Electoral Security as a Determinant of Legislator Activity, 1832–1918

A Big Data Approach to British Political Development*

Andrew Eggers† Arthur Spirling‡

June 19, 2013

Abstract

We consider the relationship between a Member of Parliament (MP)'s electoral environment and his strategic choice of legislative activities for the period between the First and Fourth Reform Acts in Britain. We argue that voters and party institutions put cross-cutting pressures on members during this time, and that legislators calibrated their behavior in accordance with the marginality of their seat. We gather a massive new dataset documenting MPs' basic biographical information, electoral records, roll call votes, and speeches. We then show in panel data analysis that the extent of MPs' speechmaking and voting (our key measures of legislative activity) varies with electoral security in ways that are consistent with our theoretical priors: safer members appear to cater to their party leadership interest, while more marginal representatives behave in ways likely appeal to their constituents directly. We also document changes in these relationships over time.

*First version: May 2013. This version: June 19, 2013. STICERD (LSE) and IQSS (Harvard) contributed financially to the costs of this project, and its assistance is gratefully acknowledged.

†London School of Economics. email: a.c.eggers@lse.ac.uk

‡Department of Government, Harvard University. email: aspirling@gov.harvard.edu

1 Introduction

Like all rational actors, legislators respond to the incentives they face; because the pressures on them vary over time and space, we observe different patterns of representation in practice (e.g. Lijphart, 1999; Powell, 2000). Thus, House members in the United States are primarily concerned with delivering (federal spending) 'pork' to their constituents (e.g. Levitt and Snyder, 1997; Stein and Bickers, 1997), vote and speak in a way that is ideologically congruent with their district (Canes-Wrone, Brady and Cogan, 2002), and work to develop a distinctive 'Home Style' for their voters (Fenno, 1978). By contrast, members of parliament (MPs) in the British House of Commons are elected on a party ticket, are thought to have a negligible 'personal' vote (though see Cain, Ferejohn and Fiorina, 1987; Pattie, Fieldhouse and Johnson, 1994), and have strong career reasons to obey their whips (Benedetto and Hix, 2007; Kam, 2009) on roll calls. In this light, explaining the way in which a particular system of governance emerged is an exercise in determining how and why parliamentarians' incentives changed, and the associated implications for their activity choices—particularly their speeches and voting—in the legislature.

Scholars have been especially interested in applying this logic to the development of the British parliament during the mass suffrage era (e.g. Cox, 1987; McLean, 2001) for at least two reasons. First, because the organizational principles embodied in the (original) 'Westminster' system have been so influential for other polities (e.g. Rhodes, Wanna and Weller, 2009). Second, because the history of this period—from the First (1832) to the Fourth (1918) Reform Acts—represents a rapidly changing structural environment for MPs. In essence, legislators went from operating almost independently of party machinery (e.g. Gash, 1952, 1977) to living in the 'modern' period of whips, cohesion (Lowell, 1902; Berrington, 1968), national (rather than local) election forces (Hanham, 1978), and a 'triumph of partisan politics' (Jenkins, 1996). Precisely because the extent of change was of such magnitude, there

is an obvious interest in documenting, at a micro level, how MPs adjusted their activity in terms of division voting, or speech-making, in response to new incentives. This is especially true for episodes in which the party leadership, local organizations and constituency voters did not place congruent pressures on their members (e.g. Ostrogorski, 1902; Hanham, 1978; Jenkins, 1996), and where those members varied in their need and opportunity to respond to the demands of different actors. Put differently, to the extent that MPs in the pre-modern era could calibrate their behavior in parliament in response to the security of their electoral district, we wish to know how they did so when faced with simultaneous—though possibly conflicting—demands from other actors. With some important exceptions (Cox, 1987; Rush, 2001; Schonhardt-Bailey, 2003) however, such fine-grained work on trade-offs in the strategic choice of legislative action has been largely missing from accounts of British political development.

This absence is unfortunate since, as implied above, understanding how individual actors negotiated the cross-pressures they found themselves under is at least as important to refining theory as descriptive work on changes to parliamentary life at an aggregate level. It is unsurprising though, for reasons of data availability: obtaining data to systematically compare MPs' action choices under different electoral circumstances, and at different times, has been problematic. Here we seek to solve this problem; in particular, we introduce a massive new data set that dwarfs all previous efforts in the field. We construct a relational database of over 5000 Members of Parliament serving between the beginning of the 19th Century and the Great War. We include background covariate information, and results from every election (and by-election) occurring between 1803 and 1918. We match this data to one million legislative speech records and twenty thousand roll calls, along with service dates and promotion information. We are thus in a position to provide much more definitive answers to questions regarding the relationship between legislative activity and electoral environment. Because this data is itself a contribution, below we spend some time discussing its compila-

tion and possible future uses. In this way we see our paper as contributing not simply to our understanding of how MPs and their constituents interacted but also to the development of 'big data' in political science.

Using our data, we demonstrate that there is indeed an association between the electoral climate an MP faces in his home district and his legislative activity, and that it changes over time. Though our observational approach means that we cannot be certain about causal direction, we can nonetheless do a thorough job of laying out the relationships between the key variables we consider. In a 'pooled' analysis, where we do not control for 'fixed effects' pertaining to individual MPs, we demonstrate that unopposed MPs vote and speak significantly less than their colleagues in more competitive seats. Meanwhile, for those who faced opposition, more secure MPs tended to vote and speak slightly more. Once we focus on 'within' variation (i.e. include member fixed effects), a somewhat different picture emerges: now, more secure MPs (including those who are unopposed) speak less, but vote more than the most marginal category of member. Below, we relate these patterns to the possible cross-pressures between the expectations of the electorate and the demands of party chiefs, and the notion that MPs chose actions strategically to increase their chances of staying in office even if it meant acting at loggerheads with their leaders. Our fixed effects estimates suggest that, by the end of the century, safer MPs faced increasingly congruent incentives to 'behave' in the Commons—by speaking less, and voting more—with presumably little cost to their re-election prospects.

We proceed as follows: in Section 2 we give the substantive background for our study, and report on previous efforts in the literature. In Section 3, we describe our database: its origins, contents and possible uses. In Section 4 we explain our measurement of constituency 'marginality' and the various measures of legislative activity we use. We then report our results, and conclude in Section 6.

2 Marginality and Activity in Westminster Systems

Party voting by the electorate, either based on national Cabinet—i.e. executive—policy positions and performance (see Budge, 1999; Crewe, 1983; Norris, 2001) or on cruder partisan loyalties (see Butler and Stokes, 1974) is thought to be the norm for contemporary Westminster systems like Britain. Congruent with this principle, almost all legislative business is directly controlled by the executive, and party pressure or 'whipping' is commonly used by the government to herd its 'backbench' MPs into supporting the Cabinet's programmatic agenda when required (e.g. Cowley, 2002, 3–7).[1] By conventional wisdom then, since voters do not care about parliamentary behavior (and have no reason to), there is little an individual backbencher has to offer her constituents aside from her party label at election time.

To the extent that scholars of contemporary Westminster systems have sought to unpack the relationship between legislator activity and popularity, unlike our study here, they have tended to focus on the former as a causal factor for the latter. Within this rubric, scholars have considered the effects of various actions on election performance: constituency service (see Cain, Ferejohn and Fiorina, 1987; Norton and Wood, 1993; Searing, 1994; Gaines, 1998), local campaigning activity (e.g. Denver and Hands, 1997; Pattie, Johnston and Fieldhouse, 1995), roll call behavior (e.g. Pattie, Fieldhouse and Johnson, 1994), private members' bills (Bowler, 2010) and other related legislative work (Loewen et al., Forthcoming).

For the nineteenth century, Cox (1987, 51–67), building on earlier data gathering efforts by Lowell (1902) and Adyelotte (1954), investigates the relationship between participation in roll calls, speech making and district size (i.e. the number of electors in the constituency). He finds that, broadly speaking, for the early and middle years of the Victorian era, MPs from more populous seats tended to be more active in the legislature. Schonhardt-Bailey (2003),

[1] Whipping typically includes offers or threats related to ministerial promotion: see Kam (2009) for a discussion of the Canadian case.

along with earlier work by McLean (2001), considers the role of constituency 'interests' (as opposed to ideology) in parliamentary voting during the Corn Laws period. Stephens and Brady (1976) consider the relationship between constituency types and party cohesion for the 1880s, and find little evidence that district characteristics affected roll call behavior at that time.

2.1 Competing pressures, ambiguous predictions

Because we are focussing on such a long period during which so much changes, it is unsurprising that multiple elements addressed by previous scholarship—for historical and contemporary periods—enter our account of MP behavior. In particular, we see MPs as strategic actors under pressure from three main sources: the voters themselves in a given constituency; local party organizations, who recruit candidates and assist in electioneering attempts, and a central party apparatus that, with certain periods excepted (see, e.g., Hanham, 1978, on the rise of the 'Fourth Party' in organizational terms), is synonymous with the party's parliamentary leadership. In the current period, in which 'nationalized' party appeals and campaigns are considered the norm, these three pressures broadly push candidates and members towards the same action choices: MPs follow the party whip and fall in line behind their leader at and between elections, since there is relatively little return or opportunity (and much cost) to refusing to follow party directives in terms of roll call voting or speech making. What makes the 19th century interesting is precisely the notion that these pressures did not pull in the same direction at the same time. As a result, different types of MPs—distinguished at a minimum by the safety of their electoral situation—may have faced different incentives. Our central task below is to see if MPs facing different electoral situations behaved differently in the House of Commons and how this relationship between electoral context and legislative behavior may have changed over time.

Although we assume that all MPs, whatever their electoral background, could affect their future success via their actions, we focus our theoretical account on those that faced competition. That is, we assume that those who were unopposed (literally, faced no alternative candidates) at election time are qualitatively different to those who were in competitive races—in particular, as regards pressures from voters, local or central organizations to behave in certain ways. At the opposite end of the spectrum, it is interesting to consider the plight of an MP in a very marginal—that is, competitive—seat. On heading to the House of Commons, such an MP has strong reasons to wish to connect to his voters, perhaps by mentioning them in speeches in the way that Cox (1987) describes for the period immediately following the Great Reform Act. Once the executive comes to dominate proceedings however, such opportunities become rarer (Cox, 1987; Rush, 2001). Later in the century, the electorate becomes more party-orientated, and such an MP is presumably required to be more responsive to his local association (as warned by Ostrogorski 1902, though see Judge 1993, 79 for discussion), in order to garner help at election time (Hanham, 1978). To the extent that he does this, he may find himself 'out of step' with his party leadership, which requires his obedience on roll calls (Jenkins, 1996, 59–63) for its survival. Moreover, for an MP seeking promotion to cabinet (Cox, 1987, 75–79) or access to honors and sinecures (Jenkins, 1996, 64), following orders in the House of Commons is a wise course of action. Exactly what an MP from a very insecure district ought to do—whom he ought to please, and how to do it—is not obvious for much of the 19th Century. It is more obvious for those in safer districts: voters already like them, re-election is relatively more certain, and thus such MPs are freer to respond to career incentives.

It is the implications of this ambiguity that we seek to resolve below. Before doing so, we note that the efforts of previous scholars notwithstanding, making causal statements from observational data about actor decisions and outcomes is very difficult. While we can readily establish associations between certain behaviors, it is helpful and intellectually hon-

est to be ecumenical in our interpretation of these results—at least in terms of plausible mechanisms by which they have arisen. At the most basic level, for example, we cannot be entirely sure why an MP finds himself in a more or less competitive district in the first place, and we presumably think the factors that determine this data generating process are not independent of other (latent) factors pertaining to the MP in question or his subsequent actions. Yet while the possibilities are many, they are not boundless: below, we will assess our evidence in light of other scholars' findings, and general plausibility. We see our efforts as 'benchmarks' for a new dataset that concerns an important period in Westminster development: a first step in establishing descriptive patterns upon which further work can be based.

To summarize then, while the complex relationship between individual election outcomes and legislative activities has generated interest among scholars—especially historically—there has been no attempt to comprehensively map the (possibly) changing relationship between these two variables over the entire course of Britain's political development. Below, we attempt to do just that, paying special attention to the period between the first ('Great') reform act (Representation of the People Act, 1832) and the fourth reform act (Representation of the People Act, 1918). This will require that we obtain information on electoral success on the one hand, and ministerial service, speech making and legislative voting on the other. The next section explains how we went about this task.

3 A Massive Database

We assembled a database representing electoral records and legislative activity by bringing together data from a variety of sources. In this section we describe these sources as well as the process we used to connect disparate sources in a single relational database.

3.1 Members of parliament

The core of the database is a list of MPs along with their basic biographical information such as dates of birth and death. An independent researcher, Leigh Rayment, provided us with names, birth and death dates, and titles and honorifics for every MP who served in this period; we used this data (much of it processed by the UK Parliamentary Service[2]) to construct an initial database of MPs. With the addition of a few MPs who were missing from these sources (sometimes due to short stints in parliament), we located 5,599 MPs who served between 1832 and 1918.

3.2 Electoral records and parties

The next step was to link MPs to their electoral records. Aside from the direct uses of electoral data for research purposes (such as studying the relationship between electoral context and legislative activity, as we do in this paper), bringing in electoral records had indirect benefits for building our database, in that it helped link MPs to parties and allowed us to establish definitively when particular MPs served in parliament.

We began by transcribing the information (candidate names, parties and vote results) for every electoral return from Craig (1989*a*), Craig (1989*b*) and Craig (1983) into our database; these collectively cover British constituencies for the period 1832–1949. We supplemented these records with Walker (1978) for the Irish constituencies, and we used Thorne (1986) and Fisher (2009) to cover the period 1803 to the 1831 general election. In total, we recorded 25,726 election returns between 1832 and 1918, of which 16,005 were successful. (Note that successful returns were those in which the MP won the seat; in cases where the election result was overturned following a petition, successful returns were not always those that won the most votes.)

[2] `http://www.hansard-archive.parliament.uk/`

We collect each set of returns into a "race", which we stored along with information such as the date, number of electors, and whether it was a general election or by-election. In total, 12,734 races took place between 1832 and 1918, of which 2,737 were by-elections.

Each race was also linked to a constituency; we obtained a list of constituencies from the UK Parliamentary Service website. We follow the conventional approach to identifying constituencies, by which a constituency disappears when it is divided or undergoes extensive boundary changes (as happened to several constituencies in 1867 and 1884). In all we have 867 constituencies in the period from 1832 to 1918.

After extensive checks of these electoral records, we then linked the winning candidates in each contest to MPs in our database. This allowed us to construct, for every MP, an exhaustive list of spells in which the MP served in the House of Commons; we could later use these spells to identify MPs from debate records and division lists. We record 7,027 distinct spells of service in parliament.

Linking MPs to electoral records also allowed us to assign party labels to MPs using the labels that appear in the electoral sources listed above. Note that we assign a party to an MP at a particular time based on the party label that appears in his most recent election return; when an MP switches parties mid-parliament, we do not register the switch.

3.3 Ministerial office

To obtain information on the MPs' ministerial careers, we used Cook and Keith (1975) and Butler and Butler (1994) which covers our period for Cabinet offices, and other ranks on the government payroll (some of which are relatively minor officials that disappear over time). For each spell of officeholding, we record (based on these sources) whether the office was

considered at the time to be part of the cabinet. We record a total of 243 distinct offices and 4,739 spells of officeholding in all. Currently absent from our work is a list of MPs serving in the *Shadow* Cabinet, including the Leader of the Opposition: that is, the opposition front bench officials who would become ministers should their party be in government. For the period under study, we do not have 'official' records on these matters since such terms were not generally used until after the Victorian era (Jenkins, 1996, 118).[3]

3.4 Speeches

In 2005, the House of Commons Library and the House of Lords Library undertook a joint digitization campaign in which the entire set of Hansard debate records from 1803 to 2004 were eventually converted to machine-readable text.[4] These records are marked up in `XML` format with tags identifying speeches, speaker names, debate titles, and so on. Due to the extensive markup, parsing the data into speeches and debates was quite straightforward. Between 1832 and 1918 we record 1,191,723 speeches organized into 218,174 debates.

The main difficulty in integrating this information into our database was the linking of speaker names to actual MPs.[5] The same issues arise to various extents in matching electoral records (noted above) and in votes (addressed below) to MPs, but because linking speakers to MPs proved to be such a major challenge in assembling the database we pause to explain our approach here.

Whether it be speeches, roll calls, election returns or other sources of data, MPs are not referred to in consistent ways in historical materials. There are various reasons why a given

[3] 'Leader of the Opposition' is first defined, for salary reasons, in statute form via the 1937 Ministers of the Crown Act (Brazier, 1997, 90).

[4] `http://www.hansard-archive.parliament.uk/`

[5] A group within the UK Parliamentary Service (see `http://hansard.millbanksystems.com/`) made a preliminary attempt to identify MPs in debates and link those MPs to offices and constituencies. Although we made use of some of their data as noted above, we decided to match speeches to MPs ourselves given clear omissions and errors in the existing data.

individual may be referred to differently in different instances. Some of the variation is simply due to misspellings or OCR errors; some of it is due to changes in an MP's official name over time as he acquired different honorific titles or even changed his surname due to a marriage or inheritance; some of it is due to changes in who *else* was in the House of Commons, as an MP may be referred to as "Mr. Jones" until another "Mr. Jones" enters, after which time his identity is recorded as "Mr. J. Jones". The way an MP is referred to can even change within a given debate: an MP may be referred to as "Mr. J. Jones" the first time he speaks in a debate and simply "Mr. Jones" the second time. Sometimes MPs are referred to by both their name and their constituency (particularly when another MP with a similar name is serving at the same time); in this case the variation can come from varying conventions in how to abbreviate county and borough names. To a human reader, it is often quite clear that two recorded speaker names refer to the same person; for example, a person would probably quickly identify that two speakers recorded in 1840 as "Acland,Tho. Dyke (Somersets.)" and "Acland,Tho. Dyke (Somersetsh.)" were the same person, and by looking up MPs serving in 1840 could identify this speaker as Thomas Dyke Acland, MP for Somerset West (distinct from his father, also named Thomas Dyke Acland, who represented Devon Northern at the same time). Given over a million speeches to process, however, having a human match each speech to a speaker is obviously impractical.

As suggested by this example, in linking speeches to MPs we want to be able to make use of the speaker's name, office, and/or title (which may change over time) as recorded by Hansard, we want to make use of constituency information (when available), which similarly is not recorded in standardized ways, and we want to take account of who was in parliament at a given time. Given unique features of the problem, our approach was to write our own custom software that used a variety of raw information about the speaker, voter, or candidate and returned a ranked list of possible MP matches, along with a score reflecting the closeness of the match. For cases in which one MP received a sufficiently high match score,

and no other MP was close, we accepted the match; for other cases we output spreadsheets of potential matches and asked research assistants to determine (if possible) which MP was the correct one, focusing on cases where resolving an ambiguity would lead to several speeches being matched. All told, it took hundreds of hours of manual checking to link speeches, votes, and electoral records to MPs, even after the work necessary to design and run the automatic matching procedures.

The number of speeches given per year increases throughout the period we examine, from about 5,000 in the 1830s to about 30,000 in the 1910s. Overall we matched about 95% of the total of 1.2 million speeches to MPs, a proportion that was fairly steady throughout the period we examine.

3.5 Roll calls

As part of a recent collaboration with the *History of Parliament Trust*, we were able to obtain digitized roll call records ('divisions' in House of Commons terms) for the period 1836 to 1910. As far as we are aware, there is no similar collection in terms of size or detail. In particular, we have some 20,258 divisions, with 4,790,548 voting decisions (that is, 'ayes' and 'noes') in total. Using the methods described above, we were able to match 99% of these votes to an MP (with the proportion missing being similar throughout the entire period). For every division we know the identity of the tellers, and whether or not they were a Chief Whip for the Conservatives or Liberals. (This allows us to identify divisions in which the whip was applied, using the approach of Cox (1992).) We also have the description of the roll call under consideration as it appeared in the original division lists, which in many cases gives a rough idea of the substance; roll calls can also be linked to the surrounding debate.

4 Measures and descriptive statistics

Since we are interested in the relationship between electoral margins and legislative behavior, it is helpful to first summarize the measurement strategy and basic descriptive statistics of each of our key variables. We begin with the competitiveness of seat contests. Due to a variety of legal, economic, and social changes that took place during the period under study here, the House of Commons became much more competitive as the Victorian era wore on. Compared to the situation in the early 19th century, by the end of the First World War MPs were far more likely to face an actual election campaign (rather than winning without opposition), and those who faced campaigns were more likely to face close races (for an aggregate overview, see, Cox, 1987). In order to document these changes over time we must decide on measures of electoral competition.

The central task here is to measure electoral margins in a period in which a large proportion of MPs were elected in multimember constituencies. In a single-member district, a natural way to summarize the safeness of an MP's seat is to measure the margin between that MP and his closest competitor in the previous election. We adopt a straightforward generalization of this for multi-member seats: the difference in vote share between the MP and the most successful losing candidate in the race. To be more specific, denote by v_i the vote share[6] of the candidate who finished in ith place; for a constituency with district magnitude M, all candidates with $i \leq M$ win a seat. We define the margin for candidate i in parliament t as

$$m_{it} = v_{it} - v_{M+1,t}.$$

For robustness we also use an alternative measure of marginality employed in other multi-member contexts (e.g. Cox and Rosenbluth, 1995), which measures the difference between

[6]By vote share, we mean the number of votes received by the candidate divided by the estimated number of voters. We estimate the number of voters by dividing the total number of votes cast by the number of seats up for election, under the assumption that e.g. voters in a two-member constituency cast both ballots.

the candidate's vote result and the Droop quota for the race. The two measures produce essentially identical results.

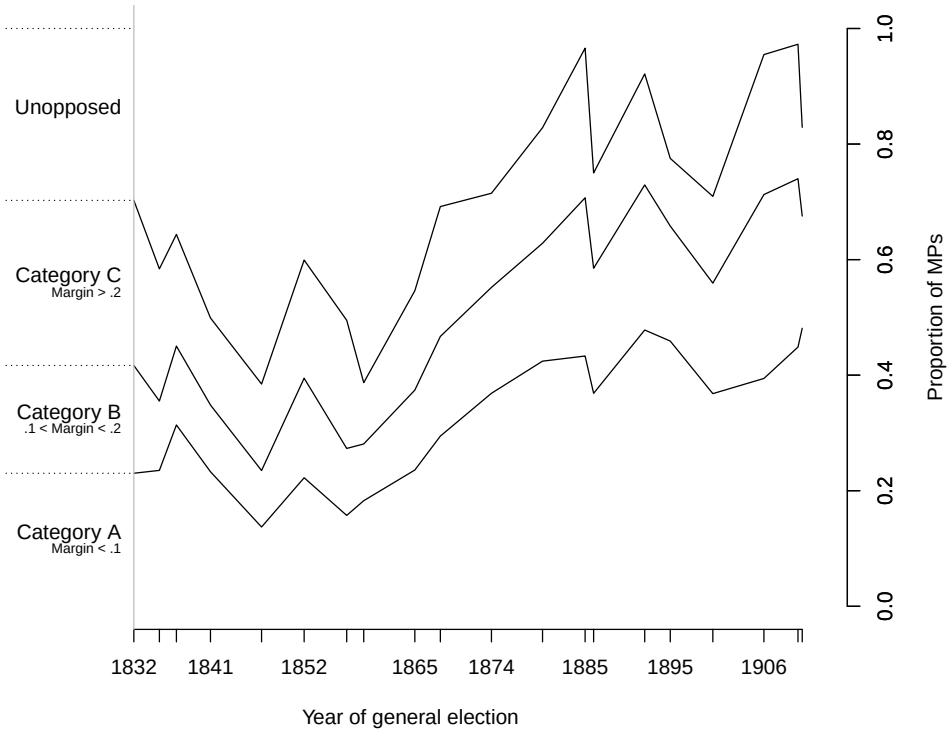
Figures 1 and 2 use these measures to highlight the changes in competition that MPs faced. For expositional purposes we divide MPs into four categories, which we also use in the regression analysis below. For MP i in parliament t, define the margin category C_{it} as follows:

$$C_{it} = \begin{cases} \text{A} & \text{if} \quad m_{it} \leq .1 \\ \text{B} & \text{if} \quad .1 < m_{it} \leq .2 \\ \text{C} & \text{if} \quad m_{it} > .2 \\ \text{UN} & \text{if unopposed.} \end{cases}$$

The increase in competitiveness of elections to the House of Commons has been noted by others. Figures 1 and 2 confirm the pattern using the complete set of election results. Strikingly, about half of MPs were elected without opposition in the early part of the nineteenth century; by the early 20th century, almost half were elected by a margin under .1. The evolution of electoral marginality (and its relationship with legislative activity, analyzed below) is similar if we use finer-grained categories or document changes in the continuous distribution of margins.

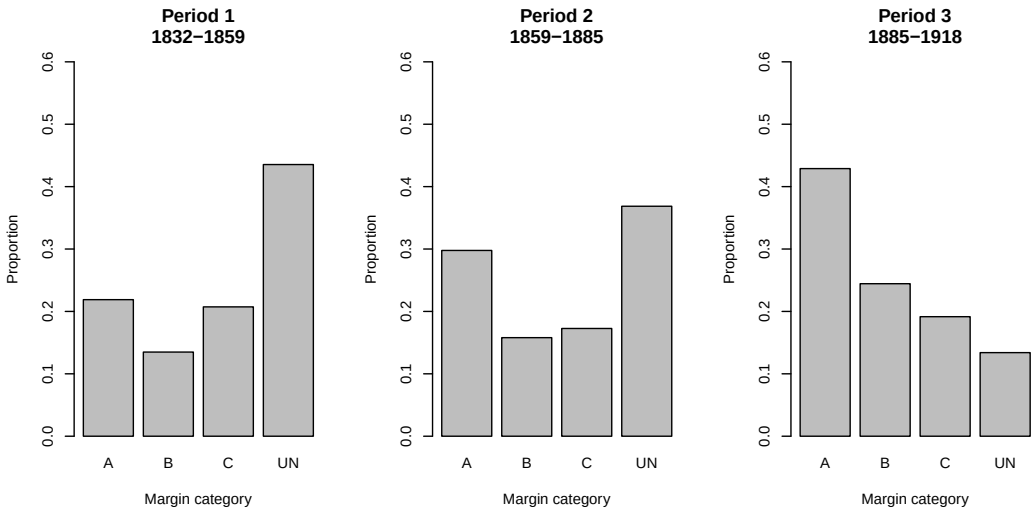
We now turn to our measures of legislative activity: voting and speaking. We focus on the sheer amount of voting and speaking in which an MP engages. Our measure of voting activity is quite simple and straightforward: for each MP in each parliament, we record the proportion of divisions on which the MP cast a vote. Our measure of speaking activity is based on the number of speeches the MP made in each parliament, divided by the length of the parliament (in years). Because of the substantial right skew of this variable (call it s_{it}) and the large number of zeros, we carry out analysis on $\log(1 + s_{it})$.

Figure 1: Electoral margins by general election, 1832-1910



NOTE: Margin category A refers to MPs elected by a margin under .1, category B refers to MPs elected by a margin between .1 and .2, and margin category C refers to MPs elected by a margin of .2 or larger; MPs not facing opposition are categories as "unopposed". Proportions in each category are plotted by parliament and parliaments are indicated by the year in which the parliament first sat.

Figure 2: Electoral margins by period

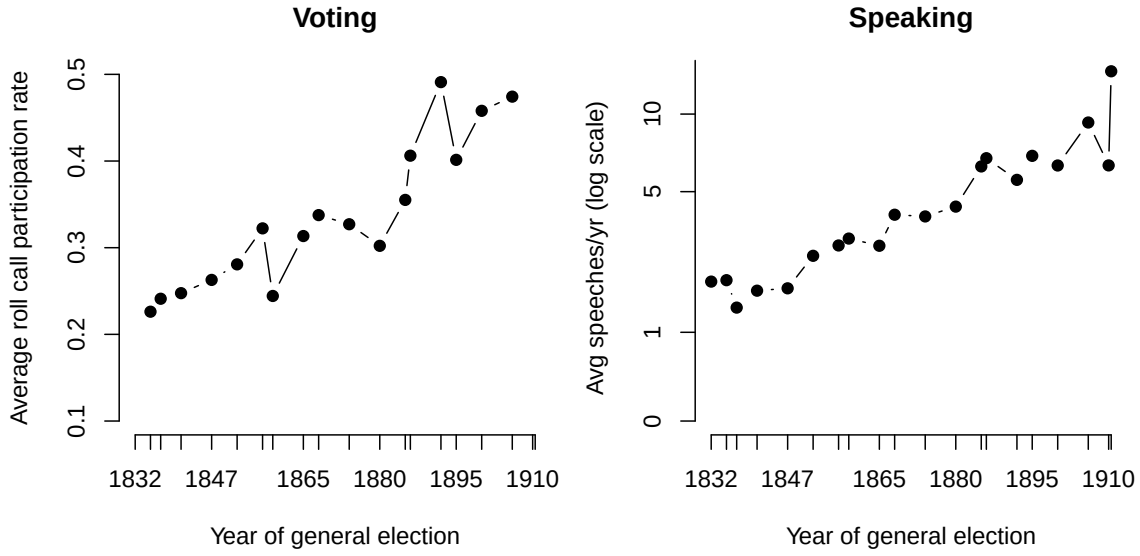


NOTE: Margin category A refers to MPs elected by a margin under .1, category B refers to MPs elected by a margin between .1 and .2, margin category C refers to MPs elected by a margin of .2 or larger, and margin category "UN" refers to MPs who were elected without opposition.

Using data for select years in this period Cox (1987), noted that the rate of voting and speaking in parliament increased substantially over the 19th century (pp. 53-54). Figure 3 documents this pattern for the universe of divisions and debates. The left panel shows that MPs voted on a steadily larger proportion of divisions as the century progressed: the average MP voted on just one-quarter of divisions in the 1830s and almost half of division by the 1910s. Similarly, as shown by the right panel of Figure 3 the average number of speeches per year made by the average MP increased steadily as well. Additional analysis confirms that the increase in speaking is not simply a few individuals appearing more, but rather an increase in the number of speakers *and* an across-the-board increase in the number of times each MP participated.

We organize our data as a panel with the unit of analysis being the MP-parliament. We omit cases where an MP was not serving throughout (the life of) a parliament, on the basis

Figure 3: Increasing participation by MPs over time



NOTE: The left panel shows the average proportion of divisions voted on by MPs in each parliament. The right panel shows the average number of speeches per year by MPs in each parliament (transformed as described in the text).

that these MPs are often elected in by-elections (whose electoral marginality may not be indicative of likely future contests) and in any case do not have the opportunity to vote or speak on the same matters as those who serve throughout the parliament.

5 Results

How were the electoral pressures facing MPs reflected in their legislative activity? Does the increase in competitiveness over the 19th century help explain why MPs became more active in voting and speaking? We begin to address these question by regressing our outcomes (roll call participation rate and (log) speeches per year) on indicators for MPs' electoral security and a set of covariates that one might think would be related to legislative activity (and possibility electoral competitiveness). In order to highlight the role of both selection and incentive effects in the relationship between electoral context and legislative activity, we carry out both pooled analysis and fixed effect analysis.

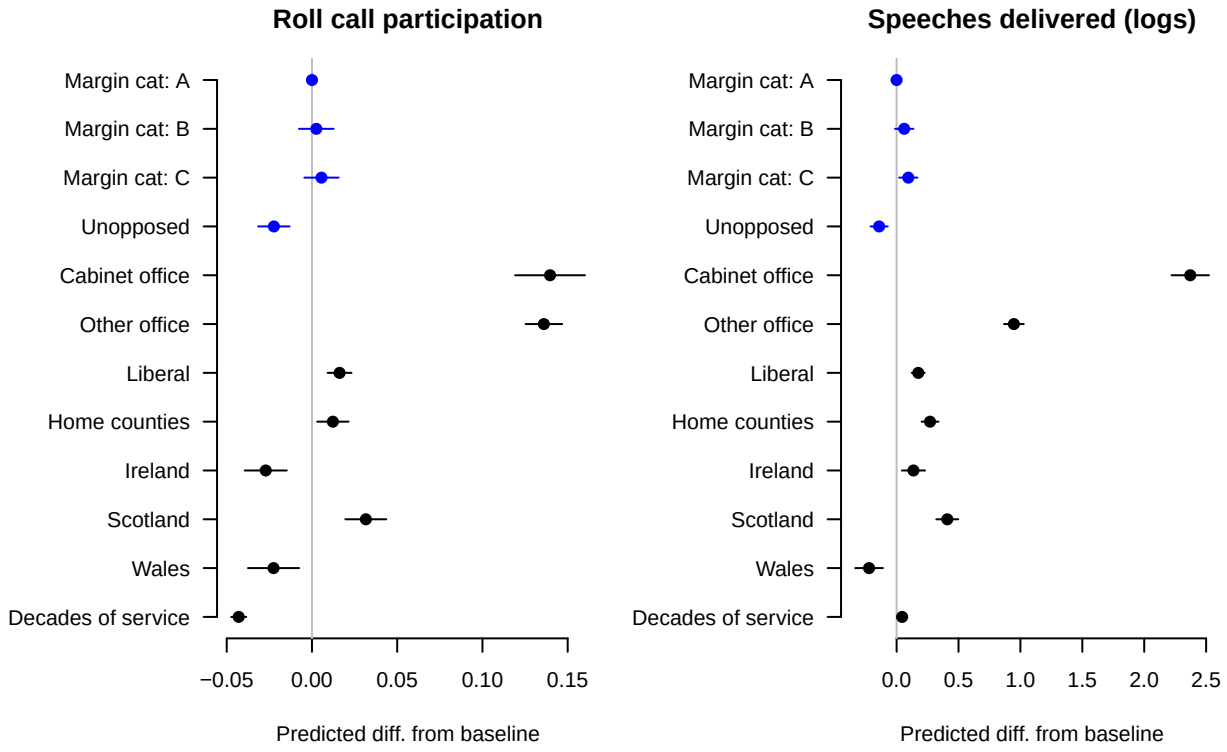
5.1 Pooled analysis

Figure 4 depicts regression coefficients and .95 confidence intervals from pooled regressions in which the dependent variable is the proportion of roll calls in a given parliament in which an MP participates (left panel) or the log of (1 +) the MP's speeches per year during a given parliament (right panel). Along with the coefficients on our electoral categories (top four coefficients) we also plot the coefficients on several covariates: whether the MP held cabinet office or another office in that parliament, the MP's party, the country or region the MP represented (Home Counties, rest of England, Ireland, Scotland, Wales), and the length of time the MP had served in parliament. (We also include in the regression, but omit from Figure 4, dummy variables for each parliament to account for parliament-specific differences in activity levels.) The coefficients from these regressions (aside from the parliament dummies) are plotted in Figure 4 as "predicted differences from baseline"; for expositional clarity we plot a 0 for margin category A, the omitted margin category in the regression.

Figure 4 indicates that the clearest relationship between electoral context and legislative activity has to do with the difference between unopposed MPs and other MPs. MPs who were elected to parliament without opposition tended to vote less, with the average roll call participation rate about 0.025 lower for unopposed MPs than for MPs who were elected by narrow margins. Given that the average turnout rate for MPs in margin category A was about .36, this works out to a difference in turnout rates of about 7%. MPs who were elected to parliament without opposition also tended to speak less. The coefficient for unopposed MPs (-0.14) indicates that MPs who were unopposed spoke about 15% less than MPs who faced close contests.[7] Both differences between closely-contested and unopposed MPs are strongly statistically significant.

[7]The average of our speech outcome (which is $\log(1 + s_{ij})$) for MPs in margin category A is about 1.63, implying an average of 4.1 speeches per year; the coefficient for unopposed MPs implies an average of 3.44 speeches a year.

Figure 4: Electoral margin and other correlates of legislative activity, 1832-1918



NOTE: Regression coefficients and .95 confidence intervals shown for pooled regressions in which the dependent variable is an MP's legislative activity (voting rates or speaking rates) in a parliament. These regressions do not include member fixed effects; the results can thus be interpreted as a characterization of how variation in legislative activity both within and across MPs relates to MPs' electoral context and other factors. Coefficients for parliament dummies not shown.

The comparison among MPs who face opposition does not match the view that competition induces legislative effort of either kind. We find no significant difference in voting rates between MPs elected by narrow margins (category A) and those elected by moderate or large margins (categories B and C). We do find a significant difference in speeches per year between categories C and A, but the estimates indicate that MPs elected by larger margins spoke *more* (controlling for offices held, experience, country/region, and parliament). The estimate for category B indicates a level of speaking intermediate to A and C, with the coefficient borderline significant at the .1 level. Thus unopposed MPs voted and spoke less; among MPs who faced opposition, electorally safer ones spoke more.

Our initial findings are thus that, compared to MPs elected by fairly narrow margins, unopposed MPs were less inclined to participate, but that (among MPs facing opposition) it is *not* the case that safer MPs were less inclined to participate – and in fact electorally safer MPs were more inclined to speak. As regards our theoretical priors, such a result is not unreasonable: we can well imagine that unopposed MPs had little reason to expend efforts on speaking as an instrument to reelection. Alternatively, we can imagine that MPs' (latent) "types" may have varied with their electoral contexts. It may be that constituencies without electoral contests selected MP candidates who were less inclined to participate in legislative activity— for example, country gentlemen whose family traditionally held the seat (e.g. Cannadine, 1990). Similarly, the fact that MPs elected with large margins spoke more may indicate that the electorate were attracted to MPs who had prominent roles in parliamentary debate or spoke well at the hustings (but not necessarily those who reliably turned up to vote on parliamentary business). It may also reflect the fact that parties rewarded their leading figures with comfortable seats—though such interventions seem to have been relatively rare empirically (Hanham, 1978, 354). Below we return to these issues of selection and incentives by extending our analysis using member fixed effects.

Although these patterns are intriguing, it is important to note that, compared to other variables included in these models, electoral context plays a relatively small role in explaining MPs' legislative behavior. This is clear from comparing the size of the first four coefficients in Figure 4 with the size of other coefficients, all but one of which also correspond to indicator variables. (The exception is "decades of service".) Not surprisingly, perhaps, holding an office makes a much bigger difference than being unopposed or winning by a small margin; an MP's party and (especially) what part of the UK he represents affects the predicted level of activity by as much or more.

One way to put the role of electoral margin in perspective is to ask how much of the change in legislative activity over the period we examine could be explained by an increase in competitiveness. Our analysis reported in Figure 4 indicates that, in cross-section, MPs who were unopposed voted and spoke less; Figure 2 documents a decrease of about .3 in the proportion of MPs who were unopposed between the first third of our period and the last third. If we suppose that the conditional relationship between electoral context and legislative participation that we measure in Figure 4 captures the "effect" of being unopposed on legislative participation (where we interpret this effect to include both incentive and selection effects), then we can combine these numbers to get a back-of-the-envelope measure of the contribution of the near disappearance of unopposed MPs to the increase in participation in the House of Commons over this period. In doing so, we find that the drop in unopposed MPs would account for an increase in average turnout of about $.3 \times 0.025 = 0.0075$, which constitutes a very small fraction (roughly .04) of the overall increase in turnout from around .25 to around .45 over the period we examine.[8] Similarly, the drop in unopposed MPs accounts in this sense for an increase in the average number of speeches per year of about $.3 \times 0.57 = 0.17$, which again constitutes a small fraction (roughly .03) of the overall increase

[8]This assumes that the drop in the proportion of unopposed MPs corresponds with an identical increase in the proportion of MPs in margin category A.

in speeches per year from about 2 to about 8.

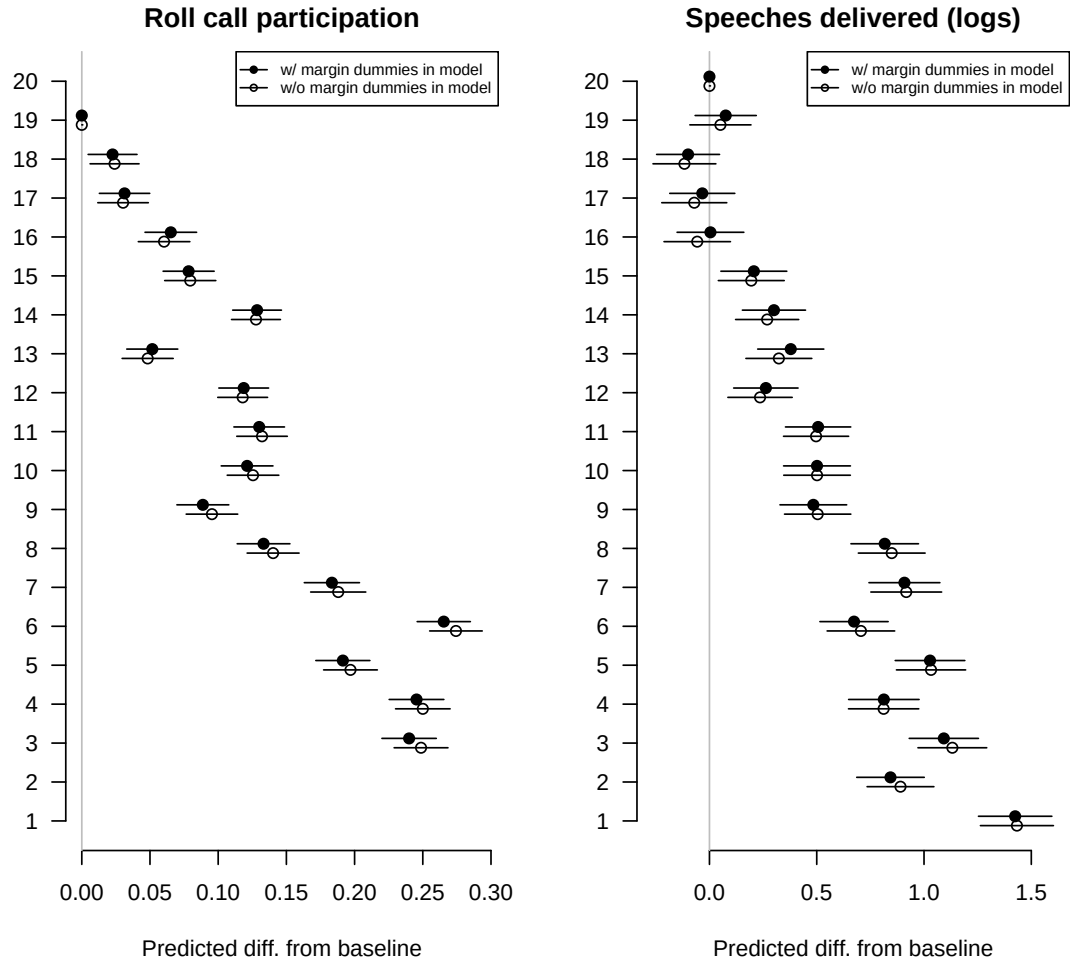
Another way to consider the relative role of electoral margin is to compare the parliament dummies from the regression reported in Figure 4 with parliament dummies from rerunning the same regression but omitting the electoral margin dummies. If changes in the distribution of electoral margin across MPs accounts for a substantial proportion of the overall change in legislative activity, then we would expect the coefficients on the parliament dummies to be much smaller in magnitude in the regression that includes the electoral margin.[9] Figure 5 indicates that this is not the case. The black dots depict point estimates for the parliament dummies in the original regression (the one that includes electoral margin); the white circles depict point estimates for the parliament dummies in an alternative regression that omits the electoral margin categories. For both of our outcomes the white circles are indeed slightly larger in magnitude, indicating that some part of the difference in participation is explained by changes in the electoral context of MPs over this time period. Clearly, though, the changes in electoral margin over time do not account for a substantively large portion of this variation. In short, the unexplained component of the increase in legislative activity over time is barely reduced by considering MPs' electoral context and the way this changed over time.

5.2 Fixed effects and selection

As noted above, the different activity levels we detect between MPs in different electoral contexts probably reflect a combination of incentive effects and selection effects: MPs who were not opposed may feel less pressure to perform, but they also probably differ in other important ways from MPs elected in competitive elections. To shed some light on the combination

[9]Suppose, for example, that a) the relationship between electoral contexts and legislative activity was fixed over time, and b) the entire increase in legislative activity over the period was accounted for by the change (documented in Figure 2) in the distribution of electoral contexts. Then the coefficients on parliament dummies would be substantial in a regression without margin categories included but approximately zero in a regression with margin categories included.

Figure 5: Parliament effects with and without including electoral margin in the model



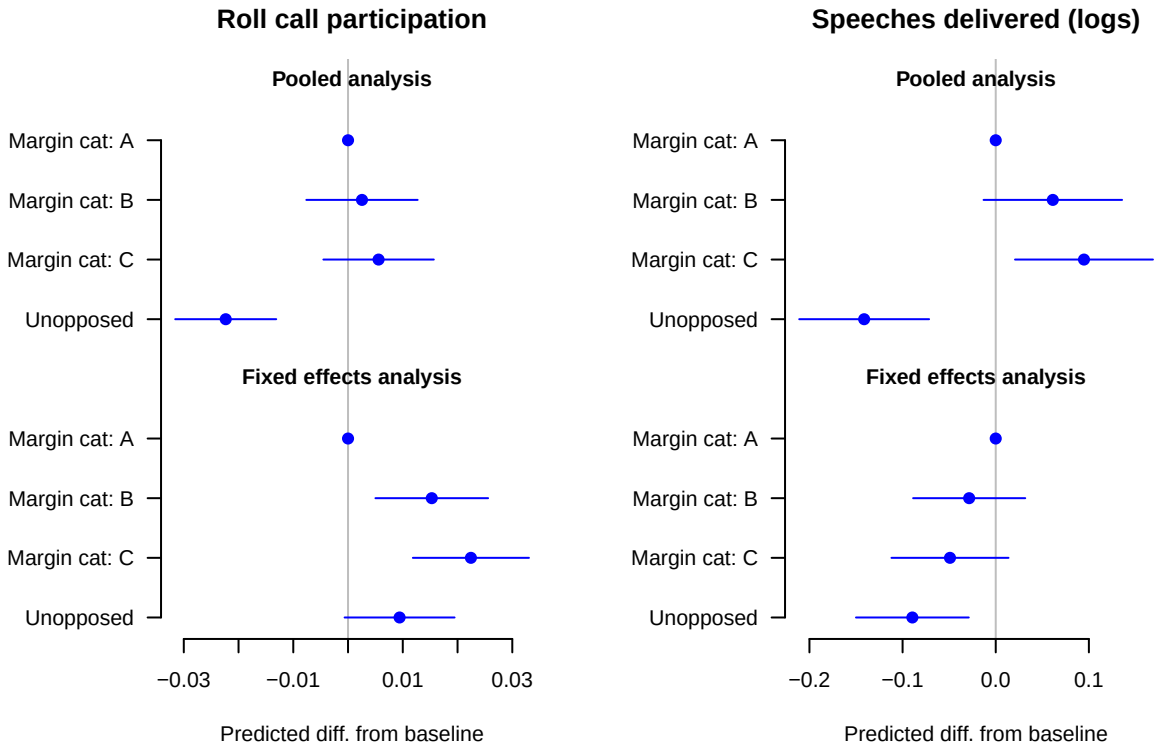
NOTE: Figure 4 omitted the coefficients on parliament dummies. The black circles in this figure depict those coefficients. The white circles depict parliament dummies from an alternate regression in which the margin categories are omitted. As explained in the text, the fact that the parliament dummies are similar in these two regressions highlights the limited role of electoral context in explaining the long-term rise in legislative activity in the 19th century House of Commons.

of selection and incentive effects at play, we carried out analysis using member fixed-effects, meaning that our analysis uses variation in electoral context within MPs' careers (rather than across MPs) to estimate coefficients on our margin dummies.

Figure 6 presents the coefficients on our margin categories from this fixed effects model (bottom panel); for comparison, we reproduce the coefficients from the pooled model discussed above and presented in Figure 4 (top panel). With member fixed effects, we see quite a distinct pattern for the two legislative outcomes: as an MP's electoral context gets safer he appears to vote more but speak less. (In both sets of regressions we control for officeholding, party, country/region, seniority, and parliament.) The differences from the pooled analysis are striking. Comparing across MPs (i.e. in the pooled analysis) electoral margin does not appear to matter much and unopposed MPs vote less; comparing within MPs' careers, MPs vote less when they are elected by a narrow margin than when they are elected by a larger margin or are unopposed. Whereas we found a non-monotonic relationship between electoral safety and speaking in the pooled model, in the fixed effects model MPs appear to monotonically speak less as their seat gets more secure (again, controlling for seniority, office, and many other factors).

The fact that the estimates are different in the pooled and fixed-effects models makes sense given the likely importance of selection in explaining cross-sectional variation in the activities of MPs. That is, we can well imagine that MPs who are elected in more and less competitive contexts intrinsically differ in ways that affect their level of legislative activity. Examples might include particular familial connections they have in their home constituencies, or their latent perception of the importance of a cabinet career, or their sense of party loyalty. To the extent that these are constant over time, the fixed effects soak them up (along with other time-invariant, MP-specific factors) and thus focus on the relationship between changes in marginality and changes in MP behavior. In the pooled estimates, we do not control for these

Figure 6: Electoral margin and legislative activity with and without member fixed effects



NOTE: At the top of each panel, we reproduce the coefficients on marginality categories from Figure 4, i.e. pooled analysis capturing the relationship between electoral context and legislative activity across and within MPs. At the bottom of each panel, we depict the coefficients on marginality categories from analysis including member fixed effects, i.e. analysis capturing the relationship between electoral context and legislative activity within MPs' careers.

effects; those estimates thus reflect not just the effect of marginality on the MP's legislative activity (incentive effects) but also more fundamental differences between MPs elected from different kinds of contexts (selection effects). Both sets of analysis are revealing about the relationship between elections and legislative activity in parliament during this period.

The fact that the fixed effects analysis indicates different dynamics for voting and speaking is also intriguing. The pattern we find (roughly, comfortable MPs vote more and speak less) is consistent with a situation in which MPs who do not face electoral pressures are loyal backbenchers: regularly turning up to vote and not ruffling feathers as speakers. In line with our theoretical comments above, MPs who are elected by narrower margins may feel less secure in their seats and thus less inclined to invest in pleasing party leaders; instead, they speak in parliament in order to represent their constituencies; they skip votes in order to remain active in the constituency or maintain and develop ties outside of parliament that will advance their non-political careers (which may be especially important if they expect to lose). Additional analysis is necessary to determine whether this is consistent with the *content* of MPs' votes and speaking contributions.

5.3 Electoral security and legislative activity over time

Finally, we divide the data up into three periods and examine how the relationship between electoral context and legislative activity may have changed over time. We use the same periods for which we depicted the distribution of electoral security in Figure 2 above, i.e. three roughly equally-sized periods in which competition was low (pre-1859), rising (1859-1885), and high (1885-1918).

Figure 7 shows the coefficients on the marginality categories for each of these three periods for the pooled analysis. The relationship between electoral context and legislative activity

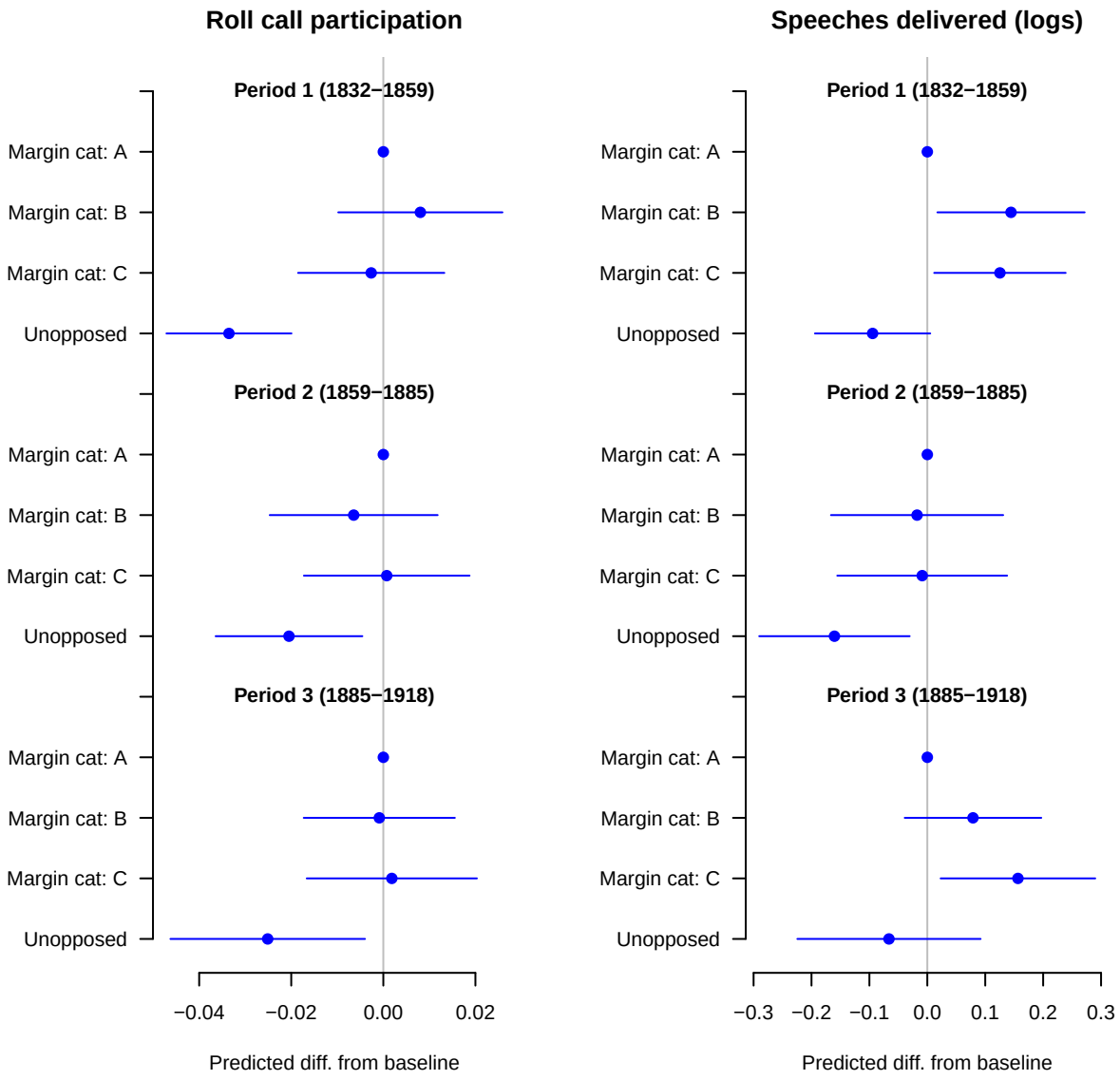
across MPs appears to have been fairly stable over time: unopposed MPs spoke and voted less than those who faced contests (even fairly comfortable contests). MPs who faced contests but won easily spoke somewhat more than those who won narrowly in both the early and late period; again, this likely reflects selection to some extent, in that comfortably-elected MPs may have been better-known and more accomplished, which explains both their electoral success and their more extensive role in debate. (Recall, however, that these regressions control for experience and office.)

The fixed effect analysis, reported in Figure 8, shows more variation over time in the relationship between electoral context and legislative activity. For both voting and speaking, we find that the within-MP relationship between electoral margin and legislative activity (and in particular the "safe MPs vote more and speak less" phenomenon) emerges only at the end of the period we examine. This is consistent with the idea that, as party organization developed and the electorate became more party-oriented (Cox, 1987), MPs sought favor with party leaders rather than by attempting to please the electorate. The timing of this shift is somewhat later than one might expect, however, given that this process is thought to have begun in the 1840s.

6 Discussion

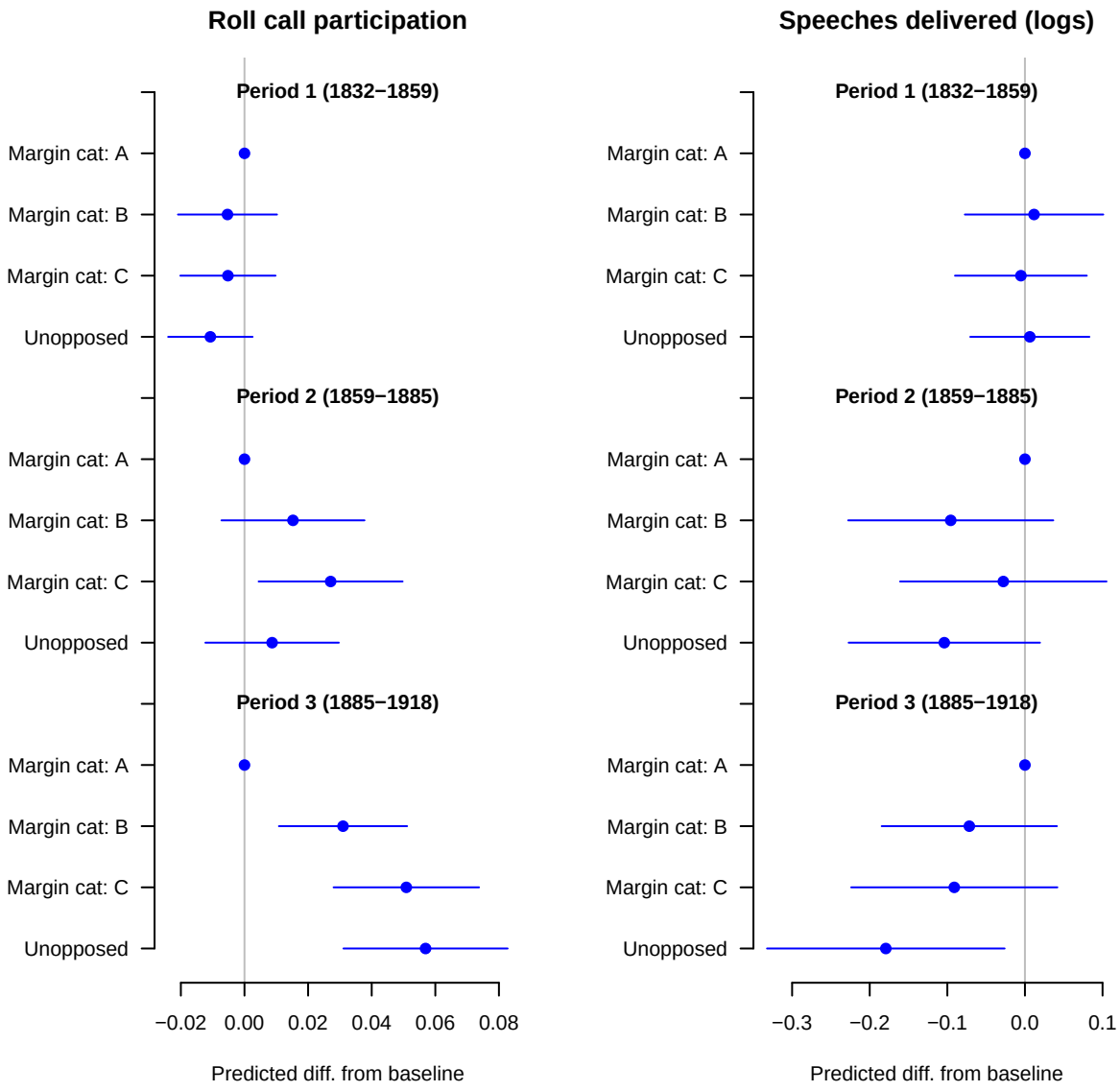
At least since the time of Burke and his *Speech to the Electors of Bristol* (1774/1975), scholars of politics have debated the 'proper' role of legislators in representative democracy. While much of the debate has been normative in nature, Britain's historical experience with mass suffrage made the transition from 'delegate' to 'trustee' a descriptive reality. This sweeping transformation is ultimately composed of thousands of actors making rational decisions to comport with new incentives arising through institutional innovations—be they an expanded franchise or a Cabinet as agenda setter. Here, we set out to document the way that one important set of such actors—MPs between the First and Fourth Reform Acts—dealt with

Figure 7: Electoral margin and legislative activity over time: pooled analysis



NOTE: Coefficients on marginality categories shown for pooled analysis carried out separately for each of three time periods.

Figure 8: Electoral margin and legislative activity over time: fixed effect analysis



NOTE: Coefficients on marginality categories shown for panel analysis including member fixed effects carried out separately for each of three time periods.

their changing environment in terms of their legislative activities of speech making and voting. We argued that MPs with different electoral backgrounds would face different pressures, and have different priorities, as they balanced party and voter demands during an inchoate period from which the modern Westminster system ultimately emerged. We showed that competition affected choices in ways predicted by theory: for example, in our fixed effects analysis, we demonstrated that MPs in safer seats tended to attend divisions more often, and speak less frequently as time wore on. This is commensurate with the notion that they, relative to their least secure colleagues, prioritized supporting their party's agenda: keeping their 'head down' in debate, and doing as they were told by their whips. This strategy made more sense for MPs with secure seats, whose political futures depended on pleasing party leaders and not the electorate.

Quite apart from the historical question we set out above, there may be interesting policy implications of our work. At the time of writing, MPs seem to believe that their activities *within* parliament might matter for reelection (Cowley and Stuart, 2005), and that they face trade-offs between pleasing party bosses and constituents, at least in terms of their service commitments (Johnston et al., 2002). Whether this is true or not, it implies that legislators perceive cross-cutting pressures and are acting in ways that challenge core components of the Westminster system as traditionally considered. In this way, increasingly conflicting incentives may endanger both the normative justification for, and mechanical functioning of, the future working of this traditional method of governance (e.g. Powell, 2000)—an issue already of concern to psephologists (see Blau, 2004). Though it seems unlikely that Westminster systems will find themselves adopting American parliamentary practices, moves in that direction have obvious consequences for 'national' party mandates.

To be clear, we are aware that our findings are commensurate with interpretations other than the ones we asserted here: we make no claims to have (uniquely) causally identified

a particular story here. Instead, we view our work as a first cut at using a massive new database to 'fill in' gaps in our knowledge on British Political Development—a topic of long-standing and general interest to political scientists (e.g. Cox, 1987; Judge, 1993; McLean, 2001; Schonhardt-Bailey, 2003), historians (e.g. Bagehot, 1873/2011; Lowell, 1902; Redlich, 1908; O'Leary, 1962; Cannadine, 1990), economists (e.g. Acemoglu and Robinson, 2000; Lizzeri and Persico, 2004) and others (e.g. Crossman, 1964). As we hope is clear, with this new data, scholars have numerous possibilities for future research, whether it be the contents of speeches (in the sense of e.g. Quinn et al., 2010), the nature of (any) incumbency advantage in electoral races, the ideological cohesion of parties (MacRae, 1970, e.g.) and the role of promotion opportunities therein (Benedetto and Hix, 2007), the effect of the changing sociological makeup of members of parliament (e.g. Rush, 2001) and so on. We leave such efforts for future work.

References

Acemoglu, Daron and James Robinson. 2000. "Why did the west extend the franchise? democracy, inequality, and growth in historical perspective." *The Quarterly Journal of Economics* 115(4):1167–1199.

Adyelotte, W.O. 1954. "The House of Commons in the 1840s." *History* XXXIX:249–262.

Bagehot, Walter. 1873/2011. *The English Constitution (2nd Edn)*. Accessed June 6, 2011.: http://socserv.mcmaster.ca/ econ/ugcm/3ll3/bagehot/constitution.pdf.

Benedetto, Giacomo and Simon Hix. 2007. "The Rejected, the Ejected, and the Dejected: Explaining Government Rebels in the 2001-2005 British House of Commons." *Comparative Political Studies* 40:755–781.

Berrington, Hugh. 1968. "Partisanship and Dissidence in the Nineteenth Century House of Commons." *Parliamentary Affairs* XXI:338–74.

Blau, Adrian. 2004. "A quadruple whammy for first-past-the-post." *Electoral Studies* 23(3):431–453.

Bowler, Shaun. 2010. "Private Members' Bills in the UK Parliament: Is There an Electoral Connection?" *The Journal of Legislative Studies* 16(4):476–494.

Brazier, Rodney. 1997. *Ministers of the Crown*. New York: Oxford University Press.

Budge, Ian. 1999. *Critical Elections: British Parties and Voters in Long-term Perspective*. London: Sage Publications.

Burke, Edmumd. 1774/1975. Speech to the Electors of Bristol. In *Edmund Burke: On Government, Politics and Society*, ed. B.W. Hill. London: Fontana.

Butler, David and Donald Stokes. 1974. *Political Change in Britain*. 2 ed. Macmillan.

Butler, David and Gareth Butler. 1994. *Twentieth Century British Historical Facts*. 8th ed. London: MacMillan Press.

Cain, Bruce E., John A. Ferejohn and Morris P. Fiorina. 1987. *The Personal Vote: Constituency Service and Electoral Independence*. Cambridge, MA: Harvard University Press.

Canes-Wrone, Brandice, David W. Brady and John F. Cogan. 2002. "Out of Step, Out of Offce: Electoral Accountability and House Members' Voting." *American Political Science Review* 96(1).

Cannadine, David. 1990. *The decline and fall of the British aristocracy*. Yale University Press New HavenLondres.

Cook, C. and B. Keith. 1975. *British Historical Facts 1830-1900*. London: Palgrave-MacMillan.

Cowley, Philip. 2002. *Revolts and Rebellions: Parliamentary Voting Under Blair*. London: Politico's Press.

Cowley, Philip and Mark Stuart. 2005. "Being Policed? Or Just Pleasing Themselves? Electoral Rewards and Punishment for Legislative Behaviour in an Era of Localized Campaigning Effects: The Case of the UK in 2005.". Paper presented at the 2005 EPOP Conference, Essex University.

Cox, Gary. 1987. *The Efficient Secret: The Cabinet and the development of Political Parties in Victorian England*. Cambridge: Cambridge University Press.

Cox, Gary. 1992. "The Origin of Whip Votes in the House of Commons." *Parliamentary History* 11(2):278–285.

Cox, Gary W and Frances Rosenbluth. 1995. "Anatomy of a split: the Liberal Democrats of Japan." *Electoral Studies* 14(4):355–376.

Craig, F. W. S. 1983. *British parliamentary election results, 1918-1949*. 3rd ed. Chichester: Parliamentary Research Services.

Craig, Frederick. 1989*a*. *British Parliamentary Election Results, 1832–1885*. London: Macmillan Press.

Craig, F.W.S. 1989*b*. *British parliamentary election results, 1885-1918*. Parliamentary Research Services.

Crewe, Ivor. 1983. In *Change in British Politics*, ed. Hugh Berrington. London: Frank Cass chapter The Electorate: Partisan Dealignment 10 Years On, pp. 183–215.

Crossman, Richard. 1964. In *The English Constitution*, ed. Walter Bagehot. London: C.A. Watts chapter Introduction.

Denver, David and Gordon Hands. 1997. *Modern Constituency Electioneering*. Portland, Oregon: Frank Cass.

Fenno, Richard. 1978. *Home Style: House Members in their Districts*. Boston: Addison-Wesley.

Fisher, D.R. 2009. *The House of Commons, 1820–1832*. Cambridge: Cambridge University Press.

Gaines, Brian J. 1998. "The Impersonal Vote? Constituency Service and Incumbency Advantage in British Elections, 1950-92." *Legislative Studies Quarterly* 23(2):pp. 167–195.

Gash, Norman. 1952. *Politics in the Age of Peel: A Study in the Technique of Parliamentary Representation, 1830-1850*. London: Longmans, Green, and Co.

Gash, Norman. 1977. The Conservatives: A history from thier origins to 1965. London: George Allen & Unwin Ltd chapter The Great Disruption.

Hanham, Harold. 1978. *Elections and Party Management*. Harvester Press.

Jenkins, Terence. 1996. *Parliament, party and politics and Victorian Britain*. New York: Manchester University Press.

Johnston, Ron, Philip Cowley, Charles Pattie and Mark Stuart. 2002. "Voting in the House or wooing the voters at home: Labour MPs and the 2001 general election campaign." *Journal of Legislative Studies* 8(2):9–22.

Judge, David. 1993. *The Parliamentary State*. London: Sage Publications.

Kam, Christopher J. 2009. *Party Discipline and Parliamentary Politics*. Cambridge: Cambridge University Press.

Levitt, Steven and James Snyder. 1997. "The Impact of Federal Spending on House Election Outcomes." *Journal of Political Economy* 105(1):30–53.

Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven, CT: Yale University Press.

Lizzeri, Alessandro and Nicola Persico. 2004. "Why did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's Age of Reform." *Quarterly Journal of Economics* 119:707–765.

Loewen, Peter, Royce Koop, Jaime Settle and James Fowler. Forthcoming. "A Natural Experiment in Proposal Power and Electoral Success." *American Journal of Political Science* .

Lowell, James. 1902. "The Influence of Party on Legislation in England and America." *Annual Report for the American Historical Association for the year 1901* i.

MacRae, Duncan. 1970. *Issues and Parties in Legislative Voting: Methods of Statistical Analysis*. New York: Harper & Row.

McLean, Iain. 2001. *Rational Choice and British Politics*. Oxford: Oxford University Press.

Norris, Pippa. 2001. London: Macmillan chapter New Labour and Public Opinion: The Third Way as Centrism?, pp. 32–44.

Norton, Philip and David M. Wood. 1993. *Back from Westminster: British Members of Parliament and their Constituents*. Lexington: University of Kentucky Press.

O'Leary, Cornelius. 1962. *The elimination of corrupt practices in British elections, 1868-1911*. Clarendon Press.

Ostrogorski, Moisei. 1902. *Democracy and the Organization of Political Parties (Vol 1)*. London: MacMillan and Company Limited.

Pattie, Charles, Edward Fieldhouse and R. J. Johnson. 1994. "The Price of Conscience: The Electoral Correlates and Consequences of Free Votes and Rebellions in the British House of Commons, 19897–92." *British Journal of Political Science* 24:359–80.

Pattie, Charles J., Ronald J. Johnston and Edward A. Fieldhouse. 1995. "Winning the Local Vote: The Effectiveness of Constituency Campaign Spending in Great Britain, 1983-1992." *American Political Science Review* 89(4):969–983.

Powell, Bingham. 2000. *Elections as Instruments of Democracy: Majoritarian and Proportional Visions*. New Haven: Yale University Press.

Quinn, Kevin, Burt Monroe, Michael Colaresi, Michael H. Crespin and Dragomir Radev. 2010. "How to Analyze Political Attention with Minimal Assumptions and Costs." *American Journal of Political Science* 54:209–228.

Redlich, Josef. 1908. *The Procedure of the House of Commons: A Study of its History and Present Form*. London: Constable & Co.

Rhodes, R.A.W., John Wanna and Patrick Weller. 2009. *Comparing Westminster*. Oxford: Oxford University Press.

Rush, Michael. 2001. *The Role of the Member of Parliament Since 1868: From Gentlemen to Players*. Oxford: Oxford University Press.

Schonhardt-Bailey, Cheryl. 2003. "Ideology, Party and Interests in the British Parliament of 1841-1847." *British Journal of Political Science* 33:581–605.

Searing, Donald. 1994. *Westminster's World: Understanding Political Roles*. Cambridge, MA: Harvard University Press.

Stein, Robert and Kenneth Bickers. 1997. *Perpetuating the Pork Barrel: Policy Subsystems and American Democracy*. Cambridge: Cambridge University Press.

Stephens, Hugh W. and David W. Brady. 1976. "The Parliamentary Parties and the Electoral Reforms of 1884-85 in Britain." *Legislative Studies Quarterly* 1(4):pp. 491–510.

Thorne, R. G. 1986. *The House of Commons: 1790–1820*. London: Secker & Warburg.

Walker, Brian. 1978. *Parliamentary Elections in Ireland, 1801-1922*. Dublin: Royal Irish Academy.