resources. When interests align, it is to the legislator's benefit to listen to and receive whatever help a group can offer—even when it is meager. As Hall and Deardorff (2006, 76) argue, "legislators listen to those whom they can trust implicitly because their interests agree perfectly." In the limit, legislators may even press allied interest groups for information. Consider this colorful anecdote from Bauer, Pool, and Dexter (1963, 440):

> one congressman, when asked what he had heard from the lobby groups on his side and whether they had pushed him, said: "Hell no, it's just the other way around; it's me calling them up and trying to shaft them to get off their fat rears and get out and do something."

In this way—and despite their modest resources—cause groups may exert influence over the policy agenda.

Hypotheses, Case Selection, and Data

Hypotheses

To test the potential for different types of interest groups to influence the link between legislators and voters, we derive two hypotheses:

> **Hypothesis 1 (H1):** The larger the *cause* group activity in a policy area, the *stronger* the government responsiveness to public opinion in that policy area.
> **Hypothesis 2 (H2):** The larger the *sectional* group activity in a policy area, the *weaker* the government responsiveness to public opinion in that policy area.

Case Selection

In terms of case selection, we believe Canada is a valuable case study for theoretical and methodological reasons. First, a wealth of empirical evidence suggests that the federal government responds to changes in voter attention. Soroka and Wlezien (2004) look at spending responsiveness from the early 1980s until the mid-2000s, while Pickup and Hobolt (2015) examine data on legislative responsiveness from as far back as 1965. Second, although the third-place New Democratic Party was historically affiliated with organized labor, neither major governing party retains formal ties with interest groups.[4] This helps make Canada a useful comparison to the United States. Third, Canada's lobby registry was created in 1989, making it one of the oldest in the world. This provides us with several years of data. On this basis, we believe Canada constitutes an appropriate case study to test our theoretical claims.

Data

The data focus on public expenditure, public opinion, and interest group lobbying for fifteen policy topics between 1990 and 2009. The fifteen policy topics are taken from the Policy/Comparative Agendas Projects: economy, health care, agriculture, employment and immigration, education, environment, energy, transportation, law and justice, social welfare, community development and housing, defense, foreign trade, international affairs, and arts/culture.[5] In particular, we have annual observations on the Government of Canada's total outlays. We measure real spending on each policy area per year (all figures in 2015 USD). We also note that there is substantial variation in year-to-year changes in government expenditures. The smallest change in expenditures is $0.3 million dollars (for media and culture). The largest changes are observed for the biggest spending category: social welfare, which shows a reduction of $13,633 million in 1995 and an increase of $14,975 million in 1992.[6]

Also for each policy topic, Environics's *Focus Canada* series regularly conducted surveys that asked respondents the following open-ended question: "What do you think is the most important problem facing Canada today?" This is a valuable data source because there is evidence senior policy makers actually used it. Rounce (2006, 148–51) observes that by the mid-2000s, more than a dozen federal departments maintained subscriptions to the *Focus Canada* series at a total cost of approximately a quarter-million dollars. Following the Policy/Comparative Agendas Projects, we group responses by policy issue. We then use the percentage of respondents that indicated a policy issue as the most important problem as a measure for the public salience of an issue. Annual data are imputed, based on the Environics *Focus Canada* quarterly series (see Online Appendix 1.1 for more information).

Finally, we measure the relative proportion of interest groups per policy area that registered with the federal government of Canada in a given year.[7] We converted the lobbyist registry into a longitudinal data set of all interest groups that engaged in lobbying communication between 1990 and 2009. This data set includes 8,760 interest group registrations, with one record per year for each interest group.

To distinguish cause from sectional groups, we established the following criteria. Groups in which the benefits of lobbying were excludable to nonmembers were coded "0" for sectional. Groups in which the benefits of lobbying were available to nonmembers were coded "1" for cause. For groups in which the excludability of benefits was unclear, we examined the barriers to membership. Groups in which barriers to membership are high (low) were coded sectional (cause). An example of a sectional group is Turkey Farmers of Ontario, which registered to lobby the federal government in 2008–2009. The nonprofit association represents 190 privately owned turkey farms in Ontario and sets the relevant quota allocations for turkey products. In 2008, the association registered to lobby a number of government offices, including the Prime Minister's Office, to discuss an ongoing World Trade Organization policy review on subsidies to the agricultural sector. Turkey Farmers of Ontario is coded sectional because the benefits of its lobbying efforts were excludable to nonmembers and there are high barriers to membership. An example of a cause group is the Winnipeg Humane Society for the Prevention of Cruelty to Animals, which registered to lobby the federal government in 2005–2008. The nonprofit society runs an animal shelter in Winnipeg that helps stray and abandoned animals and conducts investigations on behalf of Manitoba's Office of the Chief Veterinarian.

The Society has over twenty-five thousand donors and supporters across Manitoba. In 2005, the Society lobbied Members of Parliament to discuss Bills S-213 and C-373, acts to amend the criminal code on cruelty to animals. The Winnipeg Humane Society for the Prevention of Cruelty to Animals is coded cause because the benefits of its lobbying efforts were available to nonmembers and there are low barriers to membership (essentially none). The resulting data set includes 1,165 cause group registrations (13.29% of the total) and 7,595 sectional group registrations (86.7%).

We also coded groups by policy area. Human coders used information reported in the lobbying registry and from interest group websites and publications to classify each interest group into one of the major topic categories of the Policy Agendas Codebook. For more information, see Online Appendices 1.1 and 1.5, in which we discuss how we arrived at the final number of issue areas in our analysis and evaluate the activities of five interest groups in light of their lobbying registry information.[8] The Topic Codebook was developed in the framework of the U.S. Policy Agendas Project, which analyzes the composition of the policy agenda in the United States by manually coding policy documents into policy areas (Baumgartner, Green-Pedersen, and Jones 2006). The Topic Codebook classifies policy documents into nineteen major issue areas and 225 subissues. For example, Turkey Farmers of Ontario was coded as an "Agriculture" group because its website, publications, and registration information mention farming, agricultural marketing and promotion, and animal welfare in the context of agriculture. In contrast, the Winnipeg Humane Society for the Prevention of Cruelty to Animals was coded as an "Environment" group because its website, publications, and registration information emphasize the humane treatment of animals outside the context of agriculture and the protection of domestic animals and species. All registrations were double coded and reliability checks indicate a high degree of correspondence between the interest group classifications by the two coders.[9]

As an indicator of interest group pressure in a particular domain, we use the amount of cause/sectional group lobbying in that issue area as a proportion of all cause/sectional group lobbying.[10] For each of the fifteen policy areas, this is computed as the number of cause/sectional groups lobbying in the area that year ($\#cg_{i,t}$ and $\#sg_{i,t}$) divided by the total number of cause/sectional groups lobbying across all issue areas in that year ($\sum_{i=1}^{15}\#cg_{i,t}$ and $\sum_{i=1}^{15}\#sg_{i,t}$):

$$CG_{i,t} = \frac{\#cg_{i,t}}{\sum_{i=1}^{15}\#cg_{i,t}} \text{ and } SG_{i,t} = \frac{\#sg_{i,t}}{\sum_{i=1}^{15}\#sg_{i,t}}.$$

These data have several advantages. First, they facilitate a longitudinal panel study. This allows us to estimate short- and long-run dynamics as well as compare the relationships between our variables within policy topics and across time periods. Second, the data align with previous approaches in the literature. Aggregated public expenditure is an important indicator for government responsiveness (see Jacoby and Schneider 2009; Wlezien 1995, 1996; Wlezien and Soroka 2012). Similarly, the "most important problem" question is a standard tool for measuring the relative importance of issues to voters (Hobolt and Klemmensen 2008; Petrocik 1996; Pickup and Hobolt 2015). Finally, lobbying registries are an important indicator of interest group pressure (see Lowery and Gray 1994, 1995). For examples of similar methodology, see Gray et al. (2004), Messer, Berkhout, and Lowery (2011), and Klüver (2015).

Third, in terms of dollars spent, the fifteen policy topics comprise the vast majority of federal spending during the nineteen years under study—totaling $5.07 trillion. Major policy areas, such as the economy, health, the environment, and social welfare are all included. As we discuss in the conclusion, certain dimensions of policy making are not captured with our aggregated measures of public expenditure. Responding to the demands of citizens in some policy areas may not require increases in public spending. Voter demands in predominantly regulatory policy areas, such as the environment, may not require more spending but legislative or bureaucratic changes instead. Nonetheless, we believe public expenditure is a useful and substantively meaningful dependent variable. Governments have a limited amount of financial resources at their disposal and therefore need to carefully decide how to allocate the limited funds to different policy areas. Assuming that reelection-seeking governments aim to please their voters, it is reasonable to expect that governments invest in policy areas that are important to their electorate. As a robustness check, we test our empirical model on another measure of policy attention: legislative attention, measured by the number of bills that successfully became law for each policy area in a given year between 1991 and 2009. See Online Appendix 3.1, in which the results are comparable.

Before proceeding to our empirical analysis, we briefly describe summary statistics for each variable. See Online Appendix 1.3 for plots. See also 1.4 for a list of the thirty most prominent cause and sectional groups in our data set.

We begin with the public opinion variable. The average absolute change in voter attention across all years is 1.15 percentage points, with standard deviation (*SD*) 3.24. Policy areas with the greatest average absolute swings in voter attention are Defense ($M = 1.15$, $SD = 1.66$), Foreign Trade ($M = 1.42$, $SD = 5.04$), Health ($M = 4.14$, $SD = 4.45$), and the Economy ($M = 6.93$, $SD = 7.86$). High variance in Defence makes sense given voter attention sharply increases

after 9/11, then stabilizes in the years after. Foreign Trade is not normally top of mind for voters, but it was the most important national issue during the 1988 election. Voter attention to Health increases incrementally during the 1990s, eventually becoming the most important issue in the early 2000s. Voter attention to the Economy exhibits the opposite trend: it spikes in 1989–1990, corresponding to rising inflation, taxes, and deficits. Voter attention to this area remains high, though it declines thereafter.

Next, we turn to the interest group variables. The average level of area-specific cause group activity (as a proportion of all cause group activity) across all years is 0.05, with *SD* 0.09. Areas with the greatest proportion of cause groups include Health ($M = 0.26$, $SD = 0.10$), the Environment ($M = 0.16$, $SD = 0.07$), Social Welfare ($M = 0.12$, $SD = 0.08$), and International Affairs ($M = 0.09$, $SD = 0.06$). This distribution reflects similar findings from the United States (Baumgartner and Leech 1998, 107–10) and Europe (Binderkrantz 2012): cause groups are especially active in areas with diffuse policy beneficiaries, such as Social Welfare and the Environment. The average level of sectional group activity across all years is 0.04 ($SD = 0.04$). Areas with the greatest proportion of sectional groups include the Economy ($M = 0.12$, $SD = 0.04$), Agriculture ($M = 0.10$, $SD = 0.03$), Transport ($M = 0.08$, $SD = 0.02$), and Health ($M = 0.08$, $SD = 0.03$). Here again, the results align with findings from the United States (e.g., Berry 1977): Sectional groups are most active in areas with concentrated policy beneficiaries, such as Agriculture.

Finally, we move to the spending variable. The average absolute change in spending across all years is $945.53 million, with *SD* $1,817.92 million. The largest variation is in Social Welfare ($M = 5{,}291.42$, $SD = 4{,}136.08$). Other policy areas with large swings in spending include the Economy ($M = 2{,}414.94$, $SD = 1{,}696.23$), Health ($M = 1{,}722.28$, $SD = 1{,}621.53$), and Law, Crime, and Family ($M = 322.59$, $SD = 235.95$). As we note above, volatility in Social Welfare and Health is largely due to changes in federal-provincial transfers. For this reason, we supplement our main analysis with an alternative, consolidated measure of spending from Soroka and Wlezien (2004; see Online Appendix 3.1, in which the results are comparable).

Empirical Analysis

To examine the effects of interest group pressure on the responsiveness of government attention to voter attention, we estimate a panel Autoregressive Distributed Lag (ADL) (1,1) model with controls for trending. We first describe the empirical model then present the results.

We include in this ADL(1,1) model the change in the relative number of Canadians indicating issue area i as the "most important problem" at time t ($\Delta\text{MIP}_{i,t}$) and its lag ($\Delta\text{MIP}_{i,t-1}$) to capture the effects of voter attention on government attention. We include the relative amount of interest group lobbying in an issue area i at time t and its lag to capture the effects of cause group ($\text{CG}_{i,t}$) and sectional group ($\text{SG}_{i,t}$) activity. We also include interactions between changes in voter attention and interest group pressure. This is to capture the conditioning effect of interest group pressure on the responsiveness of governments to changes in voters' issue priorities.[11] Government policy attention is measured using changes in expenditures in issue area i at time t. Our data model is represented by the following equation:

$$\begin{aligned}\Delta\text{Expenditures}_{i,t} = {} & \delta_0 + \rho_1 \Delta\text{Expenditures}_{i,t-1} \\ & + \kappa_{1a}\Delta\text{MIP}_{i,t} + \kappa_{2a}\Delta\text{MIP}_{i,t-1} \\ & + \kappa_{1b}\text{CG}_{i,t} + \kappa_{2b}\text{CG}_{i,t-1} \\ & + \kappa_{1c}\left(\Delta\text{MIP}_{i,t} \times \text{CG}_{i,t}\right) \\ & + \kappa_{2c}\left(\Delta\text{MIP}_{i,t-1} \times \text{CG}_{i,t-1}\right) \\ & + \kappa_{1d}\text{SG}_{i,t} + \kappa_{2d}\text{SG}_{i,t-1} \\ & + \kappa_{1e}\left(\Delta\text{MIP}_{i,t} \times \text{SG}_{i,t}\right) \\ & + \kappa_{2e}\left(\Delta\text{MIP}_{i,t-1} \times \text{SG}_{i,t-1}\right) \\ & + \kappa\tau_{i,t} + \mu_i + \varepsilon_{i,t}.\end{aligned}$$

In addition to a lagged dependent variable to account for the autoregressive nature of the data, the model includes random effects μ_i. See Online Appendix 2.1 for results of a Hausman specification test comparing the random effects to the fixed effects model. The Hausman test indicates no systematic differences in the results from a fixed effects estimate.[12] The random effects control for any systematic differences in the changes in expenditures between different issue areas. A dummy variable for each year ($\kappa\tau_{i,t}$) is also included. These time-specific effects control for any overall changes in expenditures from any one year to the next. The year dummies also control for trending, if there is any. Controlling for individual effects and time dummies is designed to reduce the possibility of a spurious result due to any systematic differences between issue areas or changes over time that affect both changes in government expenditures and changes in policy attention or levels of lobbying.[13]

Turning our attention to the results in Table 1, the coefficient on each of the contemporaneous (i.e., t) variables is the estimated short-run effect. The interaction of voter attention and cause group lobbying ($\Delta\text{MIP}_{i,t} \times \text{CG}_{i,t}$) is positive and statistically significant (t statistic = 4.12; p value = .000).[14] For a two standard deviation increase in the level of cause group pressure (i.e., from 0 to 0.17), the short-run response of expenditures to a percentage

Table 1. The Impact of Voter Attention on Government Spending—Dependent Variable: Changes in Federal Government Spending.

	$\hat{\beta}$ (robust *SE*)
Δ in federal spending$_{t-1}$	0.352*
	(0.082)
Δ in voter attention	−311.692
	(180.424)
Sectional group pressure	−704.942
	(5,646.835)
Cause group pressure	−507.270
	(3,586.372)
Δ in Voter Attention × Sectional Group Pressure	2,156.005
	(1,181.358)
Δ in Voter Attention × Cause Group Pressure	1,980.473*
	(481.108)
Δ in voter attention$_{t-1}$	97.416
	(71.921)
Sectional group pressure$_{t-1}$	−2,836.202
	(4,253.121)
Cause group pressure$_{t-1}$	1,596.033
	(2,006.197)
Δ in Voter Attention × Sectional Group Pressure$_{t-1}$	−1,124.616
	(655.635)
Δ in Voter Attention × Cause Group Pressure$_{t-1}$	−818.972*
	(328.038)
Observations	285
R^2	.18

Cell entries represent unstandardized *b* coefficients with robust standard errors in parentheses. Model includes dummy variables for each year.
*$p < .05$.

point increase in voter attention is predicted to increase by $336.68 million.[15] This means the short-run response of government expenditures to voter attention increases with higher levels of cause group pressure.

In line with our first hypothesis (H1), the short-run response of government expenditures to voter attention is positively conditioned by cause group pressure. Meanwhile, the interaction of voter attention and sectional group lobbying ($\Delta MIP_{i,t} \times SG_{i,t}$) is not statistically significant. In other words, there is, so far, no evidence for our second hypothesis (H2) that the short-run response of government expenditures to voter attention is negatively conditioned by sectional group pressure.

This is a dynamic model. In a dynamic system, the future is a function of today and so something that affects government spending today will produce a series of (declining) knock-on effects into the future. The long-run effect is the sum total of all of these knock-on effects. The coefficients on each of the contemporaneous and lagged (i.e., $t-1$) independent variables may be combined with the coefficient on the lagged dependent variable to

Table 2. The impact of voter attention on government spending. Dependent variable: Changes in Federal Government spending

	Long-Run Effects (SE)
Δ in Voter Attention × Cause Group Pressure	1792.524*
	(686.829)
Δ in Voter Attention × Sectional Group Pressure	1591.726
	(1366.558)

*$p < 0.05$

estimate the long-run effect on government spending using the equation $(\hat{\beta}_1 + \hat{\beta}_2)/(1-\alpha_1)$, where $\hat{\beta}_1$ and $\hat{\beta}_2$ represent the coefficients on contemporaneous and lagged values of a given independent variable and α_1 represents the coefficient on the lagged value of the dependent variable (Pickup 2014). The long-run effect estimates (Table 2) may be tested for statistical significance using a non-linear Wald test with a chi-squared distribution. Looking at the results, only cause group lobbying has a long-run effect on the relationship between voter attention and government expenditures. The interaction term for voter attention and cause group pressure is positive and statistically significant (p value of 0.009). For a two standard deviation increase in the level of cause group pressure, the long-run response of expenditures to a percentage point increase in voter attention is predicted to increase by $304.73 million. This implies that the marginal long-run effect of voter attention on expenditures increases with greater cause group lobbying.

In line with our first hypothesis (H1), the long-run response of government expenditures to voter attention is positively conditioned by cause group pressure. There does not appear to be a statistically significant long-run effect for the interaction between voter attention and sectional group lobbying. There is thus no evidence of our second hypothesis (H2), that the long-run response of government expenditures to voter attention is negatively conditioned by sectional group pressure.

We further explore the effects of lobbying on government responsiveness by plotting the short- and long-run marginal effects of changes in voter attention on government expenditures at different levels of lobbying, along with 95 percent confidence intervals, in Figure 1a and 1b. In these plots, the level of sectional group pressure is set at its mean value (0.046).

The plots in Figure 1a and 1b show that the short- and long-run marginal effects at the lowest value of cause group lobbying are not significantly different from zero. For the short-run effects at the lowest level of cause group pressure, the 95 percent confidence interval encompasses zero (–475.16, 37.69) with an average marginal effect of −218.73 (far left on axis). At the highest level, the marginal effect is 632.87 (far right on axis). The difference

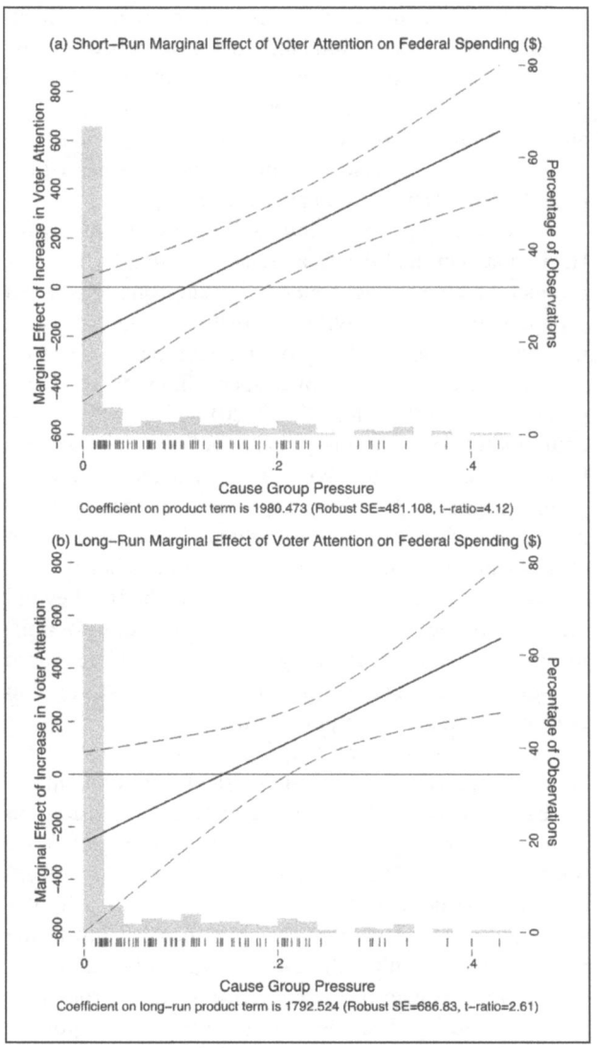

Figure 1. Marginal effects of voter attention on federal spending, by interest group pressure, ADL(1,1).
ADL = autoregressive distributed lag.

between these two short-run effects is 851.60. For the long-run effects at the lowest level of cause group pressure, the 95 percent confidence interval encompasses zero (–610.82, 86.72) with an average marginal effect of −262.05 (far left on axis). At the highest level, the marginal effect is 508.74 (far right on axis). The difference between these two long-run effects is 770.79. These results indicate that voter attention has a strong effect in the expected direction when cause group pressure is at its highest.

The fact that the long-run marginal effects are smaller than the short-run suggests that some part of the effect is reversed over time. Substantively, this means that governments may initially respond to an increase in voter attention with a big change in expenditures but in subsequent years reduce spending so that the overall increase is smaller than the first year increase might suggest. Figure 1a also shows that the point estimate of the short-run marginal effect of voter attention is positive when cause group pressure is above approximately 0.11 and is positive and statistically significant once the level of interest group pressure is about one-and-one-half standard deviations above average, or 0.19. The long-run effects in Figure 1b are similar to the short-run, with a point estimate that is positive when cause group pressure is above 0.14 and a positive and statistically significant effect above 0.21.

As the overlaid histogram shows, cause group pressure is strongly positively skewed, with more than half of all cases at zero. When one considers marginal effects within the full sample, the short- and long-run effects are positive in 21 and 10 percent of cases, with positive and statistically significant effects in 15 and 7 percent of cases, respectively. Cause group pressure is heavily concentrated in highly salient and financially significant policy areas. In our sample, the policy areas with the highest levels of cause group pressure are health care and environment, as well as social welfare, law and justice, and international affairs. Together, these policy areas comprise $3.25 trillion (64.2% of total spending in the sample). In other areas, cause group pressure may be zero in some years. When one considers the more relevant sample of cases where cause group pressure exists (i.e., is above zero), the short-run effects are positive in 47 percent of cases and positive and statistically significant in 23 percent of cases. The long-run effects are positive in 34 percent of cases and positive and statistically significant in 15 percent of cases.

Given the nontrivial range of cases for which there appears to be an effect, the large variation in the substantive magnitude of the effect of voter attention across different values of cause group pressure, along with the statistical significance of the short- and long-run interaction term coefficients, we conclude there is strong empirical evidence in support of H1. We also examined the short- and long-run marginal effects for sectional group pressure (not shown). The short- and long-run point estimates are not statistically significant at any value of sectional group pressure, at the 0.05 level. Therefore, we do not have any evidence of a substantive effect for sectional group pressure, either in the short- or long-run.

Finally, as a robustness check, we investigate the possibility that contemporaneous and/or past changes in interest group pressure might predict changes in voter attention (and vice versa). In Online Appendix 3.3, we estimate a model in which changes in voter attention are a function of contemporaneous and lagged levels of sectional and cause group lobbying. The results suggest that changes in voter attention are statistically uncorrelated

with levels of interest group pressure (see Online Appendix 3.3, Table 7). We also test whether changes in voter attention predict levels of interest group pressure. Again, the results provide no evidence of statistical correlation (see Online Appendix 3.3, Tables 8 and 9).

Conclusion

In this study, we examine whether interest group lobbying strengthens or weakens government responsiveness to voter issue attention. Using a new data set of lobbyist registrations in Canada, we test an empirical model of policy responsiveness that examines the effect of the interaction between voter attention and interest group lobbying on government spending—over time, across policy areas, and among cause and sectional groups. We find that governments are *more* responsive to voter concerns in policy areas with a high degree of cause group pressure. In real terms, this means that in policy areas with significant cause group activity—such as health, environment, and social welfare—responsiveness depends on the interaction between voter attention and interest group pressure. In these areas, government spending is more responsive to shifts in public opinion when they are accompanied by interest group pressure. However, the evidence suggests a differential effect depending on group type. Whereas cause groups appear to positively moderate the relationship between public opinion and spending, there is little to no evidence that sectional groups have any effect on policy responsiveness.

Although we find no evidence of a moderating relationship between sectional group pressure and policy responsiveness, this could be due to a small T or possibly to the use of an aggregated measure of policy spending. Our measure enables us to expand the analysis beyond specific policies to focus on general policy attention. It also facilitates comparison with public opinion and allows us to examine a range of policy areas over time and across different interest group types. However, these advantages come with a trade off. The measure makes no distinction between general policy attention and attention through specific programs or policy instruments. There is evidence that business and sectional groups may bias individual pieces of government legislation or specific regulations toward narrow societal interests (Dür, Bernhagen, and Marshall 2015; Giger and Klüver 2016; Yackee and Yackee 2006). In other words, different dependent variables may yield different conclusions. For example, certain dimensions of policy making are not captured with our aggregated measure of public expenditure. Voter demands in predominantly regulatory policy areas, such as the environment, may not require more spending but legislative or bureaucratic changes instead. As a robustness check, we estimate a panel ADL(1,1) model using a different dependent variable: legislative attention, measured by the number of bills that successfully became law for each policy area in a given year between 1992 and 2009. The results (Online Appendix 3.1) do not contradict, and even support, our conclusion that governments are more responsive to voter concerns in policy areas with a high degree of cause group pressure.

An alternative explanation for the lack of support for H2 is that sectional group activity may simply be a by-product of an already beneficial status quo. Sectional groups that enjoy a privileged position in an issue area may focus lobbying activity on maintaining—not changing—the distribution of government attention. To paraphrase Baumgartner et al. (2009, 20): "if the wealthy are better mobilized and more prone to get what they want in [Ottawa], they should have gotten what they wanted in previous rounds of the policy process." In this case, the influence of sectional groups might not be visible through changes in spending or in legislation, but rather in their ability to resist changes to the policy agenda. It is beyond the scope of the current study to investigate this possibility, but our findings certainly indicate a need for more fine-grained analysis into the relationship between group type and government responsiveness.[16]

Are voters right to be skeptical about who their government represents? Our findings shed light on contemporary debates over the influence of organized groups on policy responsiveness (e.g., Gilens and Page 2014). Specifically, our results are consistent with recent research that demonstrates cause groups—which represent diffuse interests and offer open membership to the public—can strengthen the link between policy and public priorities. However, the influence of cause group lobbying on policy responsiveness carries an important caveat. As Schattschneider (1960, 35) famously observed: "the flaw in the pluralist heaven is that the heavenly chorus sings with a strong upper-class accent." As in the United States (Leech et al. 2005), Switzerland (Giger and Klüver 2016), and other contexts (e.g., the European Union, see Klüver 2013), sectional groups tend to outnumber cause groups in our sample—nearly seven to one. Nonetheless, our findings nuance Schattschneider's (1960) claim by suggesting some of the choir's most vocal members sing in harmony with the public.

By making use of panel data, our research design has distinct advantages over other potential strategies, such as a cross-sectional study of responsiveness and interest group lobbying at a single point in time. And by considering a broad range of issues, we avoid the potential drawbacks of an overly narrow focus on a few prominent policy issues. From a comparative perspective, our findings invite cross-country analysis of the relationship between political institutions, policy responsiveness, and interest groups. On one hand, Hobolt and Klemmensen

(2008) and Soroka and Wlezien (2010) show responsiveness is weaker in majoritarian parliaments, and so it is conceivable the moderating relationship we find is even stronger in presidential systems or consensus parliaments. On the other hand, different political institutions may change the very nature of government and interest group relations. Lijphart (2012, 16) relates the adversarial structure of majoritarian governments to the competitive and conflictual lobbying environment that often accompanies them ("a system of free-for-all pluralism"). He compares this to the "compromise and concertation" of corporatism in consensus parliaments. Ultimately, the external validity of our findings depends on extending the scope of analysis beyond Canada. The increasing availability of lobby register data worldwide invites such inquiry.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

Vincent Hopkins wishes to acknowledge the financial support of the Social Sciences and Humanities Research Council of Canada through its Joseph-Armand Bombardier Graduate Scholarship Program. Mark Pickup's work was supported by the Social Sciences and Humanities Research Council of Canada [Grant 430-2011-0404].

Notes

1. Exceptions include the impressive catalogue of over one thousand groups and seventy pieces of legislation by Dür, Bernhagen, and Marshall (2015) and the large data set of 118 Swiss referenda issues by Giger and Klüver (2016), among others.
2. Note that congruence is still an important field of study.
3. Given the literature on "outside lobbying" (Kollman 1998), we also investigate the possibility that contemporaneous and/or past changes in interest group pressure might predict changes in voter attention, and vice versa (see Online Appendix 3.3).
4. Ties are formal associations between parties and groups—for example, the participation of "affiliated" trade unions in the U.K. Labour Party's National Executive Committee. Such arrangements could systematically facilitate (or hinder) certain organizations' access to government. One may distinguish this type of formal relationship from the "extended party network" and "party coalition" that Koger, Masket, and Noel (2009) and Grossmann and Dominguez (2009) observe in the United States, and which likely exist in Canada as well. See also Almond (1958), as well as Duverger (1972), for an early discussion of party-group ties.
5. See Online Appendix 1.1 for additional information on measurement and Online Appendix 1.2 for information on policy topic codes.
6. The volatility observed in social welfare and health care is largely due to changes in federal-provincial transfers. See Online Appendix 3.1 for a robustness check that uses an alternative, consolidated measure of spending from Soroka and Wlezien (2004).
7. Although Canada's registry has been in operation since 1989, data on lobbying registrations are accessible online only since 1996. Fortunately, the 1990–1996 data were transcribed by an Ottawa-based periodical called Lobby Monitor. Issues of Lobby Monitor are available in hard copy in the Library and Archives of Canada. Using these publications, human coders transcribed registry entries to ensure comparability to the 1996–2009 data set.
8. Unfortunately, most groups do not provide a detailed list of lobbying issues for each lobbying registration. We therefore assign policy topics by group rather than by lobbying activity. This is consistent with previous practices in the literature. For example, Baumgartner, Gray, and Lowery (2009, 564, note 5) code groups by "interest content . . . using directories of organizations and associations and the Web pages of individual organizations." Similarly, Bevan et al. (2013) assign policy topics by each group's description in the Encyclopedia of Associations, rather than by each group's lobbying activities. We acknowledge that a lobby group may advance goals across more than one topic code. However, we do not expect the group itself to jump between codes.
9. The Cronbach's alpha for the major topic codes is .83. Discrepancies were subsequently resolved through a meeting of the coders and the authors.
10. See Online Appendices 1.1 and 3.1 for more information on measurement and for a robustness check that uses an alternative measure of interest group pressure.
11. Our theoretical model holds that responsiveness—the change in spending as a result of a change in voter attention—will occur at higher or lower levels of interest group pressure. For this reason, the government attention and voter attention variables are measured in differences, while the interest group variables are measured in levels. The model thus presents the *level* of interest group pressure as a moderating factor on policy responsiveness.
12. The introduction of a lagged dependent variable into a random effects model may lead to bias and inconsistency due to correlation between the lagged dependent variable and the random intercept (see Baltagi 2005, 135–36, and Rabe-Hesketh and Skrondal 2012, 273). Given a T of 19, we may expect a reduction in the magnitude of this bias. As a robustness check, we include the results from a likelihood-based estimator that resolves the problem of bias due to a small T (Lancaster 2002) in Online Appendix 3.1. This estimator is somewhat less efficient than the random effects estimator but less subject to bias. The results are approximately the same as the random effects model reported in the paper. When the results do deviate, we mention them in the text. See Online Appendix 2 for additional diagnostic tests of the random effects model.
13. See Online Appendix 2.2 for stationarity tests.
14. The 0.05 significance level is used for hypothesis testing throughout.

15. In all instances, we estimate the marginal effects of cause group pressure while assuming sectional group pressure is at its average.
16. We thank an anonymous reviewer for this helpful suggestion.

Supplemental Material

Replication data is available on the Harvard Dataverse: https://dataverse.harvard.edu/dataverse/groups_influence_responsiveness. Supplemental materials for this article are available with the manuscript on the Political Research Quarterly (PRQ) website.

ORCID iD

Heike Klüver https://orcid.org/0000-0003-4838-0754

References

Ainsworth, Scott H. 1993. "Regulating Lobbyists and Interest Group Influence." *The Journal of Politics* 55 (1): 41–56.

Ainsworth, Scott H. 1997. "The Role of Legislators in the Determination of Interest Group Influence." *Legislative Studies Quarterly* 22 (4): 517–33.

Ainsworth, Scott H., and Itai Sened. 1993. "The Role of Lobbyists: Entrepreneurs with Two Audiences." *American Journal of Political Science* 37 (3): 834–66.

Allen, Nicholas, and Sarah Birch. 2015. "Process Preferences and British Public Opinion: Citizens' Judgements about Government in an Era of anti-Politics." *Political Studies* 63 (2): 390–411.

Almond, Gabriel A. 1958. "A Comparative Study of Interest Groups and the Political Process." *American Political Science Review* 52 (1): 270–82.

Andrews, Kenneth T. 2001. "Social Movements and Policy Implementation: The Mississippi Civil Rights Movement and the War on Poverty, 1965 to 1971." *American Sociological Review* 66:71–95.

Andrews, Kenneth T., and Bob Edwards. 2004. "Advocacy Organizations in the U.S. Political Process." *Annual Review of Sociology* 30:479–506.

Atkinson, Michael M. 2013. "Policy, Politics and Political Science." *Canadian Journal of Political Science* 46 (4): 751–72.

Austen-Smith, David. 1993. "Information and Influence: Lobbying for Agendas and Votes." *American Journal of Political Science* 37 (3): 799–833.

Austen-Smith, David, and John R. Wright. 1994. "Counteractive Lobbying." *American Journal of Political Science* 38 (1): 25–44.

Baltagi, Badi H. 2005. *Econometric Analysis of Panel Data*. Chichester, UK: John Wiley.

Baroni, Laura, Brendan J. Carroll, Adam William Chalmers, Luz Maria Muñoz Marquez, and Anne Rasmussen. 2014. "Defining and Classifying Interest Groups." *Interest Groups & Advocacy* 3 (2): 141–59.

Bauer, Raymond Augustine, Ithiel de Sola Pool, and Lewis Anthony Dexter. 1963. *American Business and Public Policy: The Politics of Foreign Trade*. New York, NY: Atherton Press.

Baumgartner, Frank R., Jeffrey M. Berry, Marie Hojnacki, Beth L. Leech, and David C. Kimball. 2009. *Lobbying and Policy Change: Who Wins, Who Loses, and Why*. Chicago: The University of Chicago Press.

Baumgartner, Frank R., Virginia Gray, and David Lowery. 2009. "Federal Policy Activity and the Mobilization of State Lobbying Organizations." *Political Research Quarterly* 62 (3): 552–67.

Baumgartner, Frank R., Christoffer Green-Pedersen, and Bryan D. Jones. 2006. "Comparative Studies of Policy Agendas." *Journal of European Public Policy* 13 (7): 959–74.

Baumgartner, Frank R., and Bryan D. Jones. 2015. *The Politics of Information: Problem Definition and the Course of Public Policy in America*. Chicago: The University of Chicago Press.

Baumgartner, Frank R., and Beth L. Leech. 1998. *Basic Interests: The Importance of Groups in Politics and in Political Science*. Princeton: Princeton University Press.

Bernhagen, Patrick. 2012. "Who Gets What in British Politics—And How? An Analysis of Media Reports on Lobbying around Government Policies, 2001–7." *Political Studies* 60 (3): 557–77.

Berry, Jeffrey M. 1977. *Lobbying for the People: The Political Behavior of Public Interest Groups*. Princeton: Princeton University Press.

Bevan, Shaun, Frank R. Baumgartner, Erik W. Johnson, and John D. McCarthy. 2013. "Understanding Selection Bias, Time-Lags and Measurement Bias in Secondary Data Sources: Putting the Encyclopedia of Associations Database in Broader Context." *Social Science Research* 42 (6): 1750–64.

Bevan, Shaun, and Will Jennings. 2014. "Representation, Agendas and Institutions." *European Journal of Political Research* 53 (1): 37–56.

Binderkrantz, Anne Skorkjær. 2005. "Interest Group Strategies: Navigating between Privileged Access and Strategies of Pressure." *Political Studies* 53 (4): 694–715.

Binderkrantz, Anne Skorkjær. 2012. "Interest Groups in the Media: Bias and Diversity over Time." *European Journal of Political Research* 51 (1): 117–39.

Bonafont, Laura Chaqués, and Anna M. Palau. 2011. "Assessing the Responsiveness of Spanish Policymakers to the Priorities of Their Citizens." *West European Politics* 34 (4): 706–30.

Bouwen, Pieter. 2004. "Exchanging Access Goods for Access: A Comparative Study of Business Lobbying in the European Union Institutions." *European Journal of Political Research* 43 (3): 337–69.

Burstein, Paul. 2014. *American Public Opinion, Advocacy, and Policy in Congress: What the Public Wants and What It Gets*. Cambridge, UK: Cambridge University Press.

Canes-Wrone, Brandice. 2015. "From Mass Preferences to Policy." *Annual Review of Political Science* 18:147–65.

Dür, Andreas, Patrick Bernhagen, and David Marshall. 2015. "Interest Group Success in the European Union: When (and Why) Does Business Lose?" *Comparative Political Studies* 48 (8): 951–83.

Duverger, Maurice. 1972. *Party Politics and Pressure Groups: A Comparative Introduction*. New York, NY: Crowell.

Dyck, Joshua J., and Edward L. Lascher Jr. 2009. "Direct Democracy and Political Efficacy Reconsidered." *Political Behavior* 31 (3): 401–27.

Gais, Thomas L., and Jack L. Walker Jr. 1991. "Pathways to Influence in American Politics." In *Mobilizing Interest Groups in America: Patrons, Professions, and Social Movements,* edited by Jack L. Walker, Jr., 103–22. Ann Arbor: University of Michigan Press.

Giger, Nathalie, and Heike Klüver. 2016. "Voting against Your Constituents? How Lobbying Affects Representation." *American Journal of Political Science* 60 (1): 190–205.

Gilens, Martin, and Benjamin I. Page. 2014. "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens." *Perspectives on Politics* 12 (3): 564–81.

Gray, Virginia, David Lowery, Matthew Fellowes, and Andrea McAtee. 2004. "Public Opinion, Public Policy, and Organized Interests in the American States." *Political Research Quarterly* 57 (3): 411–20.

Grossmann, Matt, and Casey B. K. Dominguez. 2009. "Party Coalitions and Interest Group Networks." *American Politics Research* 37 (5): 767–800.

Hakhverdian, Armen. 2010. "Political Representation and Its Mechanisms: A Dynamic Left–right Approach for the United Kingdom, 1976–2006." *British Journal of Political Science* 40 (4): 835–56.

Hall, Richard L., and Alan V. Deardorff. 2006. "Lobbying as Legislative Subsidy." *American Political Science Review* 100 (1): 69–84.

Hansen, John Mark. 1991. *Gaining Access: Congress and the Farm Lobby, 1919-1981.* Chicago: The University of Chicago Press.

Herbst, Susan. 1998. *Reading Public Opinion: How Political Actors View the Democratic Process.* Cambridge, UK: Cambridge University Press.

Hibbing, John R., and Elizabeth Theiss-Morse. 2001. "Process Preferences and American Politics: What the People Want Government to Be." *American Political Science Review* 95 (1): 145–54.

Hibbing, John R., and Elizabeth Theiss-Morse. 2002. *Stealth Democracy: Americans' Beliefs about How Government Should Work.* Cambridge, UK: Cambridge University Press.

Hobolt, Sara Binzer, and Robert Klemmensen. 2008. "Government Responsiveness and Political Competition in Comparative Perspective." *Comparative Political Studies* 41 (3): 309–37.

Jacobs, Alan, and Scott Matthews. 2015. "Policy Attitudes in Institutional Context: Rules, Uncertainty, and the Mass Politics of Public Investment." *American Journal of Political Science* 61 (1): 194–207.

Jacoby, William G., and Saundra K. Schneider. 2009. "A New Measure of Policy Spending Priorities in the American States." *Political Analysis* 17 (1): 1–24.

Jennings, Will, and Peter John. 2009. "The Dynamics of Political Attention: Public Opinion and the Queen's Speech in the United Kingdom." *American Journal of Political Science* 53 (4): 838–54.

Jones, Bryan D., and Frank R. Baumgartner. 2005. *The Politics of Attention: How Government Prioritizes Problems.* Chicago: The University of Chicago Press.

Judis, John B. 2001. *The Paradox of American Democracy: Elites, Special Interests, and the Betrayal of the Public Trust.* New York, NY: Taylor & Francis.

Kingdon, John W. 1984. *Agendas, Alternatives, and Public Policies.* Vol. 45. Boston: Little, Brown.

Kingdon, John W. 1989. *Congressmen's Voting Decisions.* Ann Arbor: University of Michigan Press.

Klüver, Heike. 2012. "Biasing Politics? Interest Group Participation in EU Policy-Making." *West European Politics* 35 (5): 1114–33.

Klüver, Heike. 2013. *Lobbying in the European Union: Interest Groups, Lobbying Coalitions, and Policy Change.* Oxford, UK: Oxford University Press.

Klüver, Heike. 2015. "Interest Groups in the German Bundestag: Exploring the Issue Linkage between Citizens and Interest Groups." *German Politics* 24 (2): 137–53.

Koger, Gregory, Seth Masket, and Hans Noel. 2009. "Partisan Webs: Information Exchange and Party Networks." *British Journal of Political Science* 39 (3): 633–53.

Kollman, Ken. 1998. *Outside Lobbying: Public Opinion and Interest Group Strategies.* Princeton: Princeton University Press.

Lancaster, Tony. 2002. "Orthogonal Parameters and Panel Data." *The Review of Economic Studies* 69 (3): 647–66.

Leech, Beth L. 2004. "Lobbying and Influence." In *The Oxford Handbook of American Political Parties and Interest Groups*, edited by L. Sandy Maisel and Jeffrey M. Berry, 266–90. Cambridge, UK: Cambridge University Press.

Leech, Beth L., Frank R. Baumgartner, Timothy M. La Pira, and Nicholas A. Semanko. 2005. "Drawing Lobbyists to Washington: Government Activity and the Demand for Advocacy." *Political Research Quarterly* 58 (1): 19–30.

Lijphart, Arend. 2012. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries.* New Haven, CT: Yale University Press.

Lowery, David, and Virginia Gray. 1994. "Do Lobbying Regulations Influence Lobbying Registrations?" *Social Science Quarterly* 75 (2): 382–84.

Lowery, David, and Virginia Gray. 1995. "The Population Ecology of Gucci Gulch, or the Natural Regulation of Interest Group Numbers in the American States." *American Journal of Political Science* 39 (1): 1–29.

Lowi, Theodore J. 1969. *The End of Liberalism: Ideology, Policy, and the Crisis of Public Authority.* New York, NY: W.W. Norton.

Mahoney, Christine. 2008. *Brussels versus the Beltway: Advocacy in the United States and the European Union.* Washington, DC: Georgetown University Press.

Messer, Anne, Joost Berkhout, and David Lowery. 2011. "The Density of the EU Interest System: A Test of the ESA Model." *British Journal of Political Science* 41 (1): 161–90.

Miller, Wakken E., and Donald E. Stokes. 1963. "Constituency Influence in Congress." *American Political Science Review* 57 (1): 45–56.

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Cambridge, MA: Harvard University Press.

Olson, Mancur. 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven, CT: Yale University Press.

Petrocik, John R. 1996. "Issue Ownership in Presidential Elections, with a 1980 Case Study." *American Journal of Political Science* 40 (3): 825–50.

Pickup, Mark. 2014. *Introduction to Time Series Analysis*. Vol. 174. Thousand Oaks: SAGE.

Pickup, Mark, and Sara B. Hobolt. 2015. "The Conditionality of the Trade-off between Government Responsiveness and Effectiveness: The Impact of Minority Status and Polls in the Canadian House of Commons." *Electoral Studies* 40:517–30.

Powell, G. Bingham. 2004. "Political Representation in Comparative Politics." *Annual Review of Political Science* 7 (1): 273–96.

Presthus, Robert. 1973. *Elite Accommodation in Canadian Politics*. Cambridge, UK: Cambridge University Press.

Rabe-Hesketh, S., and A. Skrondal. 2012. *Multilevel and Longitudinal Modeling Using Stata: Volume I: Continuous Responses*. College Station, TX: Stata Press.

Rounce, Andrea. 2006. "How Ottawa Spends on Public Opinion Polling." In *How Ottawa Spends 2006-2007*, edited by Bruce Doern, 138–61. Montreal, QC: McGill-Queen's University Press.

Schattschneider, Elmer E. 1960. *The Semi-Sovereign People: A Realist's View of Democracy in America*. New York, NY: Holt, Rinehart, and Winston.

Schnakenberg, Keith E. 2017. "Informational Lobbying and Legislative Voting." *American Journal of Political Science* 61 (1): 129–45.

Scott, Andrew MacKay, and Margaret A. Hunt. 1966. *Congress and Lobbies: Image and Reality*. Chapel Hill: University of North Carolina Press.

Soroka, Stuart N., and Christopher Wlezien. 2004. "Opinion Representation and Policy Feedback: Canada in Comparative Perspective." *Canadian Journal of Political Science* 37 (3): 531–59.

Soroka, Stuart N., and Christopher Wlezien. 2010. *Degrees of Democracy: Politics, Public Opinion, and Policy*. Cambridge, UK: Cambridge University Press.

Stewart, John. 1958. *British Pressure Groups: Their Role in Relation to the House of Commons*. Oxford, UK: Clarendon Press.

Stimson, James A., Michael B. MacKuen, and Robert S. Erikson. 1995. "Dynamic Representation." *American Political Science Review* 89 (3): 543–65.

Walker, Jack L. Jr. 1991. "The Mobilization of Political Interests in America." In *Mobilizing Interest Groups in America: Patrons, Professions, and Social Movements*, edited by Jack L. Walker, Jr., 19–40. Ann Arbor: University of Michigan Press.

Webb, Paul. 2013. "Who Is Willing to Participate? Dissatisfied Democrats, Stealth Democrats and Populists in the United Kingdom." *European Journal of Political Research* 52 (6): 747–72.

Wlezien, Christopher. 1995. "The Public as Thermostat: Dynamics of Preferences for Spending." *American Journal of Political Science* 39 (4): 981–1000.

Wlezien, Christopher. 1996. "Dynamics of Representation: The Case of Us Spending on Defence." *British Journal of Political Science* 26 (1): 81–103.

Wlezien, Christopher, and Stuart N. Soroka. 2012. "Political Institutions and the Opinion–Policy Link." *West European Politics* 35 (6): 1407–32.

Yackee, Jason Webb, and Susan Webb Yackee. 2006. "A Bias towards Business? Assessing Interest Group Influence on the U.S. Bureaucracy." *The Journal of Politics* 68 (1): 128–39.

Young, Lisa, and Joanna Everitt. 2011. *Advocacy Groups*. Vancouver, BC: University of British Columbia Press.