How Much Influence Does Government Have Over the Legislative Agenda? Evidence from the U.K., 1810-2004*

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Abstract

The policy intentions of democratically elected governments can be upended by external events: pandemics, foreign crises, economic shocks, etc. So, how much influence do elected governments really have over the legislative agenda? To analyze this question, I introduce a new method for quantitatively tracking the agenda of the British Parliament–the substantive topics on which Parliamentary debate was focused–from 1810-2004. I show that changes in government had little effect on the agenda of Parliament, while external shocks, such as economic downturns or conflicts, mattered more. Government influence on the direction of policy discussion appears to be limited.

1 Introduction

In democratic systems, elected political parties or leaders typically come to power with a set of policy goals that they hope to achieve. Yet, as recent years have vividly illustrated, these plans are often disrupted, by economic downturns, pandemics, foreign crises, domestic scandals, and a variety of other factors. So, how much influence do the preferences of democratic governments really exert over the policy issues that are addressed during their time in power?

The answer to this question is theoretically ambiguous. The simple median voter model (Hotelling, 1929; Downs, 1957) predicts that political parties should propose and enact similar policies as they compete for the median voter. In this case, we would expect to observe government playing a reactive role, responding to changes in the preferences of the median voter, and the identity of the party in power would not matter. However, if either the preferences of the voters are not well-known to politicians (Roemer, 1997) or politicians or parties are unable to make credible commitments to the policies they will enact (Alesina, 1988; Osborne & Slivinski, 1996; Besley & Coate, 1997), then the identity of the winning candidate or party can matter – if they have the power to substantially influence the legislative agenda.[1] Whether the identity of government matters is therefore an empirical question.

This study examines the influence of party identity over one crucial step in the complex democratic policymaker process: the determination of the legislative agenda. By the legislative agenda, I mean the set of issues on which the time and attention of Parliament is expended.[2] As any meeting attendee knows, agenda setting does

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[1]Even without commitment, in some models repeated elections may cause the identity of the winning party to cease to matter. See Duggan & Martinelli (2017) for further discussion.

[2]The "agenda of Parliament" should not be confused with the agenda of the governing party,

not determine policy outcomes, but it does play a crucial role in bounding the set of issues considered and outcomes achieved. Thus, examining the Parliamentary agenda can help us understand the extent to which parties are able to influence the set of issues addressed during their time in office.

A necessary first step in this analysis is developing a way to track the set of policy topics considered or enacted in a democratic system over a period of time that is sufficiently long to smooth over the idiosyncratic influence of particular administrations. I develop such a measure for the United Kingdom over nearly two centuries, from 1810-2004. I measure this agenda using short descriptions of each debate that took place in Parliament, drawn from the Parliamentary Hansard.[3] Starting with the debate descriptions for 1810-2004, I apply a keyword-based approach in order to trace out the substantive topics discussed by Parliament during the study period, and then add up the words spoken in debates on each topic to arrive at a measure of the amount of Parliamentary time and attention devoted to different substantive issues over time. The result is an agenda dataset that allows me to trace out, over almost two centuries, the share of Parliamentary time devoted to topics such as electoral reform, taxation, foreign affairs, crime, education, and housing. After describing the methods used to identify topics in the Hansard data, I provide several validation checks for my agenda dataset. For example, I show that the topic series match up well to key historical events, and that topics that received more Parliamentary time predict the passage of

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defined as the set of issues the party plans to deal with during a particular period and often set forth in a manifesto.

[3]While data from the *Hansard* have been used in previous studies, as I discussion later, this paper uses an aspect of the Hansard data that has not been previously exploited. Specifically, I use the descriptions of the topic discussed in each debate. In contrast, previous studies use the text of actual debates. While useful for many purposes, the debate texts are not a good substitute for the topic descriptions when the goal is to look at the substantive topics debates, the focus of this study. I discuss this point in detail in Section 2.

Acts. I complement the agenda data with a second novel dataset that identifies the topic of Acts passed by Parliament from 1820-1900. Together, these datasets provide a novel long-run perspective that can be used to better understand the development of the British political system during this important period of history.

Using these data, I examine whether the government plays a primarily *proactive* or a primarily *reactive* role in determining the agenda of Parliament. By a *proactive* role, I mean that the government's own preferences and agenda substantially influence the overall agenda of Parliament. In this case, we would expect to see notable changes in the types of topics considered after elections in which the party in government changes. Alternatively, we might think that the government plays a primarily *reactive* role in determining the agenda. This may occur if the topics that demand the attention of Parliament are driven primarily by forces other than the party's own preferences, such as public opinion, economic conditions, or international crises. In this reactive model, we should not expect changes in the party in power to have a substantial effect on the agenda of Parliament.

My results suggest that British governments played a primarily reactive, rather than proactive, role during the period that I study. Several different types of analysis all support this result. First, I do not find evidence of unusual changes in the share of attention paid to different topics around years in which the party in power changes. This is not simply a measurement issue; I do find significant evidence of systematic short-run shifts in the agenda around economic downturns or the onset of major conflicts. Second, across most of my study period I find no evidence that particular topics received more attention when one party was in government rather than the other. However, this pattern may have changed in the second half of the twentieth

century, when I do observe a systematic relationship between Labour Party control and debates related to workers and working conditions. Overall, these results suggest that across nearly two centuries, the identity of the party in power did not have a systematic meaningful influence on the set of issues on which the time and attention of Parliament was focused. Finally, I confirm these results by showing that the same patterns appear in the topics of the Acts actually passed by Parliament.

It is important to recognize that these results do not imply that party identity had no effect on the final policy outcomes of these debates. The party in power may still have played a substantial role in determining the details of the response to a particular issue. However, it does suggest that the extent to which a party in government is able to influence policy is circumscribed by the particular set of issues that demand attention during their time in power.

Relative to existing studies, this paper makes two primary contributions. First, I provide a novel approach that allows us track, over the long-run, the substantive issues to which the time and attention of Parliament was dedicated. To my knowledge this is the first study to provide such data, which are likely to be useful for studying a range of different questions related to the evolution and operation of a democratic government over the long-run.

Second, I use these data to unpack the process through which policy is made and then improve our understanding of one important step in this process, the determinants of the Parliamentary agenda. To my knowledge, this is the first study to examine what factors influence the set of substantive policy issues on the agenda of a national Parliament.

One related strand of existing literature, both theoretical and empirical, examines

how the preferences of voters are related to policy outcomes. Such studies (examples include Miller (2008) and, more recently, Caughey & Warshaw (2018)) essentially treat the process that translates preferences into policies as a black box. I complement this literature by opening up the black box to examine one important step in the policymaking process. Another similar set of studies focuses on the connection between elections and the behavior of politicians, such as their roll call votes. Two prominent examples of such studies are Lee *et al.* (2004) and Fouirnaies & Hall (2022). My study is particularly relevant for work that relies on roll call votes as an outcome of interest, since my analysis can help us better understand the factors that determine the selected set of potential issues on which politicians actually vote.

One closely related study is Ferriera & Gyourko (2009), which uses data from U.S. cities to look at whether the party affiliation of local leaders affects outcomes such as the size of local government and crime rates. Similar to my results, they conclude that the party in power does not matter. However, their interpretation of this finding is that it results from Tiebout competition between cities, which cannot explain my results. In fact, a recent review of this and other similar studies for the U.S. suggests that the influence of party is likely to differ depending on the level of government, but that obtaining clear evidence at the national level has proven difficult (Potrafke, 2018). My results help fill-in this missing piece.

There is also a large theoretical literature that models how politicians and political parties establish their platforms or the policies that they adopt in office. Examples include Alesina & Cukierman (1990), Harrington Jr (1993), Kartik & McAfee (2007), Callander (2008), and Acemoglu *et al.* (2013). This line of work typically takes for granted that politicians and parties have substantial influence over policy outcomes.

However, my results suggest that external events likely place important constraints on the types of policies that parties are actually able to influence.

Finally, the my results contribute to an extensive body of work in economics, political science, and history describing the development of the British political system since the early nineteenth century. This period of British history has had a particularly important influence on the development of political economy theory, motivating seminal papers such as Acemoglu & Robinson (2000) and Lizzeri & Persico (2004). Relative to existing work in this area, my contribution is to provide data and methods that allow us to measure and study the substantive issues that absorbed the time and attention of Parliament over this period.

2   Data and Methods

This section presents the data used in the analysis and then discusses the method I use to identify agenda topics. After introducing my approach, I then compare my method to other plausible alternatives.

2.1   Hansard data

Starting with the Parliamentary session of 1803-4, two British publishers, T.C. Hansard and William Cobbett began publishing records of the debates of Parliament.[4] Starting in 1808, Hansard became the sole publisher of the series which now bears his name.[5] The *Hansard* was not an official document until 1909, but throughout the 19th cen-

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[4] Jordan (1931).

[5] This was not the only publication to offer this service in the early 19th century. *The Mirror of Parliament* provided similar coverage from 1828-41 (Jordan, 1931).

tury it was published continuously and attained semi-official status by providing the most complete and authoritative description of the debates of Parliament.[6]

The *Hansard* data used in this study are scraped from the digitized version of the *Hansard* provided by `hansard.parliament.uk`. That source includes both transcripts of actual debates as well as index pages that describes the main topic of each debate on each day together with the number of words dedicated to each of those debates. I scraped each index page to obtain a database that lists descriptions of the topics discussed in each individual debate, as well as the number of words dedicated to each discussion and whether the debate took place in the Commons or the Lords. In most of the analysis I focus on debates in the House of Commons only. One year 1829, is missing from the digitized *Hansard* records and therefore also from my dataset.

Hansard data have been used by previous researchers, such as Eggers & Spirling (2014b), Eggers & Spirling (2014a), Spirling (2016), and Eggers & Spirling (2018), but there are important differences in terms of both the data that I use and the methods that I apply. Previous studies in this area use the text of actual speeches to study topics such as the sophistication of language used in Parliamentary debates. In contrast, I use the topic descriptions printed in the original *Hansard* volumes, which

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[6]The *Hansard* is not a verbatim report. Rather, it is a lightly-edited and sometimes abbreviated compilation which, particularly in the early years, drew on a variety of sources, mainly the daily papers which covered Parliament debates extensively. Proofs were sometimes sent to speakers for correction though Jordan (1931) reports that Hansard claimed that he refused to make any addition that was not actually spoken. The *Hansard* received a government subsidy starting in 1855 and was subject to additional regulations starting in 1888, such as the requirement that a reporter must be kept constantly in each house. Despite the drawbacks associated with a record that is influenced both by the sources available and the judgment of the editor, the *Hansard* remains by far the most complete and authoritative record of the workings of Parliament in the 19th century. Moreover, even if some material was omitted from the record, there is little reason to believe that substantial topics could have been omitted in a systematic way. Anderson (1997) argues that the *Hansard* is sufficient if "all that is needed is the general shape of the debate" but that it may fall short if one is interested in the nuances of a particular debate.

reveal the subject being debated, as well as associated information such as the number of words spoken in each debate. This aspect of the data has not, to my knowledge, been exploited in previous work. The reason that these topic descriptions are useful is that they represent the judgment of a highly informed contemporary expert on the primary subject of a particular discussion. As such, they provide the necessary building block for tracking the types of substantive issues discussed in Parliament over time. Later, I will discuss the advantages and disadvantages of using these topic descriptions relative to alternative methods such as automated topic modelling.

Debates range from very short questions of just a few words to long discussions in which tens of thousands of words were spoken. The mean length across all debates was 1,356. In total, over 2.36 billion words were spoken in the debates covered by my database. Appendix Figure 6 describes the number of words found in the *Hansard* debate records by year. I use the topic information to classify debates into various subjects, while information on the number of words spoken is used as an indicator for the amount of Parliamentary attention it attracted. Appendix Figure 5 provides an example of the debate descriptions. In the next subsection, I describe the procedure used to assign these debate descriptions to topic classes.

While Parliamentary sessions typically correspond to years, some fraction of the debates in a session may spill over into other adjacent years. This most often occurs when Parliamentary sessions began in November or December and then extended through the following year. In order not to split up Parliamentary sessions, I classify all debates in a session into the year in which most of the session debates occur. Events such as elections or changes in the government (which do, rarely, occurred outside of elections) often split the Parliamentary sessions in a particular year into

two. So, some years may effectively contain two Parliamentary sessions, but both of those will be assigned to the same year. In most of my analysis, which involve comparing debate topics to explanatory variables observed at the annual level, such as recessions, I will collapse Parliamentary sessions to years as my unit of observation.

2.2 The keyword approach

The key step in preparing the data for analysis is classifying the debates into topic categories. To do so, I use a keyword approach. The first step is to parse the debate descriptions into their component words, removing punctuation and common words, so that each debate is associated with a set of individual words. This process generates a list of around 52,000 words that appear in the debate descriptions.[7] From this list, I manually classify the subset of words associated with at least 10,000 spoken debate words. Out of this set of 10,990 words, 3,238 can be classified as associated with specific topics, because they are clearly associated with specific issues. Examples of common words that *cannot* be associated with specific topics include: bill, clause, new, government, national, amendment.

Appendix Table 5 presents the top-ten keywords associated with each topic. A quick glance at this table suggests that the keywords are reasonable. For example, for the topic of education, the most important keywords are terms like "education," "schools," "college," "teachers," etc. To help limit concerns about misidentification, when classifying keywords I manually audited the debates associated with those words, as suggested by Gentzkow *et al.* (2019). Specifically, I review a sample of debates associated with each keyword in order to ensure that the debate topics actually

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[7]Some of the 50,000 words are misspellings, which I carefully correct, allowing some of those terms to be classified.

fit with the topic category that the keyword is associated with. An alternative quality check to this manual auditing procedure is to validate the results obtained from the keyword approach. That is done in Section 3.

Using keywords to classify the debate descriptions into topics, and then using the number of words associated with each debate to track the attention paid to different topics over time, has two advantages. First, this approach is fairly transparent, in that the keywords associated with each topic can be observed and evaluated. Second, it is flexible, in that it is easy to add or drop keywords and examine the robustness of results to various alternatives.

Across the full study period, the ten most common topics of Parliamentary debate were foreign affairs, the budget, financial issues (such as monetary policy), education, the military (excluding the Navy, which I treat separately, but including the Army, ordinance, and various militias), Ireland, crime, health, local government, and transportation infrastructure (see Appendix Table 6 for a more extensive list). This list seems to correspond reasonably well to those topics that we expect. Of course, this list would look substantially different in the early nineteenth century than in the late twentieth. In Appendix G, I discuss the main changes in the importance of topics over time.

It is important to note that debates may be classified into more than one topic. So, for example, a debate over education in Ireland will be classified under both the education topic and the Ireland topic. This is a useful feature, particularly with regard to the location-based topics, because it will allow me to separate, say, debates related to education in Ireland or India from those focused on Britain.

Not all debates are classified using the keyword approach. Some were on pro-

cedural issues or were of a general nature, such as the "Queen's Speech" or "King's Speech" that starts off each session of Parliament. Others were on such specific topics that they defy classification. My procedure classifies between 70 and 90 percent of the words spoken in Parliament in each year into a debate on one or more specific topics, with the classified share roughly constant across the study period (see Appendix B for further details).

2.3   Discussion of methods

Having now described the approach that I will use, it is useful to assess the advantages and disadvantages of this approach relative to other available alternatives. The most prominent of these alternatives are various topic modelling approaches which have been applied in similar contexts by studies such as Quinn *et al.* (2010) and Greene & Cross (2017).

Regardless of the approach used, the goal in my context is to identify and categorize the primary subject being discussed in any particular Parliamentary debate. It is useful to think about this as involving two steps, though these steps may be completed simultaneously in some procedures: (1) identifying the subject of a debate, and (2) categorizing related subjects into a parsimonious set of topic categories.

In my approach, the first step relies on the topic descriptions provided by knowledgeable contemporary observers available in the original *Hansard* documents. These draw on the actual debate text and may also be based additional information not included in that text. For example, the *Hansard* observers would have almost certainly known that a debate was over a particular bill even if the actual title of the bill is never explicitly mentioned in the debate. The second step is done using the keyword

procedure described above.

In contrast, a topic modelling approach will typically start with the actual debate text and then apply machine learning methods to parse and categorize the text. In identifying the subject of a debate based on the debate text, a recent review of these methods by Gentzkow *et al.* (2019) highlights the substantial disadvantages of machine learning methods relative to knowledgeable human readers; "When humans read text, they do not see a vector of dummy variables, nor a sequence of unrelated tokens. They interpret words in light of other words, and extract meaning from the text as a whole...virtually all of the analysis of text in the social sciences, like much of the text analysis in machine learning more generally, ignores the lion's share of this complexity." This disadvantage is even greater in my context, since the contemporaries assigning topic descriptions had access to additional information not included in the actual debate texts. Given this, it seems clear that there are substantial advantages in identifying the subject matter of debates using the topic descriptions based on knowledgeable human judgement rather than the raw text. Unfortunately, once we move to the debate descriptions, topic modelling approaches cannot be effectively applied for categorization because the descriptions are quite short, with little of the overlap needed to build up topic categories.

One might think that a topic modelling approach provides an advantage in terms of transparency, flexibility, and replicability, relative to the approach I propose, since the algorithm can be observed and adjusted in the original replication files. It is true that the methodology followed by the contemporaries who decided on the debate topic descriptions cannot be observed and so that element of my approach suffers from a lack of transparency, though this likely does not outweigh the advantages of relying

on human judgement to identify topics, particularly when those contemporaries were likely drawing on additional information not included in the debate texts. In the categorization phase, my method is also quite transparent, because the keywords included in each category can be easily reviewed, and flexible, because they can be easily adjusted, and replicable, because similar procedures could be easily applied in other contexts.

Given these considerations, I conclude that my approach is preferable to more automated alternative approaches in the context I study. Of course, were topic descriptions produced by knowledgeable contemporaries not available, the extremely high cost of reproducing such descriptions would make automated methods much more attractive.

2.4 Acts data

The other major data set used in this study covers all of the Public General Acts passed by Parliament from 1820-1900.[8] For each act, a short description was digitized from the printed compendiums of the Public General Statutes. I also collect information on the length (number of pages) of each act, which provides an indicator of the novelty and importance of each Act.[9] In total, this dataset covers 7,692 Acts passed from 1820-1900

The act descriptions are fairly similar, in terms of the level of detail, to the debate

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[8]This dataset is limited to this period because consistent "long" descriptions for each act were provided in index form. Before 1820 the Act titles are written in antiquated English, which would require manual translation to utilize. After 1900, the indexes to the acts that I use no longer provide information on the length of the act, so I end the dataset in that year.

[9]There are many short acts, with total lengths under one page. These were often relatively minor modifications of previous legislation. In contrast, substantial new acts were typically dozens of pages in length.

descriptions provided by the *Hansard* data. Thus, they naturally lend themselves to the same keyword approach used to classify the *Hansard* debates. Using exactly the same keywords as used for the *Hansard* data, I classify the acts into topic groups. Using this approach, 94.5% of the acts can be classified into one more more topic groups. Appendix D describes to top twenty topics found in the acts data either by number of acts passed or by the length of those acts. Perhaps not surprisingly, those topics that attracted the most attention in debates also tended to be associated with the number of acts passed. Later, I will examine this relationship in more detail. However, it is interesting to note that some topics, such as foreign affairs and the military, account for a smaller share of acts than of debate words. In the first case, this reflects that foreign affairs were often conducted without the need for passing a new act, while much of the debate over the military surrounded the size of budgets which were included as components in broader budgeting acts. This highlights one advantage of the *Hansard* debates data relative to studying the set of acts passed.

3   Validating the agenda data

This section looks at whether the data I have constructed are accurately picking up variation in the agenda of Parliament across the study period. One way to do this is to compare the patterns observed for specific topics to well-known legislative turning points. A second approach involves studying the relationship between the topics debated in Parliament and the passage of Public General Acts. In Appendix G, I also discuss some of the long-run trends visible in the topics data. Those trends appear reasonable, reflecting a long-run evolution from an expansionist globe-spanning

empire with a domestic system where religion occupied a prominent position to a modern, secularized, welfare state.

3.1 Examining individual series

Figure 1 describes one topic series, the "Elections" topic which includes terms related to voting and the franchise, that can be compared to well-documented historical events. In the figure, we can see four major spikes in interest in this topic, corresponding to the four major electoral reform acts that took place during this period, indicated by the vertical lines in 1832, 1867, 1884, and 1918, as well as the Equal Franchise Act of 1928 (granting women equal voting rights). We can also see spikes corresponding to other important events, such as the Ballot Act of 1872, which introduced the secret ballot. Clearly, the *Hansard* data are reflecting the fact that the debates over the four landmark reform bills attracted a substantial attention from Parliament in those years. Perhaps just as important, the data in Figure 1 also pick up failed attempts at reform, such as the failed electoral reform efforts of 1859-60 that set the stage for the Second Reform Act of 1867. The fact that my data can pick up these important, if unsuccessful, efforts to pass legislation, is a valuable feature that illustrates how this measure can enrich our understanding beyond what could be learned from successful legislation alone.

Figure 2 examines two other topics, slavery and religion, that can be compared to well-documented historical events. In Panel A, which looks at the topic of slavery, I focus on the 19th century, when this was an important issue for debate. The vertical lines mark key historical points in anti-slavery legislation in Britain. The first, in 1823, marks the founding of the London Anti-Slavery Society. We can see that this

was followed by an increase in the intensity of debate over slavery in Parliament. The second vertical line denotes the abolition of slavery (outside of India), passed in 1833, and the third line, in 1838, marks the year at which abolition came into effect. These events are clearly reflected in the *Hansard* data.[10] Panel B looks at the number of words in debates associated with the topic of religion, with vertical lines indicating the dates of the disestablishment of the Irish Church (1869) and the Welsh Church (1914). Both of these important events were associated with increased debate over religious issues. A high level of debate over religious issues is also apparent in the late 1840s and early 1850s. This debate was related to the election of the first Jewish MP in 1847. It is worth noting here that another major law related to religion was the Catholic Relief Act passed in 1829. However, recall that 1829 is missing in my database because no digitized *Hansard* records are available for that year, so we cannot see whether debate over religions topics increased at that point as well.

3.2   Comparing to Acts passed

A second approach to validating the *Hansard* data is to conduct a broad comparison between all of the topics identified and some outcome of interest. To do so, I draw on the acts data and run regressions comparing the share of attention paid to various topics to the pages of acts passed related to each topic in each year. These results, in Appendix Table 9, show a strong relationship between the topics debated in Parliament and the pages of acts related to those topics. While not unexpected, this evidence shows that the *Hansard* debates, rather than simply being "hot air," were

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[10]One might be surprised by the spike in interest in the topic of slavery in 1876. This spike reflects the debate over the "Fugitive Slave Circulars," controversial directives issued by the Admiralty instructing British Navy ships to return fugitive slaves to their masters. This touched off such a hot debate that it led to the formation of a Royal Commission.

closely related to concrete legislation.

4 Measurement: Agenda churn

This section introduces the measure of *agenda churn* which will be used later in the analysis. The agenda churn measure reflects the extent to which the topics considered by Parliament were changing in the years just before compared to just after some year t. Analyzing the evolution of this measure can help us identify key political turning points, i.e., periods in which the types of issues that received the attention of Parliament shifted in meaningful ways.

Define the rate of agenda churn in the topics considered by Parliament in a year t comparing over periods of length τ as,

$$CHURN_t(\tau) = \sum_i \left| AVGSHR_{i,t+1,t+\tau+1} - AVGSHR_{i,t-1,t-\tau-1} \right|$$

where,

$$AVGSHR_{i,t+1,t+\tau+1} = \frac{\sum_{j=t+1}^{t+1+\tau} SHARE_i}{\tau}$$

In this formulation, $AVGSHR_{i,t+1,t+\tau+1}$ is the average across the years from $t+1$ to $t+1+\tau$ of the share of words spoken in debates related to topic i ($SHARE_i$).[11] $CHURN_t(\tau)$ is then a measure of the overall change (in absolute value) in these

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[11]There is a question here about whether to use the share of total words spoken in a year, or the share of words spoken in debates that can be classified into a topic. In the main analysis I focus on the share of words spoken that can be classified into a topic. Ultimately, however, both approaches yield very similar results.

shares occurring around year t summed across all topics.[12] This measure is based on observations stretching for τ years on either side of year t, which allows me to consider both short-run (1-2 year) and longer-run (5, 10, or 15 year) shifts. My analysis focuses primarily on short term churn (1 or 2 years), though it is also interesting to examine patterns over longer windows.

Note that debates from year t are not used when calculating churn around that year. The reason for omitting t is because I want to be able to compare to events, such as changes of government the onset of a recession, which may occur at different times during that year.[13] If t was not omitted, then we would have to take a stand about whether it should be included as a pre or post-treatment observation. Omitting year t allows me to abstract from that concern. It also has a second advantage, in that it allows for the possibility that there may be some delay between when an event occurs, and when the change begins to influence the agenda of Parliament (if it does so at all).

The churn rates used in my main analysis are obtained using only topics that accounted for at least 0.5% of total debate words across the study period, yielding 48 total topics.[14] Alternatively, I have examined results using cutoffs ranging from

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[12]This approach involves calculating the share of words within each year related to a topic and then averaging those shares across years. This means that years where Parliament was in session for a relatively short period of time are given the same weight as years where the session was lengthy. An alternative approach is to sum all of the words spoken on a particular topic across a window of length τ and then calculate the share of total words spoken in that window related to each topic. That alternative approach differs in that relatively short sessions of Parliament, with few words spoken, will have less impact on the churn rate. Ultimately, both approaches deliver similar results, as shown in Appendix I.

[13]There was no regular date for elections during most of the period I study, nor were elections necessarily required for a change in government, even one involving a shift in the party in control.

[14]When looking only at domestic topics, a topic must account for at least 0.5% of debate words after dropping words spoken in debates over non-domestic topics and words in unclassified debates in order to be included in the analysis. It turns out that 48 domestic topics satisfy this criterion.

0.25% to 2% (Appendix Table 15). None of the results presented below are sensitive to the choice of cutoff level.

Because the number of words spoken in Parliament is increasing across the study period (see Appendix Figure 6), churn will naturally decline over time.[15] In regression analysis I control for this by absorbing time trends using splines. When presenting churn graphically, I eliminate the trend by normalizing the churn measure by the number of words spoken in each session.[16]

4.1 Broad patterns in agenda churn

As a preliminary step in using the agenda churn measure, it is useful to study the pattern of agenda churn over time. Figure 3 graphs the agenda churn rate over time for τ equal to 1 year, 5 years, and 15 years when measured over all topics (left panels) or just over domestic topics (right panels). The results for domestic topics only exclude debates related to foreign affairs, the colonies, Ireland, India, the military, and warfare. As a point of comparison, the five major franchise reform acts are marked in vertical lines on the graph. Note that because the raw agenda churn measure is declining over time, to make the results in Figure 3 easier to interpret I have normalized the churn rate to account for this.[17] Graphs of the raw churn rate without normalization are available in Appendix Figure 9.

Several points in history show particularly high rates of churn. The earliest of

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[15]However, Dickey-Fuller tests reject the presence of a unit root in churn for $\tau = 1$ and $\tau = 2$, the values used in my main regression analysis, with p-values below 0.000 for tests either with or without allowing for a time trend.

[16]I do not do this in the regressions because the number of words spoken can be endogenous affected by events such as elections (which shorten Parliamentary sessions), which would muddy the regression results.

[17]Specifically, I multiply the churn rate in each period by the square root of the number of words spoken during the debates used to calculate each churn value.

these roughly corresponds to the passage of the First Reform Act in 1832. This event is associated with a substantial change in the agenda over both the short and medium-run windows. Notably, however, no similar spikes are found near the 1867 and 1884 franchise reforms.[18]

A second key turning point in the agenda of Parliament appears in the late 1840s or early 1850s. This spike appears when focusing on either all topics or only on domestic issues, and it appears when looking at shifts over one, five, or fifteen year periods. The timing of this spike corresponds with the repeal of the Corn Laws, which split the Conservative Party, as well as the Revolutions of 1848 on the Continent, which increased pressure on the British government through the Chartist movement. The evidence in Figure 3 indicates these events corresponded to the most pronounced shift in the agenda of Parliament observed during the nineteenth century.

The most notable period of elevated agenda churn occurs in the period from roughly 1908 to 1920. We know that this was a major period of reform for the British state, which encompassed the fight over the People's Budget, the weakening of the power of the House of Lords, the enormous disruptions of the First World War, and the passage of the Fourth Reform Act in 1918 which extended the franchise to women over 30 and all men over 21. It is not surprising that this tumultuous period appears as the most important turning point in the agenda of Parliament in the twentieth century. There is also evidence of an elevated rate of churn in the 1930s, with short-run measures suggesting a spike in churn in exactly 1930, while longer-run measures

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[18]While the cause of this difference deserves further investigation, one likely explanation is that the 1832 reform brought a relatively well-off segment of society into the franchise, a group that included many with the resources need to stand for office. In contrast, the working class men brought into the franchise in 1867 and 1884 were relatively less affluent and, as a result, existing elites retained substantial power in Parliament before WWI (Berlinski *et al.*, 2014).

push the change closer to the middle of the 1930s with elevated rates into the early 1940s. This pattern is almost certainly due to the onset of the Great Depression and the run-up to WWII.

5 Determinants of the agenda I: Agenda churn

This section begins my examination of the determinants of the agenda of Parliament, with a particular focus on the extent to which the party in power influenced the agenda. Specifically, I begin by examining how changes in the party in government affected the churn rate. In the following section, I look at whether certain parties were systematically related to the importance of certain topics.

Analyzing the impact of the party in power on outcomes is simplified by the fact that two parties, the Whigs or Liberals (including the Radicals) and the Tories or Conservatives dominated politics during roughly the first half of the period I study, and the Conservatives and Labour dominated during the second half. Thus, in broad terms it is reasonable to analyze changes in party control in the context of what was effectively a two-party system, with the Tory/Conservative Party on one side and on the other the Whig/Liberal party up through 1922 and Labour starting in 1924.[19] While I begin by analyzing the entire period, I also split my data into various sub-periods, which can better accommodate changes in the two dominant parties over time.

To study whether elections in which the identity of the party in power changed

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[19]After 1846, I classify periods in which Peelites held the office of Prime Minister as the same as those when the Whigs/Liberals were in control. In the early part of my study period there was a rift within the Tory party, between the free trade Canningites and the rest. Despite these disagreements, I classify the period when the Canningites held the Prime Ministership (1827-28) as a period of Conservative control.

were systematically associated with elevated (short-run) churn rates, I use the following simple regression approach:

$$CHURN_t^\tau = \beta_1 PARTY_t + X_t\lambda + \eta_t + \epsilon_t \tag{1}$$

where $PARTY_t$ is an indicator for years when the party in control of the Prime Ministership changes, X_t is a vector of control variables, and η_t is a set of time splines that are included in some specifications to absorb trends in the churn rate. In my preferred regression results, I include control variables for each of the major Reform Acts as well as a set of linear splines with kinks every 25 years (starting in 1825).[20]

Regression results are presented in Table 1, with results using all topics in the top panel and only domestic topics in the bottom panel. These results look across τ's of one year (Columns 1-3) or two years (Columns 4-6).[21] Serial correlation is a potential issue in these regressions, but the Durban-Watson statistics at the bottom of each panel indicate that this is not an important concern once basic controls for trends in the churn rate are included.

In Columns 1 and 4 I present the simplest regression specifications, without control variables. The estimated relationship between a change in party control is not statistically significant. The magnitudes are also very small, a feature that I will put into perspective later when I compare the influence of changes in party control to other factors, such as recessions, that may have affected churn rates. For domes-

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[20]Similar results are obtained when I use splines with kinks every decade or decade fixed effects, as shown in Appendix Figure 13. I use kinks every 25 years in my main specification mainly because that approach helps preserve power that will be useful later, when I study the impact of recessions and wars on the churn rate.

[21]I do not study effects for higher τ values since those are more likely to overlap with subsequent changes in party control. They are also more subject to attenuation bias, since many years will have a churn rate that spans at least one change in party control.

tic topics, in Panel B, the results from these specifications actually show negative coefficients.

In Columns 2 and 5, I add in time controls using linear splines, to account for any broader trends in churn, as well as controls for years in which major reform acts too place (those controls are relatively less important). The estimated effect of a change in party control remains statistically significant, and the coefficients become negative.

One potential concern with the estimates in Columns 1-2 and 4-5 is that they may be attenuated, because they include among the control years some years where the churn rate is calculated using a set of years that spans the year in which a change in party control occurred, i.e., years just adjacent to the years in which party control changed. We may worry that these are attenuating the results because their churn rate may be influenced by the change in party control. To deal with this potential concern, in Columns 3 and 6, I exclude from the comparison set years within one year (Column 3, when $\tau=1$) or two years (Column 6, where $\tau=2$) of a change in party control. Thus, none of the comparison years in these regressions includes a churn rate calculated using a year in which party control changed. This has very little impact on the results.

Overall, the main message from the results in Table 1 is that changes in the party in control do not appear to be associated with substantial shifts in the churn rate. A natural next question is whether the impact of a change in party control mattered more in particular periods. For example, we might expect the party in control to matter more later in the study period, when the government had gained more procedural control over Parliament (Cox, 1987), parties were becoming more powerful (Lowell, 1902; Berrington, 1968), and elections more national (Hanham,

1978; Jenkins, 1996). However, when I split the sample and look at the impact of party in various sub-periods, in Table 2, I continue to find no evidence that changes in party control were associated with unusual levels of churn in the agenda of Parliament.

We may also be concerned about whether these results are simply reflecting that the churn measure is too coarse to show a robust relationship with even potentially important explanatory variables. One way to check this, and to put the estimates above into perspective, is to compare agenda churn to other factors that could plausibly have affected the agenda. Specifically, I look at how agenda churn responded to the economic cycle (recessions) or the onset of major wars.[22]

The results in Table 3 compare the influence of recessions or major wars on agenda churn to the impact of changes in the party in control. The top panel looks across all topics, while the bottom panel focuses on domestic topics. In each panel, Columns 1-2 look at short-run churn ($\tau = 1$) while Columns 3-4 look over longer ($\tau = 2$) windows.

In both panels there is some evidence that recessions led to short-run increases in churn. As we might expect, this effect is stronger when focusing on domestic topics, in the bottom panel. For recessions, this pattern disappears when we look at churn over longer periods, which also makes sense given that most recessions are fairly short in duration. There is also evidence that major wars were associated with increases in churn. This is particularly apparent when looking at churn over slightly longer periods, which makes sense given that the duration of the the major wars in my data set was between three and seven years.

In contrast to recessions and wars, changes in the party in government are not

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[22]Appendix E describes how I identify recession years.

associated with elevated churn rates in any of these specifications. In fact, in most specifications the estimated effect of a change in party control is negative. At the bottom of each panel, I test for whether the effect of recessions or wars on the churn rate is statistically differentiable from the effect of changes in party control. For domestic topics, I find that the effect of recessions is statistically differentiable from the effect of a change in party control for short-run ($\tau = 1$) churn at standard confidence levels, while the effect of wars is statistically distinguishable for longer-run churn ($\tau = 2$). So, at least for domestic policy topics, we can say with some confidence that changes in party control almost certainly did not have the same impact on agenda churn as events such as recessions or major wars.

To assess the magnitude of the potential positive effect of a change in government that we can rule out, I study the upper confidence interval on the party change coefficient. Focusing on domestic topics, for short-run churn ($\tau = 1$) the upper 90 and 95% confidence interval bounds for the party change coefficient (using the specification in Column 2b) are 0.00042 and 0.00066. These are equal to, respectively, 0.25 and 0.38 of the estimated recession effect. Thus, we can be fairly confident that the upper-bound impact of a change in party control on short-run agenda churn is no more than 38% as large as the impact of a recession, and likely less than a quarter as large.[23] Thus, while we cannot rule out that a change in the party in government has some effect on the agenda of Parliament, the available evidence suggests that, even at the upper bound, any such effects are substantially smaller than the influence of events such as recessions or conflicts.

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[23]Similarly, for longer churn windows ($\tau = 2$), the 90 and 95% upper confidence bounds on the party change coefficient (from Column 4b) are equal to, respectively, 0.17 and 0.26 of the estimated effect of a major war.

In Table 4, I apply the same approach but using Acts passed as the outcome of interest rather than the topics debated in Parliament. While the Acts data are not as rich as the debates data, the results obtained from them confirm the basic patterns found in the debates. Specifically, changes in the party in power do not appear to have any systematic relationship to the rate of churn in the topics of Acts passed, whereas I do find evidence of elevated churn associated with recessions and wars. These results tell us that not only did parties fail to change the set of topics addressed in Parliament, but that as a consequence they also failed to shift the issues that were actually legislated upon.

Changes of government may have also had different effects during periods of crises, such as recessions or wars, than during other periods. Given that there are only a few years when such events overlap with a change in government (in part because government changes were avoided during major wars), an analysis that seeks to differentiate these effects is underpowered. Keeping this caveat in mind, in Appendix 16 I estimate separate effects for changes in the party in government that occur during recessions or major wars compared to the rest. Ultimately, I do not find any clear evidence that the impact of a change in the party in government was different when it occurred during a period of war or recession.

We may also wonder whether it isn't a change in the party in control that matters for the agenda, but rather just whether an election took place, or possibly the extent to which the election altered the balance of power in Parliament.[24] These possibilities are examined in Appendix Table 17. Neither of these appear to have any clear association with elevated short-run agenda churn.

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[24]Of course, elections may not change the party in power, nor, in the nineteenth century, did changes in the party in power necessarily require an election.

6   Determinants II: Topic partisanship

An alternative way to study the impact of party on the agenda of Parliament is to focus on whether particular topics are more likely to be on the agenda when a particular party is in control. In this section, I offer two different approaches to analyzing the relationship between parties and topics.

In the first approach, I focus on the major topics, those that accounted for at least 0.5% of total words spoken during the study period, and apply the following regression specification:

$$SHARE_{it} = \alpha_i TORY_t + \eta_t + \epsilon_{it} \tag{2}$$

where $SHARE_{it}$ is the share of words spoken in debates on topic i in year t, $TORY_t$ is an indicator variable for whether the Tory or Conservative party was in government during session t, and η_t is a set of linear splines with kinks every 25 years starting in 1825. For this exercise, each t corresponds to a session of Parliament.[25] I also check the robustness of my findings to focusing on sub-periods of the analysis and alternative sets of time controls.

Panel A of Figure 4 presents estimated coefficients and confidence intervals looking at the topics associated with particular political parties across the study period. We can see that most of the estimated coefficients are clustered around the zero line, indicating that they were just as likely to attract attention whether the Conservatives were in government or the Liberal/Labour parties. A relatively small number of topics

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[25]This differs from the previous regressions, where t denotes years. I focus on sessions of Parliament in this specification because I am not going to compare to a variable that is observable only at the year level (such as recessions). Also, note that I am not looking at churn here, so there is no τ to choose.

show statistically significant associations with one party or the other. However, I have run 48 regressions here, and so one would expect a number of them to be statistically significant by pure chance. In fact, the number of estimates showing statistically significant effects in Figure 4 are just about the number one would expect by pure chance, with no partisan effect at all. Consistent with this point, when I apply simple adjustments for multiple hypothesis testing (Romano & Wolf, 2005), I find no evidence that any topic retains a statistically significant relationship with the party in power; the *lowest* estimated p-value across all 48 topics after adjusting for multiple hypothesis testing is 0.495.[26] Additional robustness results, in Appendix M, show that similar results are obtained when I use alternative approaches to controlling for time trends. These results contrast with the patterns observed when looking at topics associated with major wars or recessions, in Appendix O, where I do see clearer patterns.

In Appendix L, I study patterns within sub-periods of the data using the same approach as applied in Figure 4. In all of the sub-periods before 1945, there is no evidence that the identity of the party in power had a statistically significant relationship with the types of issues debated in Parliament. However, after 1945 there is evidence that party identity was becoming somewhat more salient. In particular, I observe a statistically significant relationship, after accounting for multiple hypothesis testing, between the presence of the Labour party in power and one topic: discussions of issues related to laborers (e.g., related to working conditions, worker housing, etc.).

We may worry that periods in which a particular party was in control for a number of years differ in systematic ways from periods in which the other party was in office.

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[26]The lack of statistical significance is particularly notable given that a number of these series exhibit serial correlation, which will cause the estimated confidence bands to be too small.

In general, we would probably expect this to generate spurious results, rather than the non-results that I document. Still, it is worth considering this potential identification concern in regressions based on Eq. 2.

To help alleviate this concern, I study the relationship between the identity of the party in power and the topics on the Parliamentary agenda just before vs. after changes in government. To implement this type of analysis, I focus on a set of "experiment periods" characterized by two Parliamentary sessions with the Tories in power followed by two sessions with the Liberals or Labour in power, or vice versa.[27] Looking just before vs. after these changes, across all such experiments, I study whether certain topics were systematically more likely to appear when the Tories were in power. The specification is,

$$SHARE_{iet} = \alpha_i TORY_{et} + \eta_e + \epsilon_{ie} \tag{3}$$

where η_e is a set of experiment fixed effects and $TORY_{et}$ identifies the two sessions in each experiment where the Tories were in power (which may come either first or second).

Results based on Eq. 3 are presented in Panel B of Figure 4. These look very similar to the set of results presented in Panel A. In particular, there is very little evidence that certain topics systematically account for a greater share of the Parliamentary agenda when one party is in power rather than the other.

To summarize, I find no strong relationship between the identity of the party in

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[27]In robustness, in Appendix P, I consider an alternative specification where I look just one Parliamentary session on either side of a change in government. I focus on two sessions in my main analysis because sessions just before or after an election tended to be short and may not have been represenative of patterns observed in a full session.

power and the issues debated in Parliament across most of the study period, with the possible exception of debates related to workers in the period after 1945. For no other topics or time periods do I find evidence of a clear relationship between the identity of the party in government and the topics discussed in Parliament, nor do I find any evidence that changes in the party in control were associated with elevated levels of agenda churn. As with all null results, it is important to keep in mind that the fact that I do not find a clear effect of party on the agenda in the pre-WWII period does not rule out a small relationship, only a large and clear association.

7   Conclusions

This paper introduces a method for tracking the agenda of a Parliamentary government and applies it to study the impact of party control on the agenda of the British Parliament across almost two centuries. The data and methods developed here have the potential to help researches address a range of questions about the evolution of government over the long-run. The substantive results also help extend our understanding of the history and development of British government.

The primary substantive result to emerge from this investigation is that changes in the party in control of government appear to have had little impact on the actual topics that occupied the time and attention of Parliament. This finding may be surprising at first, and perhaps dispiriting for supporters of a newly-elected party hoping to see dramatic change. However, if we look back of the past two decades we can identify numerous forces largely outside of the control of political parties, including 9/11 and the subsequent terrorist attacks in several European countries, the

Great Recession, Covid-19, the Russia-Ukraine war, and numerous domestic political scandals, that exerted enormous influence on the political agenda. Other issues, such as immigration, or the wars in Iraq and Afghanistan, demanded the attention of Parliament for many years regardless of the party in control. This recent experience is consistent with the long-run findings presented in the analysis above, which indicate that on average Parliament's agenda was primarily *reactive*, responding to the pressing issues of the day, rather than *proactively* pursuing issues of interest to the governing party.

One implication of this model is that limitations in the governing party's ability to choose the set of issues that must be addressed will naturally limit the ability of the government to radically alter policy in its preferred direction. Of course, this does not mean that the governing party has no influence; the identity of the party in government may have substantial effects on the details of the response to any particular issue. The governing party may also be able to put off action for a limited time. Still, these results do suggest that governing parties faced important limitations in their ability to choose the types of issues confronted while they were in power.

Given that these results may seems surprising, in Appendix Q I review a number historical examples that illustrate my results. One prominent example is provided by the Second Reform Act in 1867. The first precursor of the 1867 Act was an 1851 Bill, introduced by the Radicals against the desires of the Whig government of Lord John Russel (Smith, 1966, p. 30). A following unsuccessful bill, in 1859, was introduced by the Earl of Derby's Conservative government, with Disraeli playing a key role. In 1866, with Russell (now Earl Russell) back in office, there was another push for reform, but Disraeli managed to defeat the bill and bring down the government. This opened

the way for a new Conservative government, led by the Earl of Derby and Disraeli, which pushed through a surprisingly extensive Reform Act. Thus, the experience of the Second Reform Act provides a prime example of the parties maneuvering around an issue that they seemed unable to avoid, rather than setting their own agenda. A number of other such examples are provided in the Appendix. Of course, historical counterexamples can also be found: cases where the identity of the government in power are thought to have mattered for the types of issues considered. My analysis tells us that such counterexamples were exceptions to the broader patterns.

One final message from my study is that, in order to make progress toward opening up the black box of democratic policymaking, it is useful to unpack the process through which political preferences and beliefs are translated into substantive policy actions. Here, I have examined one aspect of this process: the determinants of the legislative agenda. Further work is needed to understand other adjacent parts of the process.

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8 Tables

Table 1: Impact of changes in party control on churn

Window:		$\tau = 1$			$\tau = 2$	
Comparison set:	All years	All years	Non-overlapping years	All years	All years	Non-overlapping years
Panel A: All topics						
	(1a)	(2a)	(3a)	(4a)	(5a)	(6a)
Party control chg.	0.000511	-0.000609	-0.000695	0.000521	-0.000516	-0.000430
	(0.00127)	(0.000814)	(0.000841)	(0.00106)	(0.000673)	(0.000903)
Reform Act Cont.		Yes	Yes		Yes	Yes
Time splines		Yes	Yes		Yes	Yes
Observations	192	192	142	190	190	100
R-squared	0.001	0.628	0.635	0.001	0.726	0.758
DW stat.	0.75	1.89	1.47	0.42	1.41	0.81
Panel B: Domestic topics only						
	(1b)	(2b)	(3b)	(4b)	(5b)	(6b)
Party control chg.	-0.000147	-0.00101	-0.00112	-5.39e-05	-0.000768	-0.00115
	(0.00120)	(0.000787)	(0.000749)	(0.00108)	(0.000665)	(0.000861)
Reform Act Cont.		Yes	Yes		Yes	Yes
Time splines		Yes	Yes		Yes	Yes
Observations	192	192	142	190	190	100
R-squared	0.000	0.569	0.619	0.000	0.664	0.737
DW stat.	0.84	1.91	1.86	0.48	1.39	1.06

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons, but not in the Lords, are included. The Reform Act controls are indicator variables identifying the years of the major reform acts or franchise extensions: 1832, 1867, 1884, 1918, and 1928. I control for time-trends by including a full set of linear splines with knots every 25 years in Columns 2-3 and 5-6. Columns 1-2 and 4-5 include all years in the regressions. In Column 3, I exclude from the control group years on either side of the year in which a party change occurred. This ensures that my results are not attenuated by including years in which churn is affected by a change in the party in control among the set of control years. In Column 6 I do the same, but eliminating two years on either side of the year in which a party change occurred, to account for the wider span of years used to calculate churn.

Table 2: Impact of changes in party control by period

	One-year churn windows – All topics			
	1810-1859	1860-1909	1910-1969	1970-2004
Party control chg.	-0.00369**	0.00326**	-0.000669	-0.00231
	(0.00172)	(0.00141)	(0.00161)	(0.00147)

	One-year churn windows – Domestic topics			
	1810-1859	1860-1909	1910-1969	1970-2004
Party control chg.	-0.00342*	0.00102	-0.000930	-0.00225
	(0.00180)	(0.00116)	(0.00173)	(0.00170)

	Two-year churn windows – All topics			
	1810-1859	1860-1909	1910-1969	1970-2004
Party control chg.	-0.00356***	0.00240	-0.000987	7.02e-05
	(0.000988)	(0.00148)	(0.00145)	(0.000888)

	Two-year churn windows – Domestic topics			
	1810-1859	1860-1909	1910-1969	1970-2004
Party control chg.	-0.00172	0.000276	-0.00218*	-0.000813
	(0.00149)	(0.00109)	(0.00130)	(0.000882)

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period (that is, 0.5% of all topics in the "all topics" regressions and 0.5% of domestic topics in the "domestic topics" regressions). Only debates in the Commons, but not in the Lords, are included. Note that, unlike in Table 1, I do not include controls for time-period splines in these regressions because of the relatively shorter time period covered in each regression.

Table 3: Comparing the effect of party change to other events

| | DV: Agenda churn | | | |
| | $\tau = 1$ | | $\tau = 2$ | |
Panel A: All topics	(1a)	(2a)	(3a)	(4a)
Recession (other)	0.00252**	0.000157	0.00131	-0.000747
	(0.00125)	(0.000846)	(0.00103)	(0.000717)
Major war	0.00297**	0.00100	0.00309***	0.00140
	(0.00144)	(0.00136)	(0.00112)	(0.000967)
Party control chg.	0.000704	-0.000594	0.000706	-0.000519
	(0.00129)	(0.000839)	(0.00108)	(0.000669)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	192	192	190	190
F-test: Recession Coef. = Party Control Coef.				
p-val	0.30	0.52	0.66	0.82
F-test: War Coef. = Party Control Coef.				
p-val	0.23	0.29	0.11	0.098
Panel B: Domestic topics	(1b)	(2b)	(3b)	(4b)
Recession (other)	0.00355**	0.00172*	0.00170	5.35e-05
	(0.00139)	(0.000980)	(0.00109)	(0.000793)
Major war	0.00387***	0.000837	0.00517***	0.00228**
	(0.00136)	(0.00152)	(0.00127)	(0.00114)
Party control chg.	0.000149	-0.000927	0.000274	-0.000714
	(0.00124)	(0.000808)	(0.00107)	(0.000666)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	192	192	190	190
F-test: Recession Coef. = Party Control Coef.				
p-val	0.064	0.045	0.32	0.42
F-test: War Coef. = Party Control Coef.				
p-val	0.034	0.26	0.003	0.026

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The Reform Act controls are a set of fixed effects identifying years in which one of the five major reform acts were passed. The splines have knots every 25 years. All regressions include as a control indicator variables for downturns occurring just after major wars, though the inclusion of those controls does not substantially affect either the estimated coefficients or the statistical significance of the results.

Table 4: Analyzing churn in topics of Acts passed

| | DV: Agenda churn in Acts data | | | |
| | $\tau = 1$ | | $\tau = 2$ | |
Panel A: All topics	(1a)	(2a)	(3a)	(4a)
Recession (other)	0.00868**	0.00913**	0.00821	0.00525
	(0.00393)	(0.00433)	(0.00667)	(0.00710)
Major war	0.0101	0.0106	0.0212	0.0306*
	(0.00934)	(0.0108)	(0.0139)	(0.0160)
Party control chg.	-0.00187	-0.00197	0.00163	0.00190
	(0.00347)	(0.00366)	(0.00661)	(0.00732)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	70	70	69	69
F-test: Recession Coef. = Party Control Coef.				
p-val	0.055	0.06	0.50	0.74
F-test: War Coef. = Party Control Coef.				
p-val	0.25	0.32	0.22	0.14
Panel B: Domestic topics	(1b)	(2b)	(3b)	(4b)
Recession (other)	0.0123**	0.0124**	0.00912	0.00548
	(0.00518)	(0.00556)	(0.00830)	(0.00857)
Major war	0.00505	0.00875	0.0149	0.0282**
	(0.00438)	(0.00644)	(0.0107)	(0.0136)
Party control chg.	-0.00216	-0.00233	-0.00771	-0.00868
	(0.00411)	(0.00404)	(0.00692)	(0.00809)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	70	70	69	69
F-test: Recession Coef. = Party Control Coef.				
p-val	0.046	0.037	0.14	0.23
F-test: War Coef. = Party Control Coef.				
p-val	0.27	0.20	0.097	0.049

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Data cover 1820-1900. The Reform Act controls are a set of fixed effects identifying years in which one of the major reform acts were passed during that period. The splines have knots every 20 years (1840, 1860, 1880).
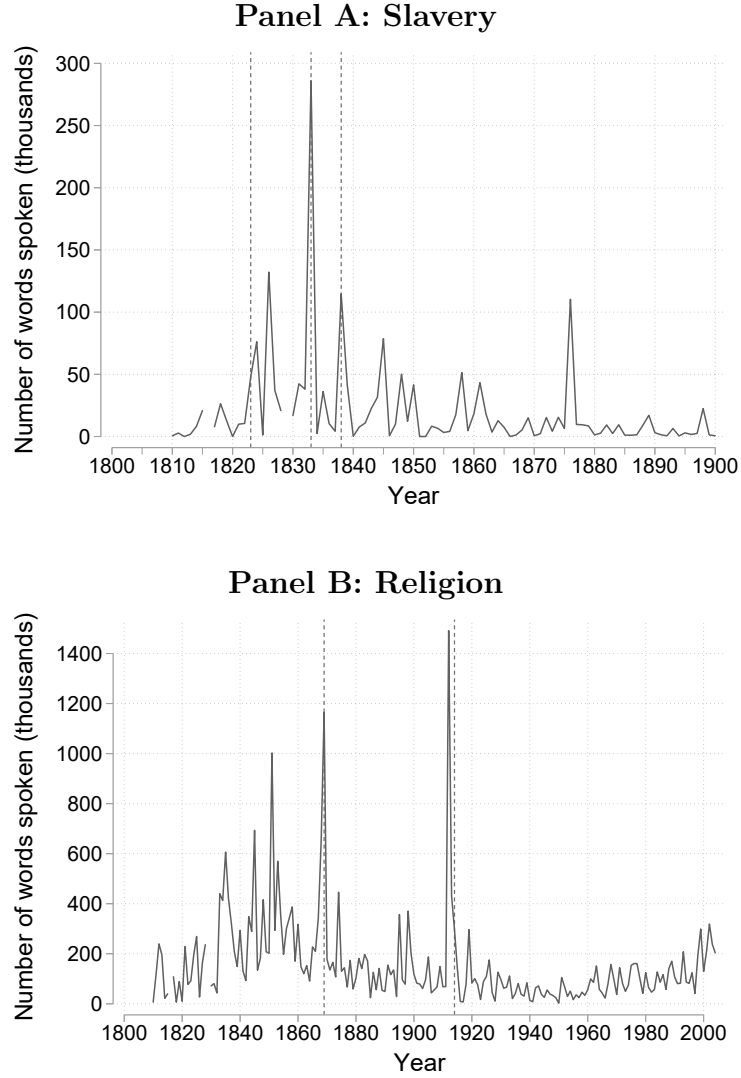
9 Figures

Figure 1: Share of debate words dedicated to elections, voting, and the franchise
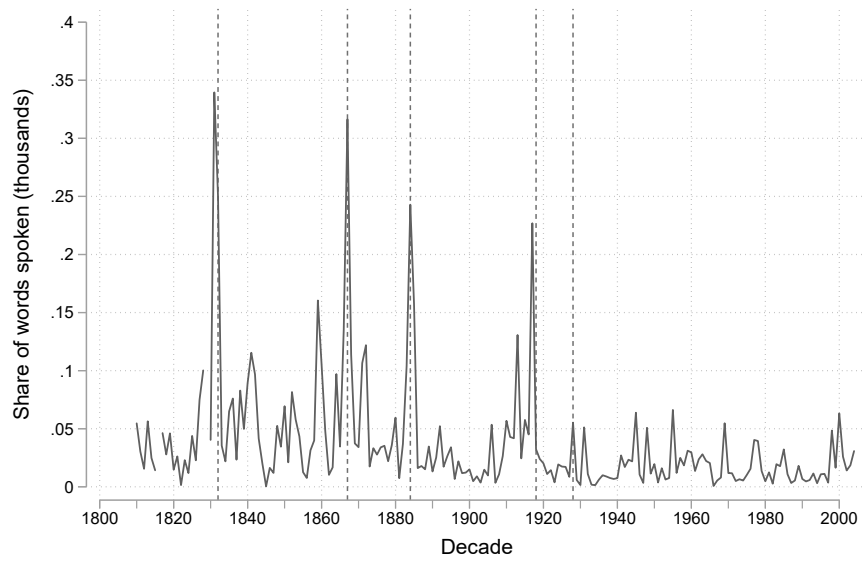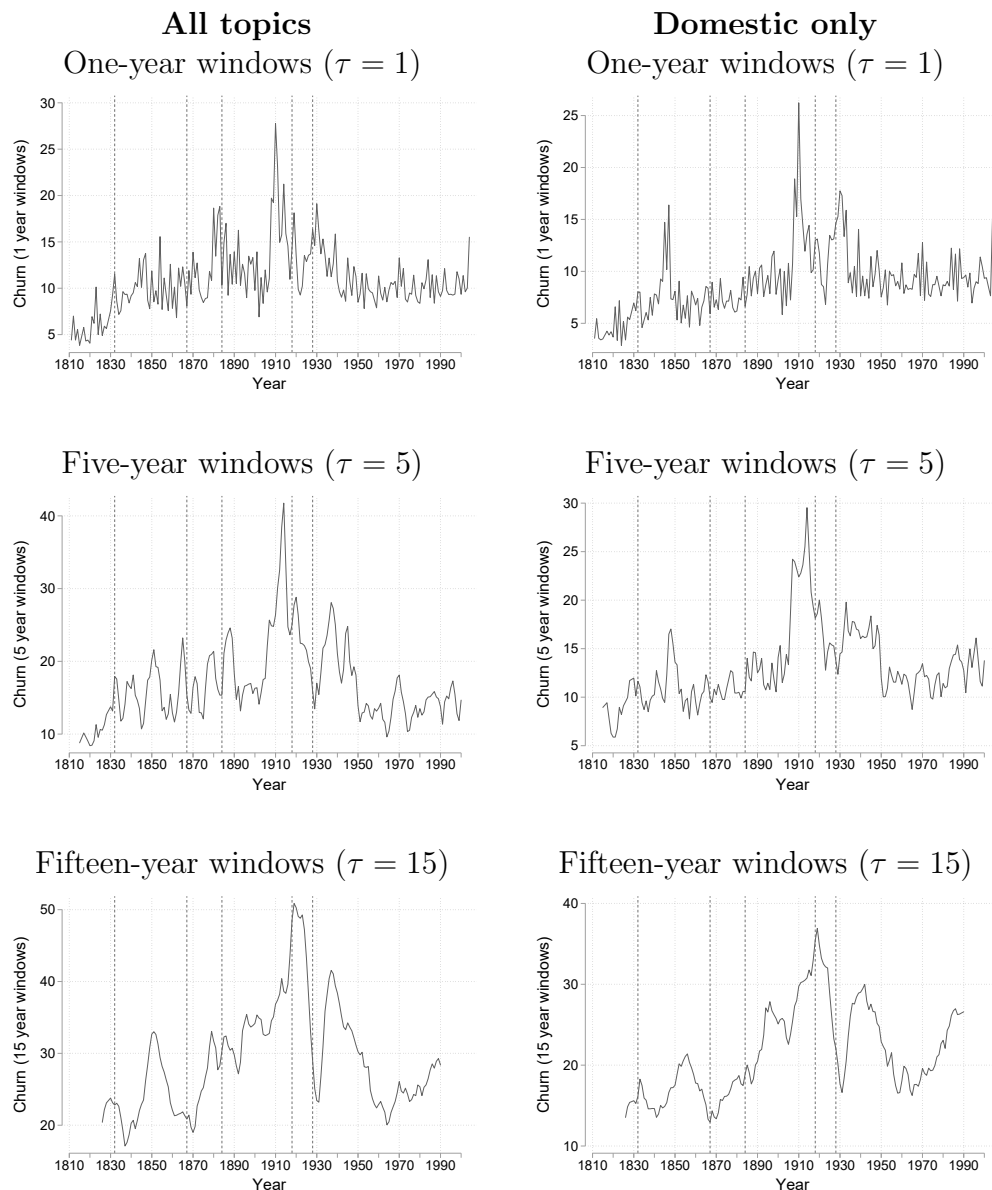

The vertical lines indicate the five major franchise reform acts passed in Britain during the study period, in 1832, 1867, 1884, 1918, and 1928.

Figure 2: Words in debates over slavery and religion

Panel A: Slavery

Panel B: Religion

Panel A: The vertical lines in the top figure indicate key historical points in anti-slavery legislation in Britain. The first, in 1823, marks the founding of the London Anti-Slavery Society, the second marks the abolition of slavery (outside of India), passed in 1833, and the third line, in 1838, marks the year at which abolition came into effect. **Panel B:** The vertical lines indicate the disestablishment of the Church of Ireland in 1869 and of the Church of Wales in 1914.

Figure 3: Agenda churn using comparison windows of one, five and fifteen years

All topics

One-year windows ($\tau = 1$)

Domestic only

One-year windows ($\tau = 1$)

Five-year windows ($\tau = 5$)

Five-year windows ($\tau = 5$)

Fifteen-year windows ($\tau = 15$)

Fifteen-year windows ($\tau = 15$)

Churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons, but not in the Lords, are included. As a point of reference, vertical lines mark the years of the five major franchise reform acts, in 1832, 1867, 1884, 1918, and 1928. To adjust for secular declines in churn driven by the increase in the number of words spoken in Parliament over time, I multiply the churn rate by the square root of the number of words spoken, in order to generate series that are close to stationary.

Figure 4: Estimated partisanship of particular topics

Panel A: Based on the specification in Eq. 2
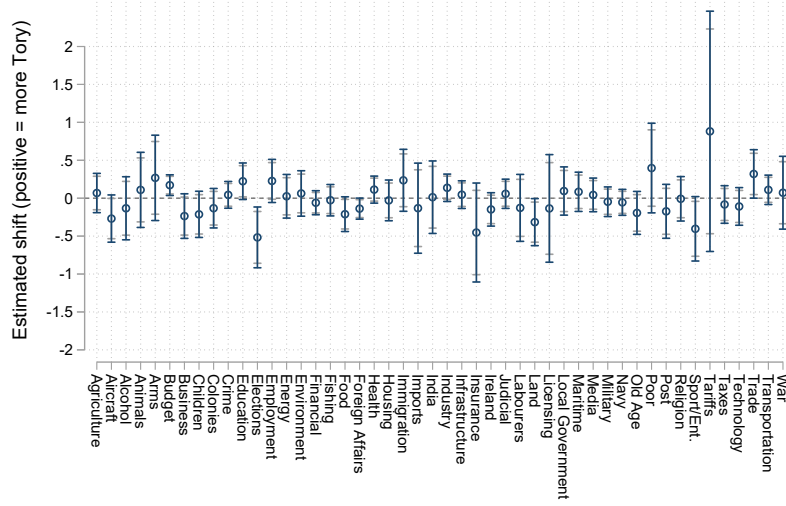
Panel B: Based on the specification in Eq. 3
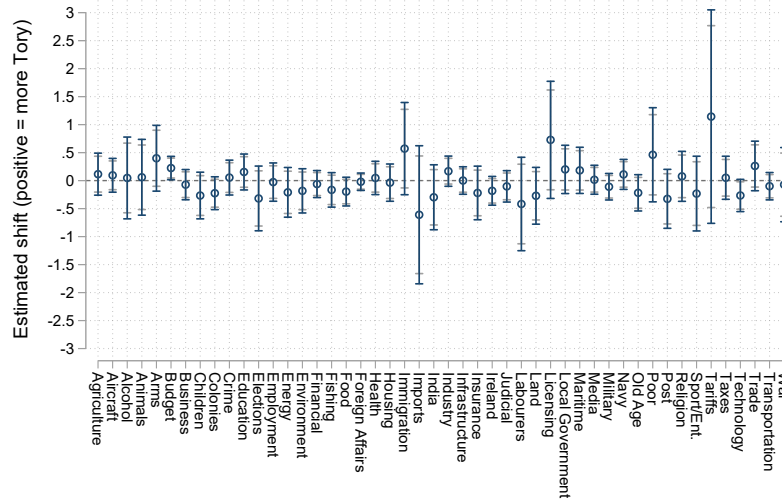
Coefficients, 90% and 95% confidence intervals obtained when applying the specification in Eq. 2 to data for each of the 48 topics that are associated with debates accounting for at least 0.5% of the words spoken during the study period. Analysis includes only debates in the House of Commons.

A   Additional data descriptives

Appendix Figure 5 provides an example of what these debate descriptions look like for one day, together with the topic classifications assigned to each debate.

Figure 5: Example of debate topics from the *Hansard*, with topic classifications

Figure 6 describes the number of words found in the *Hansard* debate records by year. The patterns described in this graph are of some historical interest. For example, there is a relatively low volume of debate from 1810-1830, followed by a substantial increase in 1830-32, just before the Great Reform Act. This provides a quantitative reflection of what A.V. Dicey (1917) called the period of "Legislative Quiescence" in the decades before 1830. From 1830 to the late 1870s there is a higher but stable level of discourse, with between 2 and 4.5 million words spoken in any given session. A new phase begins in the late 1870s and 1880s, with words spoken jumping as high as 7 million per year. This corresponds with Gladstone's

Midlothian Campaign, which some consider to be the first modern British political campaign, followed closely by the passage of the Third Reform Act in 1884. This growth continued until WWI, followed by a period of stability during the inter-war period. From WWII through roughly 1970, the number of words spoken continued to increase. However, this period was unique in that much of the increase was due to more words spoken in debates in the Lords, as can be seen in Figure 7.

Figure 6: Words spoken per year, 1810-1914
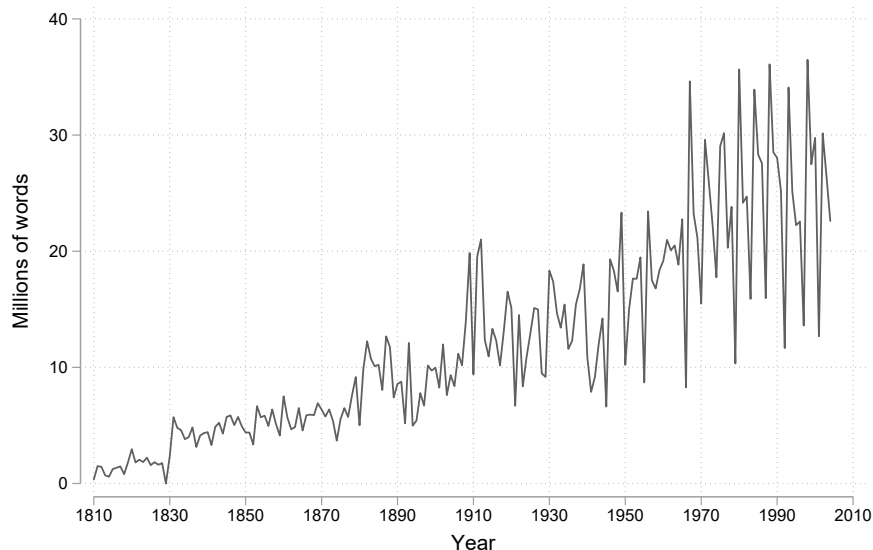
This graph presents the number of words spoken in both houses of Parliament, as recorded in the available Hansard records, each year. Words in the same sitting of Parliament are grouped together and assigned to the year in which most of the sitting took place. Note the regular fluctuations in the number of words spoken per year later in my study period, which reflects the impact of elections occurring at more consistent intervals on the length of Parliamentary sessions. Note that 1829 is missing from the data. Some other early sessions also have incomplete coverage.

Table 5 provides a sense of the types of keywords used to construct different major topics of debate in the Hansard data. Specifically, for each of the top 36 topics of debate (based on the word count associated with each topic) I present the top ten

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Figure 7: Words spoken per year by sitting, 1810-2004
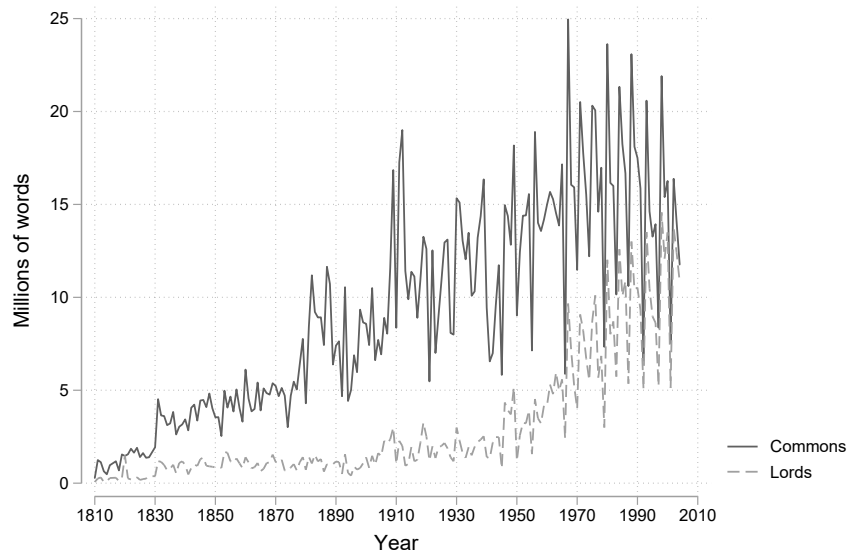
This graph presents the number of words spoken in the Lords and the Commons, as recorded in the available Hansard records, each year. Words in the same sitting of Parliament are grouped together and assigned to the year in which most of the sitting took place. Note the regular fluctuations in the number of words spoken per year later in my study period, which reflects the impact of elections occurring at more consistent intervals on the length of Parliamentary sessions. Note that 1829 is missing from the data. Some other early sessions also have incomplete coverage.

keywords used to identify debates related to that topic.

Table 5: Top 10 keywords for major topics of debate

| BUDGET	CRIME	IRELAND	HEALTH	HOUSING	TRADE
SUPPLY	CRIMINAL	IRELAND	HEALTH	HOUSING	TRADE
ESTIMATES	POLICE	IRISH	HOSPITAL	RENT	COMMERCE
REVENUE	CRIME	DUBLIN	SAFETY	BUILDING	MERCHANT
BUDGET	OFFENCES	CONSTABULARY	MEDICAL	HOUSES	IMPORT
EXPENDITURE	TERRORISM	BELFAST	TREATMENT	BUILDINGS	TRADING
CONSOLIDATED	CHARGE	ULSTER	POLLUTION	RENTS	EXPORT
EXPENSES	PRISONERS	GALWAY	NHS	HOMES	IMPORTATION
ACCOUNTS	PRISON	CLARE	HOSPITALS	EVICTED	IMPORTS
SALARIES	PRISONS	EIRE	DISEASES	CARAVAN	EXPORTS
APPROPRIATION	PUNISHMENT	CARLOW	DISEASE	DWELLINGS	MERCANTILE

FOREIGN	MILITARY	INDUSTRY	TRANSPORTATION	LAND	ELECTIONS
EUROPEAN	ARMY	INDUSTRY	TRANSPORT	LAND	REPRESENTATION
FOREIGN	DEFENCE	INDUSTRIAL	ROAD	ALLOTTED	VOTE
INTERNATIONAL	FORCES	MINES	TRAFFIC	TENANTS	ELECTIONS
AFRICA	MILITARY	STEEL	RAILWAY	ESTATE	ELECTION
UNITED	FORCE	INDUSTRIES	RAILWAYS	TENANT	BALLOT
OVERSEAS	MILITIA	IRON	ROADS	TITHE	FRANCHISE
TREATY	SOLDIERS	SHIPBUILDING	VEHICLES	LANDLORD	VOTING
EGYPT	TROOPS	FACTORIES	RAIL	TITHES	VOTERS
PEACE	RECRUITMENT	COTTON	PASSENGER	LEASEHOLD	REFERENDUMS
CHINA	COLONEL	MINING	CONGESTED	ALLOTMENTS	ELECTORAL

FINANCIAL	EDUCATION	LOCAL GOV.	TAXES	JUDICIAL	EMPLOYMENT
FINANCE	EDUCATION	LOCAL	TAX	JUSTICE	EMPLOYMENT
FINANCIAL	SCHOOLS	PLANNING	DUTIES	COURT	UNEMPLOYMENT
MONEY	SCHOOL	TOWN	RATES	COURTS	WAGES
LOANS	TRAINING	AUTHORITY	DUTY	EVIDENCE	EMPLOYERS
BANK	TEACHERS	AUTHORITIES	RATING	JURISDICTION	WAGE
CREDIT	UNIVERSITY	METROPOLITAN	RATE	MAGISTRATES	EMPLOYEES
INTEREST	ELEMENTARY	MUNICIPAL	TAXATION	APPEALS	HIRE
LOAN	COLLEGE	COUNCILS	VALUATION	JUDICIAL	EMPLOYED
MONETARY	UNIVERSITIES	TOWNS	EXCISE	TRIAL	JOBSEEKERS
INFLATION	EDUCATIONAL	DISTRICT	TAXES	ARBITRATION	JOB

ENERGY
COAL
ELECTRICITY
ENERGY
GAS
OIL
FUEL
PETROLEUM
ELECTRIC
PETROL
HYDROCARBON

RELIGION
CHURCH
ECCLESIASTICAL
CATHOLIC
EASTER
CHRISTMAS
RELIGIOUS
OATHS
MAYNOOTH
CLERGY
WORSHIP

MEDIA
BROADCASTING
TELEVISION
TELECOMMUNICATIONS
FILMS
CINEMATOGRAPH
PRESS
WIRELESS
BBC
NEWSPAPER
FILM

OLD AGE
PENSIONS
PENSION
SUPERANNUATION
RETIREMENT
PENSIONERS
ELDERLY
OLDER
PENSIONABLE
PENSIONER
CONTRIBUTORY PEN.

LABOURERS
LABOUR
HOURS
WORKERS
WORKMENS
MANPOWER
LABOURERS
SERVANTS
STRIKE
WORKMEN
FRIENDLY

ENVIRONMENTAL
ENVIRONMENT
ENVIRONMENTAL
FORESTRY
PARKS
WILDLIFE
NOISE
SUBSIDENCE
RIVERS
FOREST
CONSERVANCY

AGRICULTURE
AGRICULTURE
AGRICULTURAL
RURAL
FARM
LIVESTOCK
FARMING
CROFTERS
HORTICULTURE
FARMERS
HORTICULTURAL

INFRASTRUCTURE
WATER
TUNNEL
DOCK
CANAL
STREET
DRAINAGE
PORT
PORTS
HARBOURS
DOCKS

WAR
WAR
RAID
REQUISITIONED
INDEMNITY
DEMOBILISATION
WARFARE
BLOCKADE
CASUALTIES
REPARATIONS
REPRISALS

INDIA
INDIA
INDIAN
BURMA
PAKISTAN
BENGAL
OUDE
BOMBAY
PUNJAB
RAJAH
INDIANS

POOR
POOR
WELFARE
DISTRESS
SETTLEMENT
REMOVAL
POVERTY
UNEMPLOYED
HOMELESS
GUARDIANS
HOMELESSNESS

TECHNOLOGY
SCIENCE
TECHNOLOGY
TELEGRAPH
SCIENTIFIC
TELEPHONE
EMBRYOLOGY
MACHINERY
LIGHTING
TELEGRAPHS
TELEGRAPHY

COLONIES
COMMONWEALTH
COLONIAL
RHODESIA
CANADA
IMPERIAL
EMPIRE
COLONIES
FALKLAND
NYASALAND
TRANSVAAL

BUSINESS
COMPANIES
CORPORATIONS
INVESTMENT
CAPITAL
BANKRUPTCY
DEREGULATION
NATIONALISATION
PRIVATISATION
INSOLVENCY
MONOPOLIES

NAVY
NAVY
NAVAL
ADMIRALTY
SUBMARINE
MARINES
ADMIRAL
SQUADRON
CRUISERS
IMPRESSMENT
SUBMARINES

FOOD
FOOD
MILK
MEAT
BEEF
MEALS
BUTTER
BACON
DAIRY
BEET
DAIRIES

MARITIME
SHIPPING
SEA
MARINE
NAVIGATION
SHIPS
MARITIME
VESSELS
SHIP
SEAMEN
PILOTS

CHILDREN
CHILDREN
CHILD
CHILDRENS
JUVENILE
ORPHANS
NURSERY
MINOR
PARENTS
PARENT
INFANT

B Share of words classified

Figure 8 describes the share of words spoken in each year that are classified into one or more specific topics. This figure shows that in a typical year, between 70 and 90 percent of the words spoken in Parliament can be classified into a debate on one or more specific topics. There is a notable dip in the share of debates in the Lords classified in 1820 which can be used to illustrate the types of discussions that defy classification. Much of the debate in that session was over the Pains and Penalties Bill through which King George IV attempted to end his marriage with Queen Caroline and strip her of the title of Queen. This provides a good example of the types of idiosyncratic issues sometimes dealt with by Parliament leading to debates that cannot be classified under a particular topic. However, in general a substantial majority of debates can be classified into one or more topic categories.

Figure 8: Share of words spoken in each year that can be classified into a topic
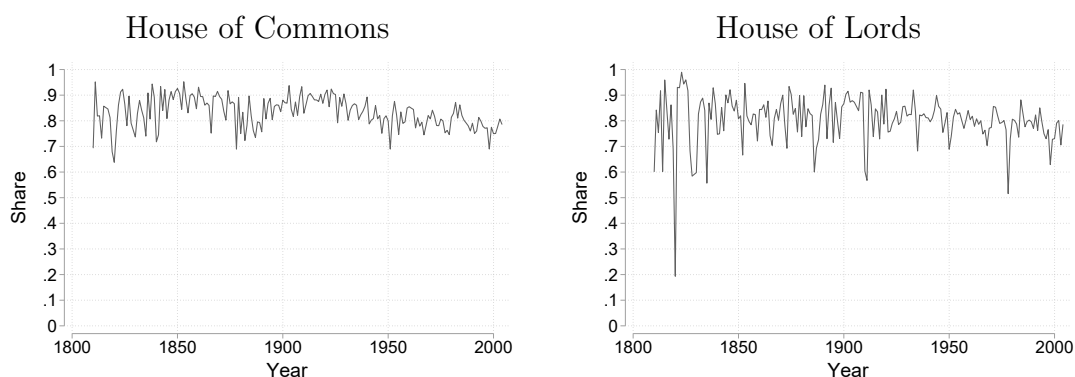
C   Most important topics of debate

Table 6 describes the most important topics debated in Parliament over the full study period.

Table 6: Most common topics of debate based on debate words

Rank	Topic	Words	Rank	Topic	Words
1	FOREIGN AFFAIRS	113.08	16	LAND	28.29
2	BUDGET	87.95	12	JUDICIAL	26.12
3	FINANCIAL	73.69	13	ENERGY	25.79
4	EDUCATION	58.32	14	AGRICULTURE	25.29
5	MILITARY	54.13	15	TRADE	23.19
6	IRELAND	52.75	16	RELIGION	21.95
7	CRIME	52.25	17	COLONIES	21.53
8	HEALTH	50.97	18	INFRASTRUCTURE	20.21
9	LOCAL GOVERNMENT	49.92	19	MEDIA	18.68
10	TRANSPORTATION	47.68	20	BUSINESS	17.61
11	INDUSTRY	46.95	21	OLD AGE	14.60
12	HOUSING	35.58	22	INDIA	14.27
13	TAXES	32.89	23	WAR	13.57
14	ELECTIONS	30.12	24	POOR	13.04
15	EMPLOYMENT	29.32	25	FOOD	13.02

D   Topics of Acts passed

Table 7 describes the topics associated with the largest number of Public General Acts passed between 1820 and 1900, while Table 8 ranks topics by the number of pages in the associated Acts. In general, the two rankings are fairly similar, though there are some differences as well.

Table 7: Most common topics of Acts by number of Acts passed

Rank	Topic	No. Acts	Rank	Topic	No. Acts
1	IRELAND	1414	11	FOREIGN	590
2	JUDICIAL	1093	12	BUSINESS	459
3	CRIME	994	13	HEALTH	434
4	BUDGET	911	14	RELIGION	417
5	TAXES	844	15	MARITIME	348
6	FINANCIAL	842	16	TRADE	346
7	LOCAL GOVERNMENT	744	17	TRANSPORTATION	326
8	LAND	616	18	INDUSTRY	326
9	MILITARY	596	19	EDUCATION	314
10	INFRASTRUCTURE	594	20	POOR	309

Table 8: Most common topics of Acts by pages of Acts passed

Rank	Topic	Pages	Rank	Topic	Pages
1	IRELAND	10,314	11	HEALTH	3,844
2	JUDICIAL	7,365	12	BUSINESS	3,830
3	CRIME	7,333	13	MARITIME	3,749
4	MILITARY	6,562	14	FOREIGN	3,633
5	LOCAL GOVERNMENT	6,288	15	TRADE	3,001
6	TAXES	5,880	16	TRANSPORTATION	2,876
7	BUDGET	5,056	17	INDUSTRY	2,251
8	INFRASTRUCTURE	4,748	18	TARIFFS	2,166
9	FINANCIAL	4,605	19	RELIGION	2,045
10	LAND	4,432	20	ELECTIONS	1,948

E   Identifying recession years

To identify recessions, I use data from Broadberry & van Leeuwen (2010) for the period before 1830, and data from Mitchell (1988) and the Federal Reserve's FRED database for 1830 to 2004, to identify years in which GDP declined. For the pre-1830 period, I identify recessions using the business cycle peaks and troughs based on sectoral indicators from Broadberry & van Leeuwen (2010), Table 18. I prefer this to the peaks and troughs based on their GDP series (their Table 19) because it appears to be more consistent with the recessions identified from Mitchell (1988) for the period from 1830-1870 when the two series overlap. I exclude from my set of recessions those that occurred as the economy adjusted following the end of major wars, both because those recessions were special and because the fact that they directly follow wars affects the churn rates around those events. The major wars in my study period are the Napoleonic Wars, from the start of my study period to 1815, the Crimean War (1854-56), the Second Boer War (1899-1902), WWI (1914-1918), and WWII (1939-1945). Of course, these are not the only wars that Britain was involved in during this period, but they are clearly the most important.

F   Comparing debate topics to Acts passed

Table 9 presents regression results looking at the association between the share of words spoken in the *Hansard* debates on a particular topic in a Parliamentary session and the Acts passed in that session. In Columns 1-2, the outcome variable is the number of Acts passed, while in Columns 3-4 it is the number of pages of the Acts

passed.[28] Both approaches reveal a strong relationship between the topics debated in Parliament and the passage of Acts related to those topics.

Table 9: Regressions comparing debate data to Acts passed

Dep. Var:	Count of Acts passed by topic		Number of Act pages by topic	
	(1)	(2)	(3)	(4)
Share of debate words for a topic	9.563*** (2.590)	8.576*** (2.226)	113.2*** (26.91)	107.8*** (24.56)
Topic FEs	Yes	Yes	Yes	Yes
Session FEs.		Yes		Yes
Observations	6,072	6,072	6,072	6,072
R-squared	0.563	0.652	0.389	0.472
Within R-squared	0.00924	0.00918	0.0117	0.0121

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parenthesis. Data cover 1820 to 1900.

Note that the within R-squared in these regressions is fairly low, at around 1%. This likely reflects a combination of factors: some issues debated in Parliament would not have led to Acts, some Acts would have passed with limited debate, etc. It is also notable that the within R-squared is somewhat higher in the specifications that take into account the number of pages in the Acts. That provides a good indication that the number of page in the Act is a useful indicator of an Act's importance.

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[28]Because the results using the number of Acts passed has a fairly discrete dependent variable, for that specification I have also examined Poisson regressions. Those also show a strong relationship between the topics of debate and the number of Acts passed.

G Rise and fall of topics over time

From a historical perspective, one primary object of interest in the agenda data set is how the relative importance of different topics evolved across the study period. This section examines these patterns for a subset of the more important topics, or those that show the most dramatic changes.

One interesting set of topics to consider are those that showed marked declines in importance across the study period. This set is described in Table 10. The topic that saw the most consistent decline in importance was religion. Another class of topics that appear to have attracted less attention later in my study period were those related to budgeting, tariffs, and taxes. These issues were of central importance during Britain's laissez-faire period in the middle of the nineteenth century, but they seem to be less important (in relative terms) to more recent Parliaments. Another, more expected, class of topics are those related to military spending and warfare. Discussions of these issues peaked in the period from 1860-1910 and declined precipitously after 1970. Finally, two of the most important topics in the early nineteenth century, Ireland and India, have also become much less important, for reasons that are easy to understand.

Table 11 presents topics that have experienced notable increases in importance over time. Perhaps the most notable commonality across these topics is the extent to which they relate directly to the welfare of average citizens. Topics such as children's welfare, employment, fertility and sexuality, health, and housing show some of the largest increases across the period. Energy and the environment have also attracted a growing share of attention, as have sports and entertainment, and the media. Not surprisingly, immigration has grown into a major topic of debate, particularly since

Table 10: Topics of declining importance over the study period

	Budget	Elections	Emigration	India	Ireland	Military
1810-1850	0.0859	0.0747	0.0025	0.0358	0.1604	0.0470
1860-1910	0.1907	0.0577	0.0014	0.0306	0.1517	0.1065
1920-1960	0.1033	0.0217	0.0005	0.0181	0.0137	0.0783
1970-2000	0.0537	0.0214	0.0001	0.0018	0.0395	0.0339
	Navy	Religion	Slavery	Tariffs	Taxes	War
1810-1850	0.0228	0.1185	0.0141	0.0141	0.0728	0.0204
1860-1910	0.0428	0.0409	0.0018	0.0109	0.0504	0.0297
1920-1960	0.0162	0.0069	0.0003	0.0051	0.0329	0.0274
1970-2000	0.0039	0.0088	0.0001	0.0006	0.0409	0.0037

Each column corresponds to a topic and each cell describes the share of total debate words associated to that topic in various periods out of all debate words associated with at least one topic.

1970. Local government has always been an important topic, but debate over this topic (which includes devolution) has consistently increased. Transportation is another topic that has grown in importance, particularly air travel, which was obviously not an issue in most of the nineteenth century. Another fairly new topic is nuclear energy and nuclear weapons.

Table 11: Topics of increasing importance over the study period

	Air transp.	Children	Employ.	Energy	Envir.	Fert./Sex	Health
1810-1850	0.0000	0.0027	0.0032	0.0024	0.0015	0.0009	0.0137
1860-1910	0.0014	0.0055	0.0118	0.0132	0.0034	0.0009	0.0303
1920-1960	0.0157	0.0093	0.0453	0.0402	0.0091	0.0035	0.0505
1970-2000	0.0136	0.0207	0.0365	0.0343	0.0259	0.0104	0.0757
	Housing	Immig.	Local Gov.	Media	Nuclear	Sport/Ent.	Land trans.
1810-1850	0.0051	0.0048	0.0270	0.0065	0.0000	0.0009	0.0218
1860-1910	0.0312	0.0063	0.0533	0.0059	0.0000	0.0014	0.0299
1920-1960	0.0445	0.0072	0.0410	0.0207	0.0039	0.0078	0.0592
1970-2000	0.0405	0.0148	0.0701	0.0252	0.0071	0.0136	0.0516

Each column corresponds to a topic and each cell describes the share of total debate words associated to that topic in various periods out of all debate words associated with at least one topic.

Finally, it is interesting to look at those topics which have either continued to be important throughout the almost two century period covered by this study, or which show other interesting patterns. Some of these are described in Table 12. This group reflects a set of major topics – agriculture, the regulation of business, education, finance and monetary policy, foreign affairs, infrastructure (excluding transportation-related), judicial affairs, and trade – that seem to have been of perennial interest to Parliament. Within these broad trends, however, there are some interesting patterns. Crime (which includes terrorism), for example, shows clear declines from the early nineteenth century through the mid-twentieth, followed by resurgent concerns starting in the 1970s. On finance and monetary policy, we see a spike in interest in the period from 1920-1960, reflecting Britain's struggles to bring monetary and financial policy under control during this period. The poor were a particularly important topic of debate in the early nineteenth century, when the New Poor Law was enacted, though this has remained an important issue throughout, as has the closely related topic of pensions and old age support.

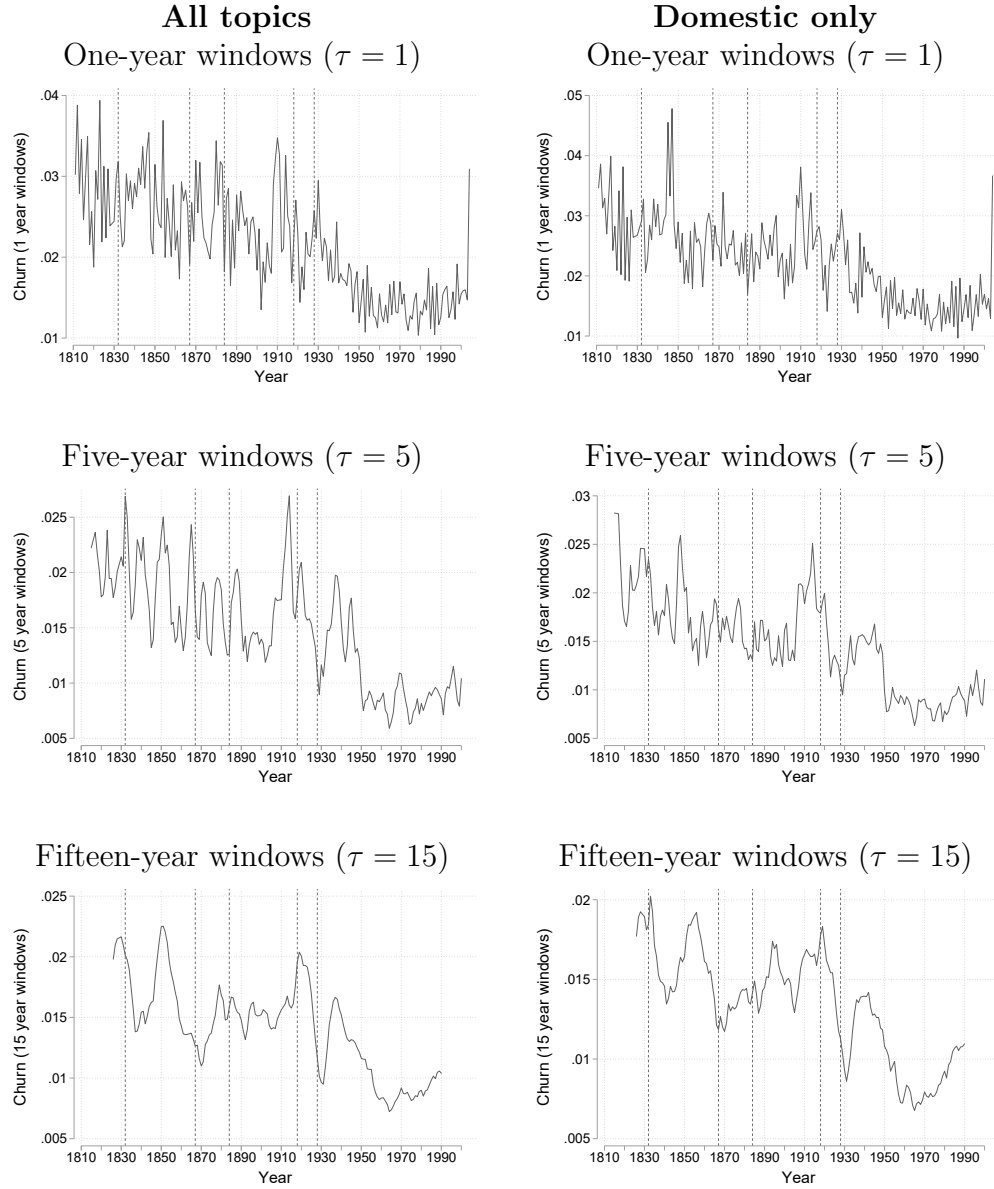Table 12: Topics of importance throughout the study period

	Agric.	Business	Crime	Education	Finance/Monetary	Foreign aff.
1810-1850	0.0102	0.0186	0.0736	0.0462	0.0542	0.1331
1860-1910	0.0196	0.0139	0.0641	0.0776	0.0655	0.1243
1920-1960	0.0412	0.0160	0.0377	0.0416	0.1013	0.1414
1970-2000	0.0241	0.0266	0.0838	0.0688	0.0690	0.1234
	Infrast.	Judicial	Maritime	Old age/Pens.	Poor	Trade
1810-1850	0.0099	0.0535	0.0188	0.0079	0.0606	0.0340
1860-1910	0.0268	0.0377	0.0186	0.0133	0.0165	0.0213
1920-1960	0.0191	0.0190	0.0148	0.0217	0.0096	0.0443
1970-2000	0.0259	0.0427	0.0114	0.0182	0.0107	0.0249

Each column corresponds to a topic and each cell describes the share of total debate words associated to that topic in various periods out of all debate words associated with at least one topic.

H   Churn graphs without normalization

In the main text Figure 3, I graph churn rates while normalizing by the square root of the number of words spoken. This is done in order to generate churn rates that are close to stationary and therefore easier to interpret graphically. In Figure 9 below, I present churn rates without normalization.

Figure 9: Agenda churn without normalization

All topics
One-year windows ($\tau = 1$)

Domestic only
One-year windows ($\tau = 1$)

Five-year windows ($\tau = 5$)

Five-year windows ($\tau = 5$)

Fifteen-year windows ($\tau = 15$)

Fifteen-year windows ($\tau = 15$)

Churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons, but not in the Lords, are included. As a point of reference, vertical lines mark the years of five major franchise reform acts, in 1832, 1867, 1884, 1918, and 1928.

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I Additional churn analysis robustness checks

Table 13 presents some alternative results based on my main churn regression specification. The first two columns in each panel show results using splines with knots every decade, rather than every 25 years, while the third and fourth columns show results with decade fixed effects instead of splines. All of these results are quite similar to one another as well as to those presented in Table 1 in the main text, indicating that the churn regressions are robust to alternative ways of controlling for time.

Table 13: Churn analysis robustness to alternative time controls

Panel A: All topics				
	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
	(1a)	(2a)	(3a)	(4a)
Party control chg.	-0.000434	-0.000386	-0.000290	-0.000400
	(0.000779)	(0.000660)	(0.000770)	(0.000624)
Reform Act Cont.	Yes	Yes	Yes	Yes
Decade splines	Yes	Yes		
Decade FEs			Yes	Yes
Observations	192	190	192	190
R-squared	0.686	0.775	0.663	0.765
Panel B: Domestic topics only				
	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
	(1b)	(2b)	(3b)	(4b)
Party control chg.	-0.000863	-0.000696	-0.000441	-0.000332
	(0.000774)	(0.000645)	(0.000745)	(0.000678)
Reform Act Cont.	Yes	Yes	Yes	Yes
Decade splines	Yes	Yes		
Decade FEs			Yes	Yes
Observations	192	190	192	190
R-squared	0.618	0.701	0.623	0.700

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons, but not in the Lords, are included. The Reform Act controls are indicator variables identifying the years of the major reform acts or franchise extensions: 1832, 1867, 1884, 1918, and 1928.

Next, I consider results based on an alternative approach to measuring churn.

This alternative measure differs from the one in the main text because rather than calculating the share of words dedicated to each topic in each year and then taking the average of those shares across a window of length τ, I instead sum up the words dedicated to each topic over the window of length τ and then calculate the share of total words spoken in that window accounted for by each topic. Effectively, this difference amounts to down-weighting the impact of sessions of Parliament in which relatively fewer words were spoken.

Specifically, this alternative measure of agenda churn, $CHURNALT_t(\tau)$ is given by,

$$CHURNALT_t(\tau) = \sum_i \left| ALTSHR_{i,t+1,t+\tau+1} - ALTSHR_{i,t-1,t-\tau-1} \right|$$

where,

$$ALTSHR_{i,t+1,t+\tau+1} = \frac{\sum_{j=t+1}^{t+1+\tau} WORDS_{ij}}{\sum_i \sum_{j=t+1}^{t+1+\tau} WORDS_{ij}}$$

and $WORDS_{ij}$ is the number of words spoken in debates on topic i in year j.

Table 14 presents regression results using the alternative measure of agenda churn, $CHURNALT_t$. This alternative measure delivers results that are very similar to those obtained from my primary churn measure and reported in the main text.

In the main text, I calculate churn using all topics that account for at least 0.5% of total words spoken across the study period (48 topics in total). Table 15 examines robustness to alternative choices for this cutoff value. Columns 1a-2a and 1b-2b present results using a cutoff of 0.25%, which leaves me with 59 topics when all topics are included, or 56 when focusing only on domestic topics (note that the cutoff for

Table 14: Agenda churn using an alternative churn measure

Window:		$\tau = 1$			$\tau = 2$	
Comparison set:	All years	All years	Non-overlapping years	All years	All years	Non-overlapping years
Panel A: All topics						
	(1a)	(2a)	(3a)	(4a)	(5a)	(6a)
Party control chg.	0.000511	-0.000609	-0.000695	0.000614	-0.000452	-0.000349
	(0.00127)	(0.000814)	(0.000841)	(0.00109)	(0.000667)	(0.000905)
Reform Act Cont.		Yes	Yes		Yes	Yes
Time splines		Yes	Yes		Yes	Yes
Observations	192	192	142	190	190	100
R-squared	0.001	0.628	0.635	0.001	0.729	0.754
Panel B: Domestic topics only						
	(1b)	(2b)	(3b)	(4b)	(5b)	(6b)
Party control chg.	-0.000147	-0.00101	-0.00112	9.07e-05	-0.000760	-0.00124
	(0.00120)	(0.000787)	(0.000749)	(0.00111)	(0.000672)	(0.000880)
Reform Act Cont.		Yes	Yes		Yes	Yes
Time splines		Yes	Yes		Yes	Yes
Observations	192	192	142	190	190	100
R-squared	0.000	0.569	0.619	0.000	0.666	0.726

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons, but not in the Lords, are included. The Reform Act controls are indicator variables identifying the years of the major reform acts or franchise extensions: 1832, 1867, 1884, 1918, and 1928. I control for time-trends by including a full set of linear splines with knots every 25 years in Columns 2-3 and 5-6. Columns 1-2 and 4-5 include all years in the regressions. In Column 3, I exclude from the control group years on either side of the year in which a party change occurred. This ensures that my results are not attenuated by including years in which churn is affected by a change in the party in control among the set of control years. In Column 6 I do the same, but eliminating two years on either side of the year in which a party change occurred, to account for the wider span of years used to calculate churn.

domestic topics applies to their share within the set of domestic topics). Columns 3a-4a and 3b-4b look at a cutoff of 1% (35 topics included), and those in 5a-6a and 5b-6b use a cutoff of 2% (21 topics when including all topics or 24 when looking only among domestic topics). All of these alternatives show very similar results to those presented in the main text.

Table 15: Churn regressions with alterantive cutoff points for major topics

Panel A: All topics

	0.25%		1%		2%	
Cutoff:						
τ value:	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
	(1a)	(2a)	(3a)	(4a)	(5a)	(6a)
Party control chg.	-0.000429	-0.000299	-0.000387	-0.000455	7.40e-05	-0.000192
	(0.000667)	(0.000554)	(0.00110)	(0.000956)	(0.00214)	(0.00180)
Observations	192	190	192	190	192	190

Panel B: Domestic topics only

	0.25%		1%		2%	
Cutoff:						
τ value:	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
	(1b)	(2b)	(3b)	(4b)	(5b)	(6b)
Party control chg.	-0.000933	-0.000690	-0.000399	-0.000747	-0.000745	-0.00119
	(0.000675)	(0.000560)	(0.00104)	(0.000844)	(0.00158)	(0.00134)
Observations	192	190	192	190	192	190

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Only debates in the Commons are included. All regressions include a full set of Reform Act controls as well as linear time splines with knots every 25 years.

J Party change intreactions with other events

Table 16 separates party change periods that occur during recessions or wars from those occurring at other times. Most of these occurrences (6 out of 7) are party changes during recessions rather than wars. While these results are underpowered, they can provide a rough sense of whether the effects of a change in the party in power are substantially different during periods of crises. These results provide no clear evidence that the impact of a change in government was different during periods of recession or war than during other periods, though for domestic topics there is some very weak evidence that a change in the party in power may have had more influence during one of these events.

Table 16: Party change effects during recessions/wars vs. at other times

| | DV: Agenda churn | | | |
| | $\tau = 1$ | | $\tau = 2$ | |
Panel A: All topics	(1a)	(2a)	(3a)	(4a)
Party change + crises	0.000380	-0.000880	0.000889	-0.000168
	(0.00222)	(0.00168)	(0.00142)	(0.00105)
Party change + no crises	0.000607	-0.000405	0.000475	-0.000505
	(0.00146)	(0.000876)	(0.00127)	(0.000792)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	192	192	190	190
R-squared	0.001	0.634	0.001	0.725
F-test: Party change during crises = Party change otherwise				
p-val	0.93	0.82	0.84	0.80
Panel B: Domestic topics	(1b)	(2b)	(3b)	(4b)
Party change + crises	-0.000399	-0.00143	0.00154	0.000660
	(0.00221)	(0.00154)	(0.00215)	(0.00128)
Party change + no crises	-6.74e-05	-0.000883	-0.000561	-0.00121*
	(0.00134)	(0.000837)	(0.00116)	(0.000701)
Reform Act cont.		Yes		Yes
Time splines		Yes		Yes
Observations	192	192	190	190
R-squared	0.000	0.570	0.003	0.667
F-test: Party change during crises = Party change otherwise				
p-val	0.89	0.74	0.37	0.18

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The Reform Act controls are a set of fixed effects identifying years in which one of the five major reform acts were passed. The splines have knots every 25 years.

K   Influence of elections and margin on churn

Table 17 looks at whether we observe differences in agenda churn around years in which elections took place, regardless of whether the party in power changed, as well as the possibility that such effects may depend on the size of the government majority resulting from the election. Elections years and the majority of the party in power are based on data from Rallings & Thrasher (2007), which start in 1832. Columns 1-2 look at the impact of elections on agenda churn over windows of $\tau = 1$ and $\tau = 2$, while Columns 3-4 look at how the majority obtained by the governing party following an election relates to agenda churn. None of these results suggest that agenda churn was elevated around years in which elections took place.

Table 17: Impact of elections on agenda churn

| Panel A: All topics				
Window:	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
Election	-0.000205	-0.000204	0.000238	0.000160
	(0.000754)	(0.000584)	(0.00114)	(0.000773)
Gov. majority			-5.17e-06	-4.25e-06
			(7.91e-06)	(4.49e-06)
Observations	173	172	173	172
R-squared	0.624	0.697	0.625	0.699
Panel B: Domestic topics only				
Window:	$\tau = 1$	$\tau = 2$	$\tau = 1$	$\tau = 2$
Election	-0.00103	-0.000681	-0.000694	-7.16e-05
	(0.000967)	(0.000680)	(0.00160)	(0.000993)
Gov. majority			-3.97e-06	-7.11e-06
			(1.17e-05)	(7.48e-06)
Observations	173	172	173	172
R-squared	0.559	0.633	0.559	0.635

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Churn rate is calculated using all topics that account for at least a 0.5% share of words spoken across the full study period. Only debates in the Commons are included. All regressions include controls for the five major franchise reform years as well as decade fixed effects, though none of these substantially affect the results.

L Partisanship of particular topics by period

Figure 10 looks at the partisanship of different topics by sub-period. I split the sample in into four sub-periods, allowing me to retain sufficient power for analysis while looking at the extent to which clearer patterns are obtained when looking over shorter time periods. The figures for the first three periods do not show evidence of strong patterns of partisanship. While there are some statistically significant coefficients, there are no more than one would expect given the number of regressions being run.

However, there is evidence that this relationship changed in the post-1945 period. In that figure, we begin to see more evidence of the party in power affecting the agenda of Parliament. In that period, we begin to see a relationship between issues related to laborers and the presence of the Labour party in power (a result that survives at the 95% confidence level even after adjusting for multiple hypothesis testing). Thus, there is reason to believe that party identity became more salient for the agenda of Parliament after WWII.

Figure 10: Partisanship regressions by sub-period
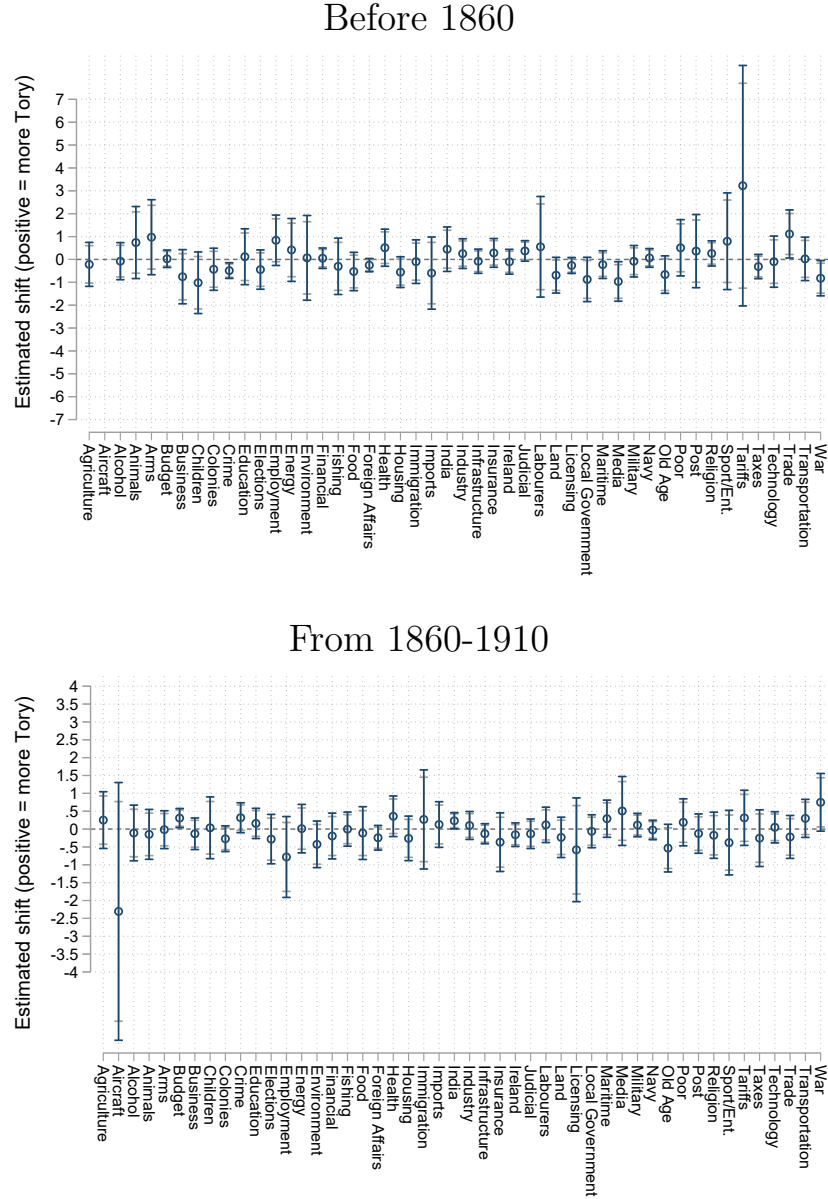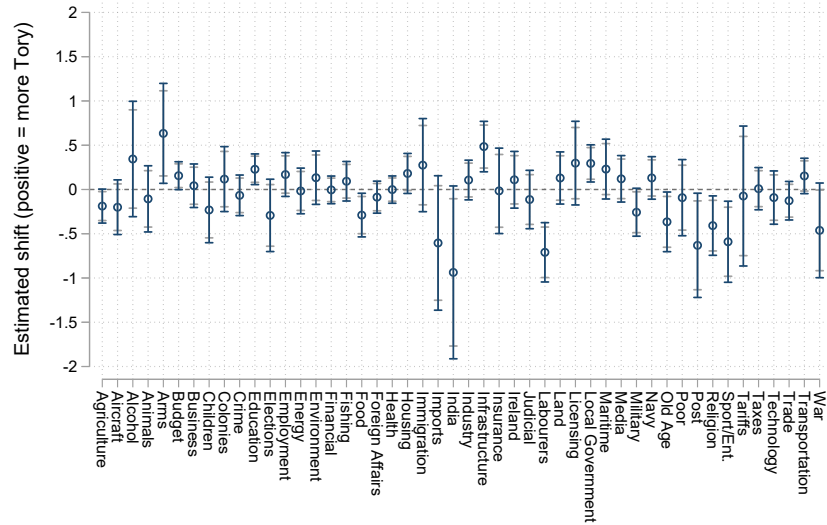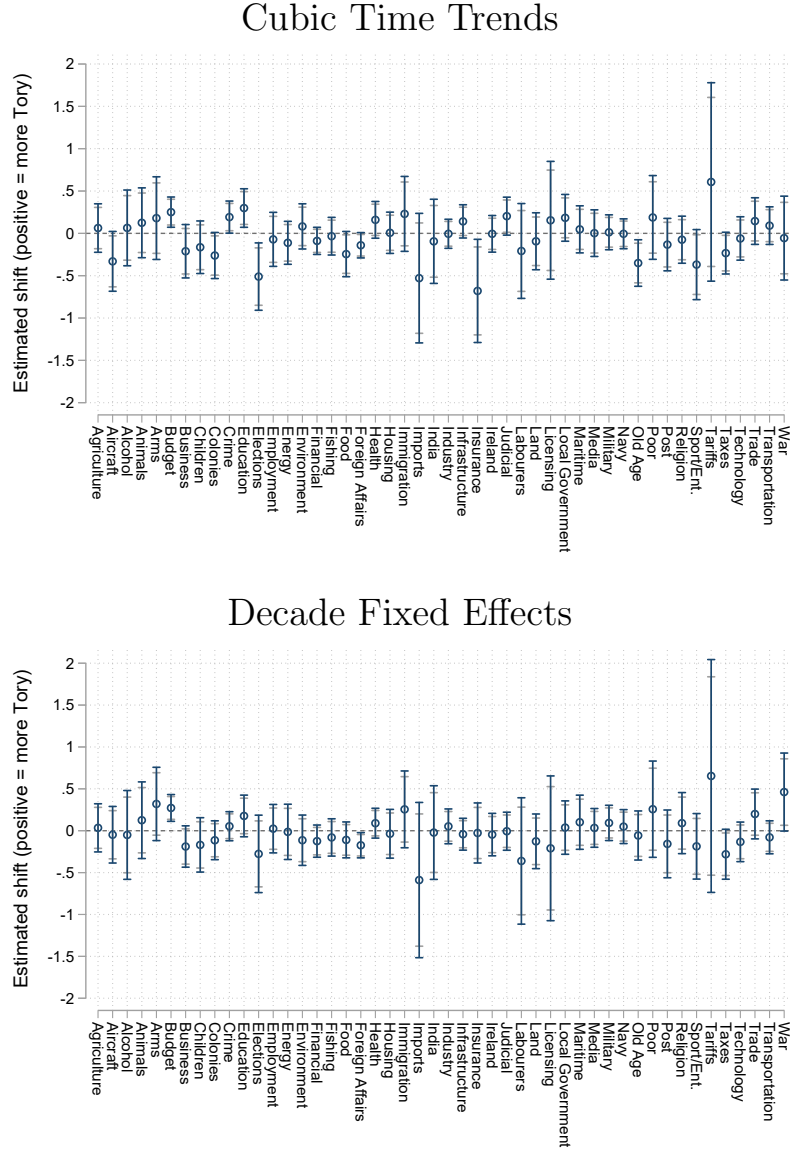
Before 1860

From 1860-1910

This figure presents coefficient estimates, 90% and 95% confidence intervals (using robust standard errors) for regressions looking at how the identity of the political party is related to the share of debate words dedicated to a topic. Regressions are run by topic, with each regression including controls for linear splines with knots every ten years.

Interwar period
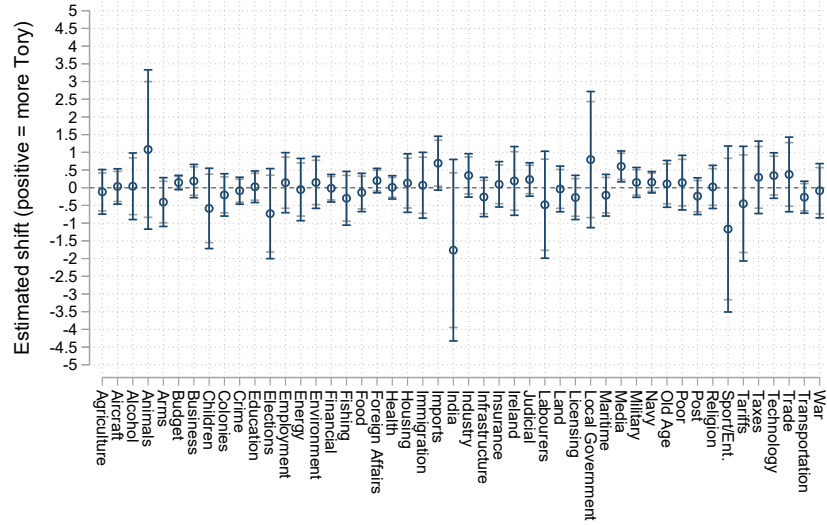
Post-1945

This figure presents coefficient estimates, 90% and 95% confidence intervals (using robust standard errors) for regressions looking at how the identity of the political party is related to the share of debate words dedicated to a topic. Regressions are run by topic, with each regression including controls for linear splines with knots every ten years.

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M Robustness results for partisanship regressions

Figure 11 presents additional partisanship results using two alternative estimation strategies utilizing different approaches for controlling for time effects. In the top panel, I use cubic time controls in place of the splines used in the main analysis. In the bottom panel, I instead use decade fixed effects. Neither of these alternatives deliver results that are substantially different than those presented in the main text. In both cases, none of the coefficients are even close to statistically significant after adjusting for multiple hypothesis testing.

Figure 11: Partisanship regressions using alternative time controls
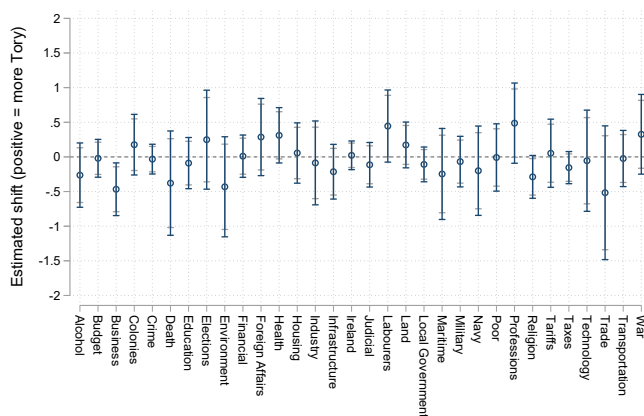
Cubic Time Trends

Decade Fixed Effects

These figures present coefficient estimates, 90% and 95% confidence intervals (using robust standard errors) for regressions based on Eq. 2. The two panels each reflect specifications using different approaches to controlling for time.

N Partisanship of Acts

Next, I look at whether there is an association between the identity of the party in power and the particular topics of the Acts passed. This analysis uses the specification in Eq. 2 but with an outcome based on the Acts data rather than the Hansard debates data. Figure 12 presents the results. Note that the set of topics is different here. This is because I continue to focus only on those topics that account for at least 0.5% of the data set (in this case the number of pages of Acts produced) during the period for which the Acts data are available, 1820-1900, which yields a set of 32 major topics. However, the results are essentially identical to those obtained from the debates data. In particular, after accounting for multiple hypothesis testing I do not observe a strong association between the identity of the party in power and any of the the topics (the lowest p-value after accounting for multiple hypothesis testing is 0.62).

Figure 12: Partisanship results using Acts data

This figure presents coefficient estimates, 90% and 95% confidence intervals (using robust standard errors) for regressions based on the specification in Eq. 2 but using the Acts data rather than the debates data. Specifically, the outcome that I focus on is the share of total pages in Acts dedicated to particular topics in particular Parliamentary sessions. I control for time by including linear time splines with knots in 1840, 1860, and 1880.

O Topics associated with wars and recessions

In this appendix, I present results looking at whether there were certain topics that were strongly associated with either major wars or recessions. Examining these results can provide a sanity check, by ensuring that it is possible to pick up clear associates between the set of topics that receive attention from Parliament and ongoing events. To study this, I apply the approach described in Eq. 2 and used in main text Figure 4 Panel A.

The top panel of Figure 13 looks at topics that receive more attention during major wars. Not surprisingly, the most important of these is war itself. Other topics associated with war include aircraft, armaments, food, foreign affairs, the military, and (perhaps surprisingly) issues related to old age. A number of other topics, such as policies related to the employment and the poor receive less attention during wartime. Overall, these patterns look similar to what we might have expected. Moreover, a number of these associates remain statistically significant even after accounting for multiple hypothesis testing.

Panel B of the figure looks at whether there are certain topics that appear to attract more attention during recessions. Here, the patterns are not as strong, but they appear fairly reasonable. Topics such as children, energy, finance, industry, and labourers' issues, all receive relatively more attention during recessions, while aircraft, armaments, immigration, religion, and war receive less.

Figure 13: Relationship between wars or recessions and agenda topics
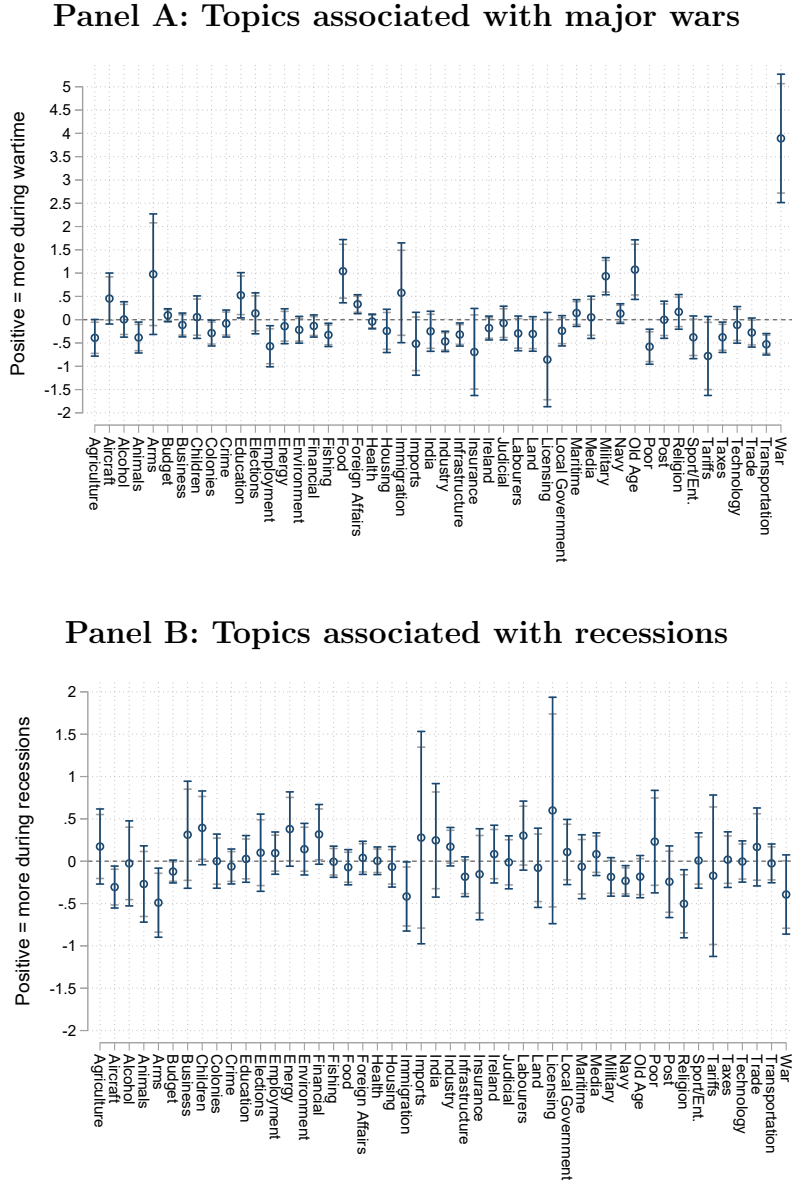
Panel A: Topics associated with major wars

**Panel B: Topics associated with recessions**

Coefficients, 90% and 95% confidence intervals obtained when applying the specification in Eq. 2 to data for each of the 48 topics that are associated with debates accounting for at least 0.5% of the words spoken during the study period. Analysis includes only debates in the House of Commons. All regressions include a set of linear splines with knots every 25 years starting in 1825 to control for time trends.

P   Robustness of partisanship event study analysis

In main text Figure 4, Panel B, I estimate the relationship between party identity
and the share of debate words spoken on particular topics in the two sessions before
and two sessions after a change in the party in power. In Figure 14 below, I present
similar results, but instead looking at just the sessions before and after a change in
government. This is not my preferred approach because sessions just before or after
a change in government are somewhat unusual, since they are typically shortened by
the interruption of an election. However, by comparing the patterns in Figure 14 to
those in Panel B of main text Figure 4, we can see that my choice to focus on two
sessions before and after a change in leadership is not critical to the results.

Figure 14: Partisanship event study results using only one session before and after
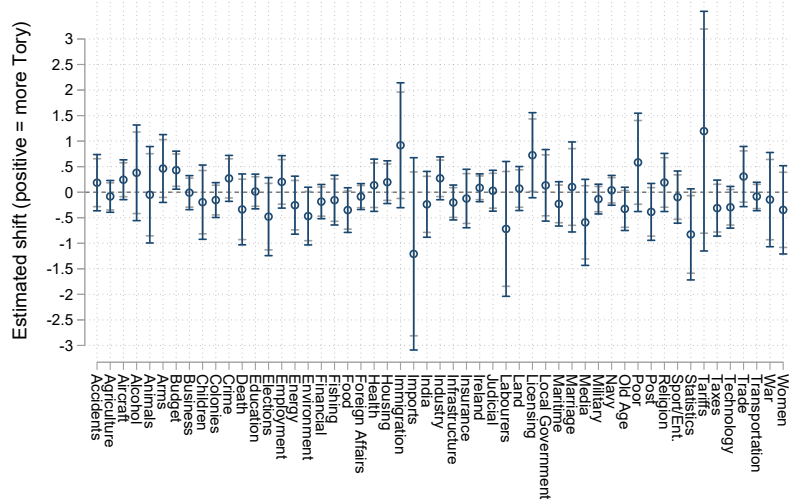
These figures present coefficient estimates, 90% and 95% confidence intervals (using robust standard errors)
for regressions looking at how the identity of the political party is related to the share of debate words
dedicated to a topic. These regressions follow the approach used in main text Figure 4, Panel B, except that
I compare the partisanship of topics looking just one year (rather than two) before vs. after a change in the
party in government.

Q Reactive government in historical context

The experience of the Second Reform Act briefly described in the Conclusion provides a prime example of the parties maneuvering around an issue that they seemed unable to avoid, rather than setting their own agenda. This is only one of many such examples during the period covered by my study. Cannadine (1999) provides another example related to local government reform (p. 156-7):

> By the mid-1880s, it was generally accepted that the government of the counties by quarter sessions could not continue indefinitely...In Gladstone's second ministry, Dilke and Chamberlain were much preoccupied with schemes for such reform, but the congestion of the parliamentary timetable meant that no measure was actually introduced. And so, ironically, it was Lord Salisbury's Conservative government that introduced the reform...

Similarly, in the realm of education, the key first step toward a public system came in the form of Foster's Act of 1870, passed under Gladstone's Liberal government. This allowed the opening of local school boards. This was followed soon after by Lord Sandon's Act, passed under Conservative leadership, which extended the reach of local school attendance committees to locations left out by the 1870 Act. With the government back in Liberal hands in 1880, Mundella's Act completed the system by requiring school boards to impose compulsory primary school attendance. Later, another key example is provided by the Provision of Meals Bill of 1906, the first of the famous 'Liberal Welfare Reforms.' While passed under the new Liberal government of Henry Campbell-Bannerman, the issue had been raised in Parliament the previous year under Arthur Balfour's Conservative government, with a resolution passed in favor of providing meals to poor children in schools.

All of these cases show a common pattern: Parliament was presented with a set of issues that neither party seemed to be able to avoid addressing. While the ultimate outcome of any particular bill likely depended on the party in power at any point in time, whether the issue came before Parliament appears to have been largely outside of the control of the governing party, consistent with the pattern of reactive government described in my main analysis.

Of course, there are potential counterexamples. Some might cite the First Reform Act, passed by a Whig government in 1832, as a clear example of a case in which the identity of the party in power influenced the set of issues dealt with by Parliament. My results do not rule out such exceptional cases. What my broad analysis does show, however, that parties did not exert a systematic influence on the Parliamentary agenda.