The accountability gap: Deliberation on monetary policy in Britain and America during the financial crisis

Cheryl Schonhardt-Bailey [*], Christopher Dann, Jacob Chapman

London School of Economics and Political Science, UK

ABSTRACT

We employ multiple methods to gauge empirically the quality of the deliberative process whereby central bankers are held to account for their policy decisions. We use quantitative text analysis on the monetary policy legislative oversight hearing transcripts in the UK and US during the financial crisis. We find that the UK performs significantly better than the US in holding the central bank head to account on monetary policy, namely by engaging in a reciprocal dialogue between the legislative committee and the central banker. We then manually code selected exchanges from these transcripts, according to four criteria of deliberation: partisanship, accountability, narrative and response quality. We find that British MPs invoke almost no partisan rhetoric and target their questions more to relevant aspects of monetary policy; by comparison, their American counterparts seek to appeal more to their constituents and tend to veer away from discussing the details of monetary policy.

1. Introduction

For many decades, central banks throughout the world have had their independence with respect to monetary policy conditional on having to explain their policy actions, usually in formal hearings before the national legislature. The appearances of central bank heads before elected politicians often receive considerable media coverage, and their words are closely parsed to discern the direction in which the country's economy is heading. The core purpose of these deliberative hearings is to hold central bankers to account for their policy decisions: questions are asked, and answers are given. In this sense the hearings are deliberative, meaning that reasoned argumentation is fundamental. More broadly, deliberative democracy scholars have long argued that deliberation is a desirable component of democratic governance, as it is seen to enhance political legitimacy, attitudes of public-spiritedness, more interest in political participation, and ultimately better public policy (Lascher, 1996; Bächtiger et al., 2005; Mutz, 2008). However, what is less self-evident is the deliberative standard by which accountability hearings in national legislatures may be judged. What is "good" and "bad" *deliberative accountability*[1]?

Moreover, in a comparative framework, it is also unclear just how much the institutional setting of the national legislature may shape the quality of both questions asked and answers given. The focus of this paper is the quality of deliberative accountability for the decisions made by monetary policymakers, and the extent to which this relates to attributes of the hearings within a specific institutional setting. We use the metrics of reciprocity and non-partisanship to gauge deliberative accountability and examine these in the context of verbatim legislative hearing transcripts.

We examine monetary policy accountability hearings in the United Kingdom and the United States, leading up to and including the period of the financial crisis (2006–09), and use as data the hearing transcripts for the Treasury Select Committee (in the UK) and both

the House Financial Services Committee and the Senate Banking Committee (in the US). The financial crisis is an ideal period since both countries experienced many of the same conditions of, and effects from, the financial crisis, and so this period offers parallels in how each political system and its central bank responded to these conditions, and it is precisely during a crisis when monetary policy and other statutory responsibilities are highly relevant.[2] Aside from similarities in the immediate context of the financial crisis, both central banks operate "independently", and representatives from both are required by statute to appear regularly before their respective legislatures. Importantly, the two country cases also embody fundamental differences in their approaches to accountability in monetary policy—in part, the product of their presidential and parliamentary systems. Given similarities in the statutory requirements of each central bank along with others in the political-economic context facing each country during the financial crisis, we can take these features as "constant" and thus focus predominantly on differences in the institutional contexts and norms in their respective hearings to reveal the effect of these on the quality of deliberative accountability in monetary policy oversight hearings.

We seek to gauge the quality of deliberation by combining quantitative text analysis of parliamentary and congressional hearing transcripts, with systematic qualitative hand coding for key measures of deliberative quality. The latter analysis uncovers subtleties in reciprocity and partisanship by examining bilateral exchanges between the central bank head and individual legislators. A related literature on "central bank communication" focuses on how central banks communicate their actions and decisions to wider audiences. This literature has sought to understand forms of communication by, for example, the Bank of England, the Federal Reserve, the European Central Bank and the International Monetary Fund (Ehrmann and Fratzscher, 2007, Haan et al., 2007; Eijffinger and Geraats, 2006; Berger et al., 2011; Siklos and Sturm, 2013; Moschella and Pinto, 2018; Baerg, 2020). These studies typically examine communication (say, of speeches or statements) as flowing one-way, and this is targeted at some specified audience. In contrast, the present paper examines communication in an explicitly deliberative setting, where a dialogue exists between legislators and central bankers.

A second related literature addresses central bank accountability (Haan, 1997, Eijffinger and Geraats, 2006; Best, 2016; Högenauer and Howarth, 2019; McPhilemy and Moschella, 2019). While some of these studies examine the parliamentary setting in which central banks are held to account (e.g. (Högenauer and Howarth, 2019)), even these do not gauge whether, for example, oversight hearings adhere to any of the norms of deliberation which have received extensive attention in the deliberative democracy literature (Bächtiger et al., 2018; Bächtiger and Parkinson, 2019). We do recognize that multiple forms of accountability exist for central banks; however, the focus here is on the legislative setting in which monetary policymakers are required to explain their policy decisions, in an exchange which is intended to be deliberative in nature.

To summarize in advance, our comparative analysis provides empirical evidence that, at least in monetary policy hearings during periods of stress, the legislative setting certainly does shape the degree of reciprocity and extent of partisanship in the deliberative interactions between politicians and central bank officials. The analysis of the transcripts reveals that the two country cases represent two very different approaches to deliberative accountability. The UK adopts an approach of deliberative interaction between central bankers and parliamentarians on all substantive themes, exhibiting reciprocity and minimal partisanship in the hearings. In contrast, the US exhibits little in the way of reciprocal dialogue between the chair of the Federal Reserve and members of Congress. For the US, this appears to allow greater scope to divert discussion away from the primary focus of hearings (i.e., monetary policy).

2. Deliberation in legislatures: reciprocity and non-partisanship

The term *deliberative accountability* is not novel (e.g. (Mansbridge, 2009; Staszewski, 2009; Borowiak, 2011; Kreiczer-Levy, 2012; Vibert, 2014; Montanaro, 2019)) but most previous studies have taken a theoretical rather than an empirical approach. Moreover, while much has been written on deliberation in legislatures, to our knowledge no previous study has examined the deliberative accountability of monetary policy in comparative perspective. This paper seeks to build a bridge between the literatures on central bank communication and accountability on the one hand, and that of deliberative democracy (Barabas, 2004; Mutz, 2008; Bächtiger et al., 2018; Bächtiger and Parkinson, 2019) on the other. It does so by examining the quality of the process of questioning and answering, as seen in the formal setting of oversight hearings where the dialogue is expected to be deliberative.

Comparative studies of deliberation in national legislatures have identified key institutional features that shape deliberative quality (Steiner et al., 2004, Bächtiger and Hangartner, 2010a; Bächtiger and Parkinson, 2019). Of relevance here is that deliberation is argued to be of higher quality in presidential than in parliamentary systems. Although the empirical evidence for this purported difference in deliberative quality is mixed (Steiner et al., 2004: 123), the logic is that critical deliberation on the government's agenda by MPs of the government's party may impede government stability, and is therefore implicitly or explicitly discouraged. Furthermore, party discipline—which is typically greater in parliamentary systems—is understood to constrain free flowing deliberation, since in parliamentary settings, "argumentative lines have been fixed before the debate" (Steiner et al., 2004: 85). As this paper examines deliberation in both system types, the expectation from the comparative legislatures literature would be that monetary policy hearings in the US would exhibit higher quality deliberation than in the UK. But, when gauging the core measure of reciprocity, this is not what we find.

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[2] Elsewhere, one of the authors of this study examines deliberation on monetary policy in both the UK and US legislative committees during time periods outside the recent financial crisis, or what might be considered "normal" times. The findings in both those larger works align with the findings presented in this present study [Schonhardt-Bailey, 2013; Schonhardt-Bailey, 2022].

2.1. Reciprocity

Studies that have investigated the empirics of deliberation have at times isolated and then measured dimensions such as "information" or "open-mindedness" (Barabas, 2004; Mucciaroni and Quirk, 2006). However, the focus in these studies has not been on accountability. Because our concern rests with gauging the quality of deliberation within a specific formal accountability setting in which legislators address questions to policymakers and in so doing, expect answers to their questions, we therefore use reciprocity as our primary empirical measure. This is not to say that the "information" conveyed, and the "open-mindedness" exhibited—along with other possible measures of deliberation, such as equal participation, a focus on the public good, and so on (Steiner et al., 2004)—are unimportant, but rather that these measures are not as fundamental to deliberative accountability as reciprocity. Succinctly, our primary concern is whether legislators and central bankers engage with one another on key issues, listen to one another and respond accordingly—namely, whether they engage in a *reciprocal* dialogue. After all, if there is little or no convergence of vocabulary in accountably hearings, then one can hardly say that legislators have effectively held monetary policymakers to account.

Within the literature on deliberative democracy, reciprocity is a key principle of deliberation. The concept of reciprocity is not only fundamental to deliberative democracy; it lies at the root of human ethics. For game theorists and cognitive scientists (Ostrom and Walker, 2005), as well as scholars of conflict studies (Diekmann, 2004), anthropology (MacCormack, 1976) and computational neuroscience (Mahmoodi et al., 2018), reciprocity has implications for trust between individuals and groups of individuals. While the concept of reciprocity has received attention by deliberative scholars mostly at a theoretical level (e.g. (Goodin, 2000; Gutmann and Thompson, 2004)), there have also been studies that have sought to explore its empirical implications (e.g. (Weale et al., 2012; Pedrini et al., 2013)).

Reciprocity in deliberation is both conceptual and empirical. Conceptually, reciprocity means that "citizens owe one another justifications for the mutually binding laws and public policies they collectively enact" (Gutmann and Thompson, 2004, 98–99). These citizens should, moreover, ratify or acknowledge the arguments of others. As Goodin notes: "(t)here must … be uptake and engagement—other people must hear or read, internalize and respond—for that public-sphere activity to count as remotely deliberative" (Goodin, 2000: 92). Goodin contrasts this form of communication as one in which people are essentially *talking to one another* with other practices, such as posting material on the internet or pontificating from a soapbox, where people are essentially "posting notices for all to read"—notices which may or may not be read or internalized. The latter, in his view, does not constitute deliberation for the simple reason that it is not reciprocal (Goodin, 2000: 91–92). Reciprocity therefore requires participants to "engage with one another" so that "they do not only give reasons *but listen and take up the reasons of other participants*" (italics added) (Pedrini et al., 2013: 488).

This concept of reciprocity has not previously received attention in the central bank communications literature, and yet we contend that it is essential to any evaluation of central bank accountability. Without evidence that participants are talking *to* rather than *past* one another, we have no certainty that the explanations for decisions taken by the central bank are being conveyed to legislators sufficiently to enable them to gauge whether representatives from these institutions have met their statutory obligations. In other words, a reciprocal exchange entails not only offering up arguments, but also an "effective listening" to those arguments (Morrell, 2018, 238). This implies, for instance, that any empirical investigation of text emanating from such hearings should be able to capture shared concepts, or themes—and should, moreover, also be able to gauge the extent to which individual members participate in these shared themes.[3]

2.2. Partisanship

As a secondary measure, we also gauge the role of partisanship in monetary policy oversight hearings. For some scholars, partisanship is a key factor in the political economy of monetary policy, as for example in a partisan electoral cycle, or in the appointments of monetary policy committee members (Nordhaus, 1975; Hibbs, 1977; Alesina and Sachs, 1988; Franzese, 2002; Chang, 2003). Hence, any investigation of deliberative accountability in monetary policy hearings should not overlook the importance of assessing whether and how partisanship affects the quality of this accountability.

A priori, it is not clear whether partisanship should be considered a negative or positive influence on the hearings. There are several considerations which do not all conflate into a single clear stance. Viewed negatively, political parties may elevate ideological/partisan objectives and thus exacerbate conflict within a deliberative setting, and thereby diminish ideals such as open-mindedness, reason-giving and respect. Political parties are also adept at framing conflicts in a way that enhances their own legislative agenda (Slothuus and Vreese, 2010, Stewart et al., 2019), and so may lessen the scope for deliberation to be public-regarding. Simply put, by virtue of appealing to their partisan base, political parties are incentivized to "distort deliberation" (Quirk et al., 2018, 277).

At the same time that partisan rhetoric can diminish core ideals of deliberation, arguably it may deliver other positive goals, such as inclusivity (Mansbridge et al., 2012, 2–3). Partisanship may also enable politicians to demonstrate their commitment to shared group values and enable legislators to express their genuine preferences for particular policies, thereby fulfilling their role as political representatives. Thus, partisanship may be a double-edged sword, by lowering the intrinsic quality of deliberation but also enhancing the ability of legislators to hold independent central bankers to account.

It is thus worth asking whether legislators who hold central bankers to account are employing partisan rhetoric to demonstrate their credentials as political representatives who are diligently performing an accountability role, or are using the rhetoric in a more self-

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[3] (Weale et al., 2012) provide a good example of the empirical application of deliberative reciprocity in parliamentary discourse.

serving partisan fashion, perhaps also by pandering to constituents? The distinction between these two, however, may be quite subjective; nonetheless it is one worth exploring since it helps us to better understand just how much partisan rhetoric can be deemed acceptable (and even desirable) within accountability hearings on monetary policy.

Notably, previous research has found clear evidence of partisanship and electoral concerns driving deliberative processes in the US Congress, when both the Senate and House committees hold the chair of the Federal Reserve to account for monetary policy (Schonhardt-Bailey, 2013). At the same time, research on accountability in UK select committees has found evidence of low levels of partisanship in monetary policy hearings (Sanders et al., 2018). This previous research has not, however, sought to compare directly monetary policy deliberative accountability across the two country cases. But taking this previous research into account and bearing in mind that modern parliamentary select committees do strive to be nonpartisan (as discussed in the next section), we might anticipate finding lower levels of partisanship in the UK parliamentary committee relative to that in the US congressional committees. Yet, this simple comparison does not tell us whether partisanship is benefiting or detracting from deliberative accountability. To better make this judgment, this paper aims to assess partisanship within the context of the qualitative deliberative exchanges between legislators and central bank heads.

3. Institutional contexts and expected findings

An important feature of the institutional context for monetary policy oversight hearings in the UK and US is that both the Bank of England and Federal Reserve are independent central banks, although clearly no central bank is independent of the will of the people and thus elected representatives in respect of its constitution and objectives. The objective of monetary policy at a high level is laid down in statute. In the UK the relevant statute is the 1998 Bank of England Act, while in the US, it is the 1978 Balanced Growth and Full Employment Act. In the case of the Bank of England, the priority is price stability and "subject to that", the legislation mandates the Bank to support growth and employment. In contrast, and as suggested by the title of the US legislation, price stability and high employment are on an equal footing. The Bank pursues an inflation target (currently 2%) which is set by the government, while the Fed has no numerical target structure defined in legislation (but has itself adopted a similar target). Both central banks are independent with respect to the instruments chosen to achieve the objective of low inflation, without direct interference from political actors. That is, both may set the level of whatever variable they deem necessary to achieve their objective(s) (usually a short-term interest rate, but recently quantitative easing via asset purchases).

Both the Monetary Policy Committee (MPC) of the Bank and the Federal Open Market Committee (FOMC) of the Fed are subject to legislative oversight. The House of Commons Treasury Select Committee (TSC) conducts hearings on the Bank of England's Quarterly Inflation Report (from 2019, renamed the Monetary Policy Report). In the US, both the House and Senate have a statutory responsibility for holding the Federal Reserve to account. Within the House Financial Services Committee (HFSC) and the Senate Banking Committee (SBC), American legislators use the hearings on the semi-annual Monetary Policy Report of the Federal Reserve to hold the Fed chair to account on the performance of monetary policy.

Both in the UK and the US, then, legislative committees regularly hold hearings on the monetary policy decisions of their respective central banks.[4] The country cases are also similar in that both the UK and US legislative committee members do not vote on or produce a subsequent report following these oversight hearings.

There are, however, significant *institutional* differences between the two country cases. The first pertains to the role and purpose of committees in each legislative system. In Congress, committees are purported to enhance the electoral prospects of members (Fenno, 1973; Adler and Lapinski, 1997), enable members to exploit informational advantages (Krehbiel, 1991), and/or pursue partisan objectives (Cox and McCubbins, 1993). Select committees in the UK Parliament strive to be nonpartisan and more recently have sought to be more assertive in holding government departments and agencies to account. Committee theory for select committee membership is less advanced than for US congressional committees, although researchers typically note as motivation for membership the following: career advancement to the front benches (or conversely, former ministers move to the position of committee chair), gaining a reputation for policy expertise, and/or simply having influence as a backbench MP (White, 2015). This motivation is enhanced by three features: first, whereas congressional committees also draft and scrutinize legislation, select committees focus predominantly on oversight of government departments and agencies; second, frontbench ministers and opposition spokespersons are usually not members of select committees (Russell and Benton, 2011; Gordon and Street, 2012; Kelso, 2012); and third, members of Congress generally serve on multiple committees (fewer in the House; more in the Senate) whereas not all MPs serve on select committees, even after allowing for the exclusion of ministers, other frontbench spokespersons and party whips.[5] Hence, legislators in Congress may aspire to serve on one committee as opposed to another, but committee membership itself is not in question; for MPs, this is not a given.

These differences give rise to the potential for partisan allegiances to play a greater role in the congressional committees, thereby potentially compromising adherence to deliberative standards. For instance, by drafting legislation, committees in Congress are more open to lobbyists and partisan pressures, whereas the focus on oversight alone insulates select committees from such pressures. Moreover, because committee service is more of a privilege for backbench MPs (rather than a requirement of congresspersons), their acquired policy expertise on committees can be a pathway to ministerial careers. Yet, this in isolation does not allow us to judge the effect on deliberative accountability. For this, we will not only need to assess partisanship empirically, but also employ other ways to

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[4] To be clear, the Fed presents its formal report to Congress (a statutory obligation), whereas the Bank of England publishes its report, after which the TSC discusses this report in its hearing.

[5] In 2018, about two thirds of the 500 MPs eligible actually sat on one or more select committees (n.a., 2018).

evaluate its overall effect on deliberation.

A second set of institutional differences pertains to the norms and practices of the banking committees in each country. Among these are five of note: (1) the relatively small number of staff serving parliamentary select committees relative to congressional committees, thus giving the former fewer resources and placing greater onus on parliamentarians[6]; (2) the TSC has between eleven and thirteen members, whereas the HFSC and SBC have, respectively, about 70 and between 21 and 24 members; (3) *only* the Fed chairman testifies on the Monetary Policy Report, while in the UK, a rotation of several members of the MPC (always including the governor) testify before the TSC at hearings; (4) it is normal for both members of Congress (MCs) and the Fed chair to read out prepared statements in congressional committees, whereas such practice is strongly discouraged in the TSC; and (5) attendance is monitored more carefully in parliamentary committees. (Part of the 2010 reform package includes penalties for non-attendance by MPs Reform of the House of Co (2009).) This is not to say that no attendance problems exist for the TSC (Brazier and Fox, 2011: 366), but the incentives to attend are greater in Parliament than they are in Congress.[7] All these norms and practices shape deliberation, but their cumulative effect on the quality of deliberative accountability is hard to gauge. We suspect that the greater onus on MPs, smaller committee size[8] and more rigorous attendance standards may all improve the quality of questioning, insofar as it makes free riding on staff questions and the contributions of other committee members more difficult. The norm of having multiple members of the MPC before the committee also enables the TSC to seek to tease out differences of opinion on monetary stances among MPC members (thereby enhancing their own understanding of monetary policy), whereas this is not possible with just the appearance of the Fed Chair in the congressional committees. Again, we suspect that this may improve deliberation, as it allows a deeper understanding of the nuances that different independent experts may bring to the table in deciding monetary policy. Finally, we suspect that the practice of reading out statements is directly detrimental to the reciprocal dialogue required for these hearings. For all these reasons, we anticipate finding that parliamentary hearings will exhibit "better" deliberation than congressional hearings by the standard set out above for reciprocity.

4. Methodology and data

This paper employs a "thematic" approach to quantitative text analysis (elsewhere this is referred to as keyword-in-context, or KWIC (Illia et al., 2014)).[9] This assumes that speakers of textual data convey meaning in a distinctly thematic fashion, so that it is not just the words that help to classify content but also the context in which the words appear. Applications of thematic approaches may be found across the social sciences, including political science (Klüver and Mahoney, 2015; Klüver et al., 2015; Anstead, 2018). Thematic approaches to textual data are particularly effective in settings in which the form of argumentation or deliberation is of interest, as it allows one to capture the sequencing, reciprocal and interactive nature of the argumentative structure.[10] For instance, a thematic approach would be less suited to a large body of text which lacks any coherent theme (the contents of newspapers, or the entirety of *Hansard* or the *Congressional Record*, where the array of subjects discussed are unknown). As the focus of our research is on monetary policy accountability hearings, our subject matter is already known. Our key concern rests in the ways in which participants interpret and apply themselves to the task at hand—which is to hold central bankers to account for their decisions—and thus we seek to investigate the quality of the questioning of legislators as well as the quality of the responses from central bankers. We seek to uncover whether legislators and central bankers converge on the same set of themes (and thereby share discourse and dialogue in the questioning process in a way that demonstrates involvement and exchanges in a reciprocal manner).

The primary quantitative textual analysis software used here is referred to as "Alceste", and has been used widely in the social sciences (Noel-Jorand et al., 1995; Kronberger et al., 2000; Brugidou, 2003, Bara et al., 2007; Weale et al., 2012; Illia et al., 2014;

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[6] To exemplify, in 2008, the HFSC and SBC had, respectively, 75 and 55 paid staffers (Legistorm.com). Even with the Cook Reforms of 2002, which expanded committee staffing for select committees to eight in the TSC, the TSC is under-resourced relative to the two congressional committees. The TSC typically employs 8 staff, but can also appoint occasional specialist advisors, as required (Maer et al., 2009: 25–26).

[7] Between 2016 and 2018, average attendance in the Treasury Select Committee was between 65% and 70% (n.a., 2018).

[8] Legislative scholars have argued that smaller legislative committees enable specialization and greater expertise, while larger committees can become unwieldy and encourage members to free ride, thereby lessening their effectiveness (Mattson and Strøm, 1995; Strøm, 1998; Martin and Vanberg, 2020). See also, (Francis and Riddlesperger, 1982; Kirkland, 2014).

[9] Elsewhere (Sanders et al., 2018) parliamentary hearing transcripts are explored using *both* thematic and a Structural Topic Model (STM) (Roberts et al., 2014), in order to lend insights into the understanding of the content of the discourse and how that content varies over a set of covariates. Importantly, the findings from *both* approaches are consistent, with the thematic approach offering a visualization of the reciprocity aspect of deliberation, and the STM approach offering further precision in the partisan metric, by providing point estimates for topic proportions across different topics.

[10] In the pre-processing stage, words are reduced to their lemmas (which is a type of word stemming) and aspects of the text such a punctuation are retained to identify how words appear together in a section of text. Software using this approach employs co-occurrence analysis to examine the bivariate associations between words and phrases to map out concept clouds (specifically, the existence of words and phrases that tend to co-occur), and the relationships between concept clouds within a single corpus. A common feature of these approaches is to cluster textual units according to their semantic similarity. Such classifications are normally achieved by finding a partition of classes that maximizes variation in the vocabulary across the different groupings. The interpretation of the clusters obtained proceeds by analyzing the occurrences of terms in any given class. Besides this, thematic approaches also rely upon multiple spatial representations of the associations (e.g., Correspondence analysis) to capture relationships between themes in the corpus and independent variables which identify unique characteristics of the authors of the text (names, party affiliation, role, etc) and the setting (speech, hearing, date, place).

Vallès, 2015), in central banking (Bholat et al., 2015), and in the field of medical education (Ostapenko et al., 2018). Alceste is a thematic analysis software, meaning it considers co-occurrences across lexical units (key words) to form stable classes that are representative of the text. Simply put, it first analyses the vocabulary of a text to formulate a dictionary of the words and their root forms (i.e., the "lemmas"), and then it divides the text into homogenous units (classes) which are distinct from other units, using an algorithm based on descending hierarchical classification. Following an iterative process, the classification method decomposes the classes until a predetermined number of iterations fails to result in further divisions.[11] The result is a hierarchy of classes, which can be examined spatially, along with key identifiers which are provided by the researcher (e.g., name of speaker, party affiliation of speaker, and so on).[12]

Within each distinct unit, or class, both the characteristic words and sentences are given, and these are ranked statistically, using both φ and χ^2 coefficients,[13] and both can be traced back to the original text to evaluate their meaning. Both the characteristic words and "sentences" (or "Elementary Context Units", since these may extend beyond a single sentence to comprise a phrase which is characteristic of the class)[14] are then used by the researcher to assign labels to the classes which convey the meaning or theme of the class.[15] As with a topic model, characteristic words enable the researcher to assign labels, but with a thematic approach, these labels are also informed by the characteristic phrases, as well as by a variety of spatial tools which allow one to examine the sequencing of the discourse. A thematic approach differs from a standard topic model (or "bag of words" approach), where the order and sequencing of words and sentences is not necessarily of primary concern. Both thematic and topic model approaches capture the content of a corpus, and so as a validation exercise, we also check our results against that obtained from a Structural Topic Model (Roberts et al., 2014). We maintain, however, that our thematic approach is the preferred method here, since our overall subject matter is already known (e.g., monetary policy) and our primary concern rests in gauging the context of the discourse, and particularly we require the means by which to evaluate empirically the reciprocity of the participants.

The data for this study include the transcripts from the Fed's semi-annual Monetary Policy Report hearings of the HFSC and the SBC, along with hearings of the TSC on the BoE's Quarterly Inflation Report. These are taken from the period of mid-2006 to early 2009, thus comprising for the US Congress, twelve hearings in total.[16] Two of the twelve hearings (in both chambers in 2006) were chaired by Republicans (Representative Mike Oxley and Senator Richard Shelby) while the remaining ten hearings were chaired by Democrats (Representative Barney Frank and Senator Christopher Dodd, 2007–2009). For the UK Treasury Select Committee, data are from 2006 to 09, when it held ten oversight hearings on the Quarterly Inflation Report.[17] As the chair of this committee has always been occupied by the party in government (which was the Labour party from 1997 to 2010),[18] Labour's John McFall held the chair for the entire 2006–09 period.

The data are structured into three text files (corpuses), comprised of the above hearings for each committee (two congressional and one parliamentary). The text files are structured so that each speech or remark constitutes a "case", and each is "tagged" with identifying characteristics—the name of the speaker, his or her party affiliation (or "no party" for central bank officials), the speaker's role

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[11] That is, the number of classes for any given corpus is determined by the software's algorithm. This follows an iterative process, where the method of descending hierarchical classification decomposes the classes until a predetermined number of iterations fail to result in further significant divisions. For details and presentation of the algorithm, see appendix in (Schonhardt-Bailey et al., 2012).

[12] For an excellent illustration of the hierarchy of classification, using Alceste on US Senate debates on the Patient Protection and Affordable Care Act of 2010, see (Vallès, 2015, 143–162).

[13] From a standard chi square table, for a given degree of freedom, the larger the chi square value, the more representative a word or ECU is in relation to the class in which it occurs. For Alceste the df = 1 and so, for instance, a chi square value of 11 would indicate 1% statistical significance. Phi coefficients are measures of association which normalize chi square values (and thereby factor out the effect of sample size). These coefficients range from 0 to 1, with 0 indicating no association and 1 indicating perfect association. For a detailed explanation of these coefficients in their interpretation for Alceste results, see (Vallès, 2015).

[14] The methodology proceeds by identifying a set of 'gauged sentences' (or Elementary Context Units, ECUs), from a pre-existing division of the text specified by the user. This constitutes the sampling unit of the analysis. In our case, the sampling unit is represented by single interventions in committee hearings. Using the occurrence of words in each ECU, Alceste builds the classification using an iterative descending hierarchical classification algorithm which decompose the classes until a predetermined number of iterations fails to result in further significant divisions (Reinert, 1998).

[15] Alceste requires the researcher to apply semantic meaning to a list of characteristic lemmas and ECUs, ordered by their phi and chi square coefficients. This involves first looking at the list of the most representative words for each semantic class and, second, analysing the ECUs most strongly associated with each class. The labelling process is repeated for each class, until the user has assigned a label to all lists, after which, more complex analyses (i.e. dendrograms, Correspondence analysis etc.) can begin. Further details of its processes are given in (Lahlou et al., 1995b; Sanders et al., 2018).

[16] For the House committee, these are: 20 July 2006; 15–16 February 2007; 17–18 July 2007; 26–27 February 2008; 16 July 2008; and 25 February 2009. For the Senate committee, these are: 19 July 2006; 14 February 2007; 19 July 2007; 28 February 2008; 15 July 2008; and 24 February 2009.

[17] The TSC held hearings on most, though not all, of the Bank's Quarterly Inflation Reports. The ten hearings were on the following dates: 29 June 2006; 30 November 2006; 27 March 2007; 28 June 2007; 29 November 2007; 26 March 2008; 26 June 2008; 11 September 2008; 25 November 2008; and 24 March 2009.

[18] In an email with the authors (22 February 2022), the Second Clerk of the Treasury Select Committee clarifies: "There are no rules about which party gets which committees, but there are traditions: for example, a Member from the main Opposition party will chair PAC (usually a Member with previous ministerial experience in the Treasury). Other chairmanships are freely traded, although some (e.g. Treasury and Foreign Affairs) have never, to our knowledge, been held by a Member other than one from the main party in Government, including during the 2010 Coalition."

(committee chair, committee member, Fed chairman, MPC internal member [the governor, two deputy governors, the Bank's Chief Economist and the Bank's Executive Director for Markets], MPC external member [four individuals]), and the date of the hearing. All the hearing transcripts are analysed in their entirety, except for written questions and answers submitted after the hearing. The congressional committees permit the inclusion of this correspondence in the transcripts, while the TSC does not adhere to this practice. Because the focus here is on deliberation, the post-hearing correspondence is excluded from the congressional text files.

Substantively, the key task in examining the hearings is to ascertain the extent to which witnesses are effectively held to account. Do they answer the questions asked? Is the dialogue reciprocal or diversionary? Are parliamentarians more interested in making partisan jabs than in uncovering and understanding the reasons for decisions made and actions taken? The methodological approach to answering these questions is to first, examine quantitatively the entirety of the transcripts from the hearings, with a view to gauging whether the themes that are identified exhibit vocabulary which is associated with both central bankers and legislators. That is, for any given theme in the hearings, do we find a statistical association between at least one central banker and at least one legislator (which would signify a reciprocal dialogue on that theme)? This quantitative approach is an aggregate one which includes the entirety of the 2006–09 period for each set of hearings, but does not examine specific questions and answers. Thus, a second qualitative approach is to examine at an individual level, whether an individual central banker responds to an individual legislator in a way that demonstrates reciprocity (that is, the answer to a specific question about a policy decision is one that offers an explanation to that decision), and whether the questions themselves relate to the statutory expectations of the central bank, or whether the legislator is seeking other goals, such as partisan point-scoring.

5. Analysis

Key terms for these hearings (e.g., the Fed, GDP, interest rate, and so on) are identified and managed through the lemmatization process[19] to improve the robustness of the results. Online Appendix 1 details the specific list of terms that required lemmatization supervision prior to analysis.

5.1. Identifying the themes

Table 1a provides summaries of the basic statistics from Alceste for each of the three sets of hearings. The size of each of these three text files is roughly similar, and as a measure of goodness-of-fit, we observe that the TSC, HFSC and SBC obtain a classification rate of 81%, 76% and 82%, respectively. This classification captures the percentage of the overall corpus (or more precisely, the percentage of the Elementary Context Units[20]) which has been successfully apportioned into the obtained classes. Thus, respectively, 19%, 24% and 18% of the text files remains unclassified by our approach.

The bottom two rows indicate the number of classes identified and the size of each class, with the class labels imposed by the researcher who is reliant on both the most characteristic function words for each class (ranked by χ^2 and φ [21]) and characteristic ECUs.

As an example, the top ten words (and χ^2 values) for Class 1 from the TSC hearings are: bank (542), lend (291), liquid (181), sheet (155), fund (147), market (142), financial (130), banking_system (124), scheme (116), and system (96). Furthermore, the top two representative phrases (ECUs) provide the context surrounding the characteristic words:

> The provision of the SLS [Special Liquidity Scheme] does not provide funding for mortgage lending but it does provide liquidity insurance to give the banks time to sort their balance sheets out. (Governor King)

> For those particular kinds of operation—commercial paper and corporate bonds—the criterion for success is not the amount of purchases that we engage in, it is the leverage that such purchases might have on the credit spreads in markets and the private sector issuance of that paper, and it is only two or three weeks into the scheme but I think we are mildly encouraged by what we are seeing so far. (Governor King)

These quotes refer to the Bank of England's Special Liquidity Scheme, introduced in April 2008 to improve the liquidity position of the UK banking system by helping banks to fund assets on their balance sheets. The lists of characteristic words and phrases for each class thus provide an understanding of the thematic content for each class. For this class, the label *Bank Lending and Central Bank Liquidity Assistance (during the crisis)* is assigned; the remaining class labels are similarly assigned.

However, to provide further clarity on the labelling of classes and their content, Table 1b provides the top ten characteristic words for each class. Beneath these are the names or roles of participants whose discourse is strongly associated with each class. Again, using Class 1 of the TSC hearing as an example (*Bank Lending and Central Bank Liquidity Assistance (during the crisis)*), we see that the vocabulary and ECUs of two Bank officials (Mervyn King and Paul Tucker) as well as the TSC Committee Chair (John McFall) were statistically associated with the content of this class.

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[19] Lemmatization is like word stemming. However, whereas stemming removes suffixes or prefixes, lemmatization reduces the form of the word by also considering the full vocabulary of the corpus, for instance by examining the text and punctuation which surrounds the word. Lemmatization is computationally more intensive (and thus slower) than stemming since it requires the analysis of the whole corpus (Beri, 2020).

[20] The program conducts two preliminary analyses, each using slightly different lengths for the elementary contextual units. It then opts for the length that successfully classifies the greater proportion of ECUs.

[21] Here, the minimum χ^2 of 12.28 is designated for the TSC corpus, with one df. Whereas the size of the χ^2 is related each corpus, the φ is not sample specific and thus can be compared across the three hearings.

Table 1a

Basic Statistics for US and UK Legislative Oversight Hearings on Monetary Policy, 2006-09

	UK Treasury Select Committee (Commons)	US House Financial Services Committee	US Senate Banking Committee
Total Word Count	154,813	159,764	147,163
Minimum Frequency of a Word Included in Analysis (Minimum χ^2 for word selection)	4 (12.28)	4 (11.63)	4 (11.78)
Passive Variables (Tagged Indicators)	52	78	42
I·C·U.s (= number of speeches/comments)	1642	1319	1311
Classified E.C·U.s	81% (= 3685)	76% (= 3490)	82% (= 3533)
Stable Classes	4	6	4
Distribution of Classes (%)	1 **(35)** *Bank Lending & Central Bank Liquidity Assistance [during crisis]* 2 **(29)** *Inflation & Monetary Policy* 3 **(22)** *Economic Activity & Growth* 4 **(14)** *Labor Market & Real Wages*	1 **(25)** *Process & Pleasantries* 2 **(15)** *Bernanke's Description of Real Economy & Inflation (incl. Labor Market)* 3 **(25)** *Financial Crisis: Causes & Responses* 4 **(8)** *Financial Regulation-Conduct (espec. Re: Consumers)* 5 **(20)** *Labor Market (Wages & Incomes)* 6 **(7)** *Trade & Current Account*	1 **(31)** *Process & Pleasantries* 2 **(38)** *Financial Stability (Banks & Bank Failures)* 3 **(18)** *Economic Activity/Growth (incl. Labor Market) [pre-crisis]* 4 **(13)** *Inflation*

Table 1b

Characteristic Words and Most Significant Names/Roles for Thematic Classes in Committee Hearings (χ^2 and φ coefficients, given respectively in brackets)

TSC	HFSC	SBC
1 (35) <u>Bank Lending & Central Bank Liquidity Assistance [during crisis]</u> *bank, lend, liquid, sheet, fund, market, financial, banking_system, scheme, system* Gov. Mervyn King (56, 0.12); MPC Int. Paul Tucker (46, 0.11); Committee Chair John McFall (38, 0.10)	**1 (25)** <u>Process & Pleasantries</u> *thank, Chairman_Bernanke, question, chairman, committee, want, ask, Chairman_Frank, members, hear* Committee member (213, 0.24); Democrat (160, 0.21); Committee chair (123, 0.18)	**1 (31)** <u>Process & Pleasantries</u> *thank, Chairman Bernanke, question, issue, committee, talk, comment, want, Chairman Dodd, today* Democrat (377, 0.32); Chris Dodd (290, 0.28); Committee chair (261, 0.27)
2 (29) <u>Inflation & Monetary Policy</u> *inflation, target, interest_rate, medium, vote, term, letter, fiscal, meet, keep* David Gauke (21, 0.07); MPC External (21, 0.07)	**2 (15)** <u>Bernanke's Description of Real Economy & Inflation</u> *inflation, price, pace, core, growth, quarter, expect, energ+, like, remain* Ben Bernanke [Fed Reserve Chair] (293, 0.28)	**2 (38)** <u>Financial Stability (Banks & Bank Failures)</u> *bank, capital, loan, asset, credit, regul+, institution, system, mortgage, make* Ben Bernanke (249, 0.26); Fed Reserve Chair (249, 0.26)
3 (22) <u>Economic Activity & Growth</u> *growth, invest+, recover+, econom+, see, slow, United_States, trade, strong, rebalancing* Chief Economist Charlie Bean (111, 0.17); MPC Ext. David Blanchflower (25, 0.08)	**3 (25)** <u>Financial Crisis: Causes & Responses</u> *bank, asset, capital, loan, private, securit+, institut+, provide, fund, market* Ben Bernanke [Fed Reserve Chair] (186, 0.23)	**3 (18)** <u>Economic Activity/Growth (incl. Labor Market)</u> *percent, growth, year, gain, rise, quarter, average, saving, rate, wage* Michael Bennet (54,0.12); Robert Menendez (47, 0.11); Paul Sarbanes (39, 0.10)
4 (15) <u>Labor Market & Real Wages</u> *price, supply, food, pay, commodit+, rise, household, increase, energy, labour* MPC External (29, 0.08); MPC Ext. Kate Barker (24, 0.08)	**4 (8)** <u>Financial Regulation-Conduct (espec. Re: Consumers)</u> *card, disclosure, practice, rule, consumer, credit, deceptive, unfair, mortgage, regul+* Judith Biggert (65, 0.13); Ben Bernanke [Fed Reserve Chair] (57, 0.12)	**4 (13)** <u>Inflation</u> *inflation, price, expect, energy, commodit+, core, food, oil, outlook, press* Ben Bernanke [Fed Reserve Chair] (121, 0.18)
	5 (20) <u>Labor Market (Wages & Incomes)</u> *wage, income, job, real, famil+, people, middle, minimum, increase, inequality* Democrat (105, 0.17); Committee member (104, 0.17)	
	6 (7) <u>Trade & Current Account</u> *oil, deficit, export, dollar, demand, domestic, barrel, unit, China, foreign* David Scott (29, 0.09); Ron Paul (18, 0.07); Tom Price (16, 0.06)	

Table 1b also helps to convey the *strength* of the relationship between individuals/roles and a thematic class. As the φ coefficient is independent of the sample size (and varies between 0 and 1), we can compare this coefficient across the hearings. Notably these coefficients are larger for some classes in the HFSC and SBC where the Fed Chair (Bernanke) dominates the discourse (e.g., *real economy and inflation* and the *financial crisis* in the HFSC and *financial stability* in the SBC) or where MCs dominate the discourse (*process and pleasantries* in both the congressional hearings). The φ coefficients for the individuals in the TSC hearings do not appear to exhibit the same imbalance between central bankers and committee members. That is, for the congressional committees, the central bank chair dominates discourse in some classes while MCs dominate discourse in other classes (as seen in the χ^2 and φ coefficients).

5.2. Thematic contrasts between committees

Four observations can be drawn from Table 1a. First, across all the committees, four themes are consistently prominent: (a) labour market (including unemployment and jobs); (b) the financial crisis itself (including the stability, solvency and liquidity of banks and the role of the central bank); (c) assessments of economic activity and growth; and (d) inflation. To validate these themes, we ran a structural topic model on the two sets of country hearings and found that all the classes also appeared in these topic models.[22]

Second, financial regulation and/or stability of banks emerge as distinct classes for both congressional committees, but not for the TSC. While *both* the congressional and parliamentary committees held *other* hearings on financial regulation and other aspects of the financial crisis, we are nonetheless capturing here the extent to which financial regulation spilled over into the discussion of monetary policy oversight.[23] It is also worth recalling that British select committees differ from American congressional committees in that they do not explicitly consider legislation, but rather focus more predominantly on their oversight function. This more specialist function may give rise to the relatively large weight given to discussion of inflation and monetary policy in the TSC—that is, 29% of the classified ECUs fall into this class, compared to weights of 15% in the HFSC and 13% in the SBC.

Third, the HFSC hearings exhibit two classes that do not appear in either the SBC or the TSC. In Class 4, the committee focuses on financial regulation that covers consumer related aspects of banking—i.e., the conduct of business (credit cards, deceptive lending practices, consumer debt). In contrast, the SBC appears to focus more on financial stability in terms of bank failures, liquidity in the system and systemic risk. In Class 6 the HFSC also discusses issues surrounding international trade and the current account (oil prices/demand/supply, foreign purchases of US debt, exchange rates and currency manipulations). While significant, it should be noted however that together, these two unique classes comprise just 15% of the classified ECUs for the House committee.

A fourth observation is that for both the House and Senate, discourse relating to the committees' *process, procedures and pleasantries* comprises a large share of the classified ECUs—25% for the HFSC and 31% for the SBC. These include words like "I, thank, you, committee, question, talk, comment, today, ask, hearing" and phrases like "Thank you. I appreciate you sharing that with us." In contrast, the parliamentary committee does not exhibit any such class that is primarily comprised of process language. This tends to indicate that the style of oversight in the UK involves a more direct form of questioning. One interpretation for these findings is that for the congressional hearings, the committee process (time allocation, and so on) and pleasantries intrude upon the more "meaty" issues, whereas these aspects of the discourse do not appear to have the same influence in the parliamentary committee.
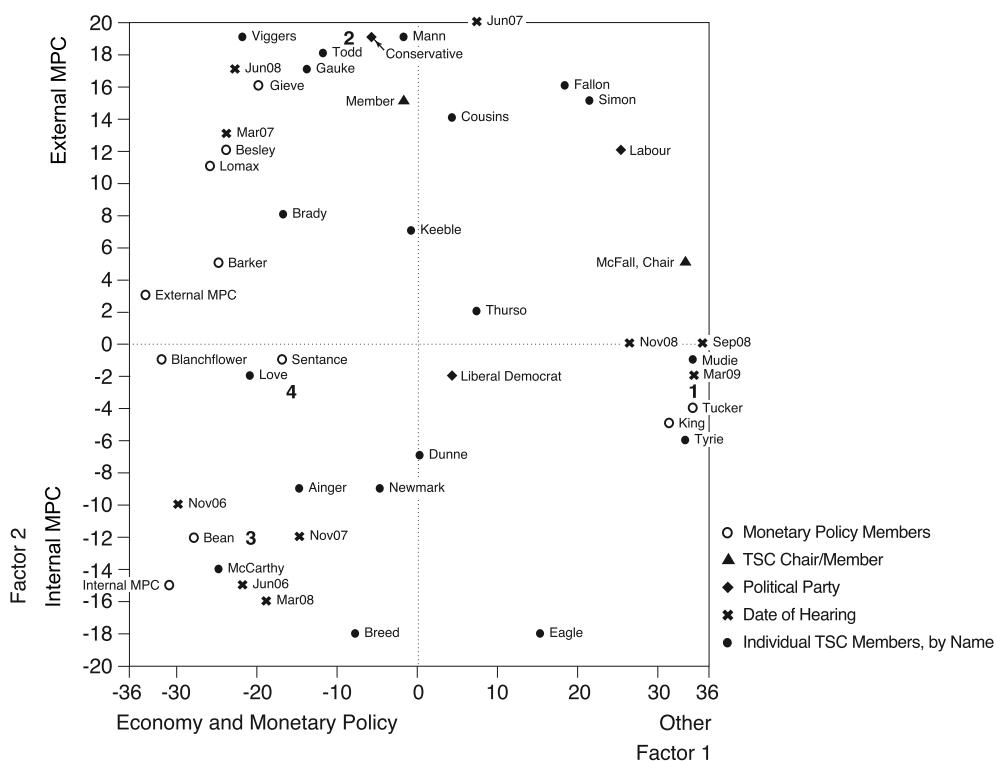
5.3. Correspondence analysis

Fig. 1 through 3 are maps of the correspondence analysis of the classes as well as the identifying tags (name, role, date) for each of the oversight hearings, where distance between a class and a tag (or between two classes) reflects the degree of association. This analysis cross-tabulates classes and words in their root form in order to create a matrix that can then be subjected to factor correspondence analysis (Greenacre and Hastie, 1987, 437–447, Greenacre, 1993). In this way, we obtain a spatial representation of the relations between the classes. The positions of the points is contingent on correlations rather than coordinates (Reinert, 1998: 45), where distance reflects the degree of co-occurrence.[24]

The legend for the identifying tags is given to the right of each graph—for instance with the TSC (Fig. 1), speakers may be identified by their name and their role (Monetary Policy Member, committee chair or member), and for MPs, their party affiliation. Thus, the association between individuals or their aggregates (e.g., MPC members, Liberal Democrats, committee members) and a thematic class

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[22] To obtain an optimal number of topics, we relied first on diagnostic values for semantic coherency, held out likelihood, residuals and lower bound. Second, we then examined the top words for each class and sought to arrive a topic number which provided coherent topics, but with the least amount of repetition among the classes. We arrived at a 19-topic model for each the UK and US sets of hearings. For the UK hearings, the classes in Alceste were replicated in 11 of the 19 topics (and two of the topics were not substantively informative). One topic on fiscal policy and one on household debt did not appear in the Alceste results. For the US hearings (HFSC and SBC combined), 16 of the 19 topics aligned with those in the House and Senate hearings, as analysed using Alceste. Again, fiscal policy was found in the topic model but not in the Alceste results.

[23] Notably, from 2006 to 09, the Bank of England was not the regulator of financial institutions, whereas the Fed was a regulator of banks.

[24] For this, Correspondence analysis uses the "chi-squared distance", which resembles the Euclidean distance between points in physical space. (Here, chi-squared distance—which is distinct from the chi-squared statistic used to measure the significance of the words and tags–can be observed in Euclidean space by transforming the profiles before constructing the plots.) In Correspondence analysis, each squared difference between coordinates is divided by the corresponding element of the average profile (where the profile is a set of frequencies divided by their total). The justification for using the chi-squared concept is that it allows one to transform the frequencies by dividing the square roots of the expected frequencies, thereby equalizing the variances. This can be compared to factor analysis, where data on different scales are standardized. For more detailed discussion and further geometric reasons for using the chi-squared distance in Correspondence analysis, see (Greenacre, 1993: 34–36).

	% Association	% Cumulative
Factor 1	44.7	44.7
Factor 2	30.5	75.2

1 Bank Lending and Central Bank Liquidity (During Crisis)
2 Inflation and Monetary Policy
3 Economic Activity and Growth
**4** Labor Market and Real Wages

Fig. 1. Correspondence analysis of Treasury Select Committee hearings on monetary policy oversight.

may be observed spatially. We can observe that individuals whose speech acts acquire χ^2 and φ statistical significance for any class are situated in proximity to that class, and conversely, if their discourse shares little or no co-occurrences with another class, are situated at a distance from that class. A good example of this is Ben Bernanke in Fig. 2, where he is situated on the horizontal axis midway between Classes 2 and 3 (*Real Economy/Inflation* and *Financial Crisis*), but at a distance particularly from Class 1 (*Process and Pleasantries*). As the Fed Chair would not typically engage in managing the process of the hearing, his discourse has no co-occurrence with that of Class 1. Moreover, the χ^2 and φ coefficients given in Table 1b help to understand the position of his identifying tag, with Bernanke being the single dominant speaker for Classes 2 and 3, and committee members/chair and Democrat members are all highly significant for Class 1.

With respect to the axes, correspondence analysis aims to account for a maximum amount of association[25] along the first (horizontal) axis. The second (vertical) axis seeks to account for a maximum of the remaining association, and so on. Hence, the total association is divided into components along principal axes. The resulting map provides a means for transforming numerical information into pictorial form. It provides a framework for the user to formulate her own interpretations, rather than providing clear-cut conclusions.[26]

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[25] Correspondence analysis usually refers to the "inertia" of a table, which can also be called "association" (Weller and Romney, 1990). A corresponding chi-squared value can be obtained by multiplying the association value by the total *n* of the table.
[26] The association and chi-squared statistic may be interpreted geometrically as the degree of dispersion of the set of rows and columns (or, profile points) around their average, where the points are weighted.
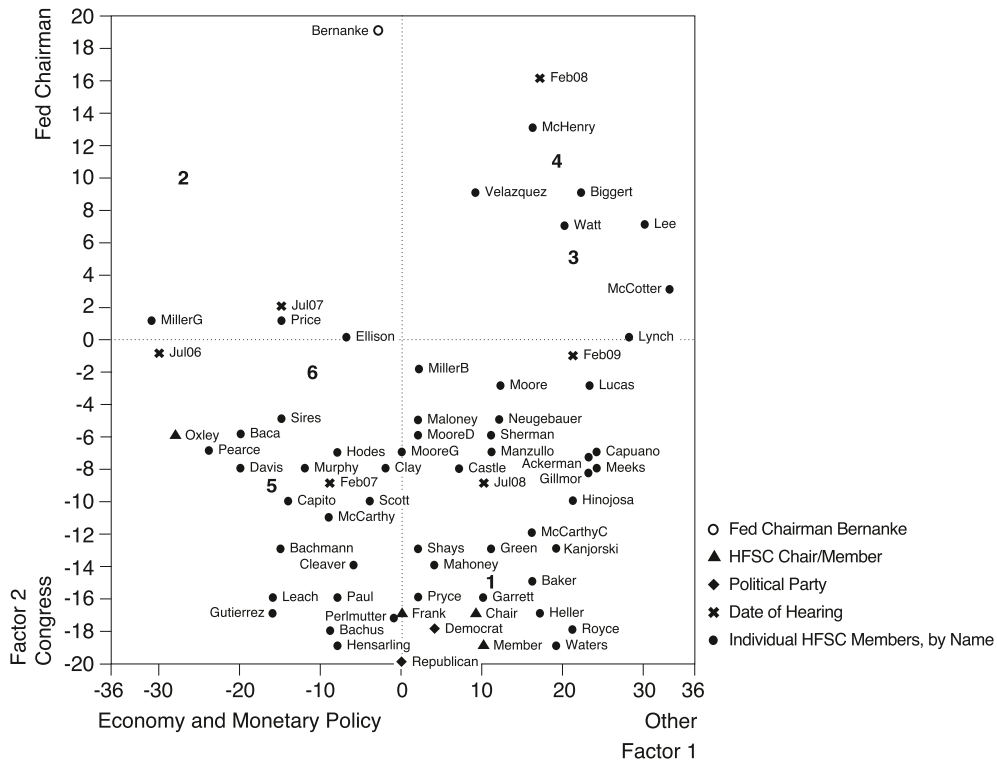
	% Association	% Cumulative
Factor 1	31.9	31.9
Factor 2	23.4	55.3

1 Process and Pleasantries
2 Bernanke's Description of Real Economy and Inflation
3 Financial Crisis: Causes and Consequences
4 Financial Regulation: Conduct
5 Labor Market
6 Trade and Current Account

Fig. 2. Correspondence analysis of House Financial Services Committee hearings on monetary policy oversight.

All three correspondence graphs represent a primary (horizontal) dimension which distinguishes on the left, what might be considered core themes of monetary policy decision making—namely inflation, labour markets, economic growth, or a theme which is a source of information to inform policy (trade and current account). On the right are other themes which are not core to monetary policy making (for instance, financial stability/regulation, and the process managing the committee hearing). All three correspondence graphs also suggest a secondary dimension which reflects an underlying institutional divide in the discourse. For the two congressional committees, this is a stark divide between Fed Chair Bernanke (situated at the extreme top of each graph) and members of Congress who are located mostly in the bottom quadrants. For the TSC, this divide is intra-institutional—namely between external MPC members toward the top of the graph and internal MPC members toward the bottom. This divide should not, however, be overstated since the positions of the "External MPC" and "Internal MPC" identifiers are situated in closer proximity than the Fed/Congress positions in the other two correspondence graphs.[27]

A further unique feature of the spatial representation of the TSC discourse is that both legislators and central bankers are situated near each of the thematic classes. For instance, MPC members King and Tucker are the nearest situated individuals to the theme of central bank lending (Class 1), as also are legislators Tyrie and Mudie. The same applies to the remaining three classes for the TSC, with

members of both the MPC and the TSC speaking to each of these themes. What does this signify? The proximity of both central bankers and MPs to each of the four themes means that there is discourse co-occurrence between each set of actors on each of the themes, or more simply, they are in a conceptual dialogue. They may not agree on all aspects of, say, labour markets, but both the MPC members and TSC members are engaging with each other on this theme. Questions asked receive answers which share the same vocabulary. There is, in short, evidence of a *reciprocal* dialogue between legislators and MPC members for each of the thematic classes.

This is not the case for the two congressional committees. In Figs. 2 and 3, the second (vertical) dimension pits the discourse of legislators (at the bottom) against that of the Fed chairman (at the top). As such (and by virtue of the Fed chairman testifying alone) there is no dispersion of the single central banker around other thematic classes. For both congressional committees, the marginal gap in distance between the Republican and Democratic party tags is dwarfed by the distance between the party aggregates and Bernanke. Thus, Bernanke's discourse can be said to have little in common with that of legislators. The Fed chairman and congressional members do not appear to engage verbally with one another; rather, they talk past each other.

It is, however, important to emphasize that the multiple members testifying before the TSC allows a specialization of discourse by the MPC members, with internal members speaking to core functions of the BoE during the crisis (King, Tucker) or to their defined roles in the Bank (Bean, as Chief Economist), and external members speaking to topics reflecting their areas of expertise. This specialization is reflected in the intra-institutional divide on the second dimension, but in large measure the divide is one of specialization. With only one representative of the Federal Open Market Committee (the Fed chair) appearing before the congressional committees, no such specialization can occur, and so the identifier for Bernanke can only appear in one position. Notably, in Figs. 2 and 3, Bernanke's identifier appears in the top quadrants where, for instance, the classes on real economy, inflation and financial stability also appear. But his identifier is situated at an extreme distance from aggregate identifiers for Members of Congress (e.g., member, Republican, Democrat), which means that, even for the words used in classes on real economy, inflation, and financial stability, his language is most different from that of legislators. As a clear measure for this, we can see that for inflation and the real economy, for instance, Bernanke's identifier is the statistically dominant one for these classes. (In contrast, no one member of the BoE's MPC dominates any class in the same way as Bernanke does in the two congressional hearings [see, again, Table 1b].)

To further understand Bernanke's position in Figs. 2 and 3, we can consider a counterfactual. If, for example, the discourse reflected perfect reciprocity between the Fed chair and MCs on all classes, Bernanke's identifier would be located roughly in the centre of the graph as he would be constrained to a fixed central position. His identifier would not fall at a distance from all the thematic classes associated with members of Congress. Alternatively, if the discourse of Bernanke and members of Congress were reciprocal on just one thematic class, the identifiers for Bernanke and at least some of those members would appear near that class. We do not observe this.

A further feature of the analysis which contributes to the reciprocity story is the distribution of discourse by identifiers, which allows us to sort all the elementary context units of the corpus into whether the speaker was a member of the central bank or legislative committee. For the TSC, MPC members do most of the talking (72%) relative to TSC members (28%). For the congressional committees, the distribution is weighted towards congresspersons: 43% for the Fed chair and 57% for representatives; and 47% for the Fed chair and 53% for senators. This stark difference suggests that members of Congress dominate the speech in the hearings far more than their counterparts in the UK, and so offer less scope for the Fed chair to even respond as fully as the chair may wish. Of course, the fact that a single central banker appears in these hearings may also contribute to this finding.

In sum, these spatial graphs illustrate that oversight hearings on monetary policy in the US reflect a bifurcation in discourse between legislators and the Fed chairman. This finding is not particularly unique to the financial crisis but rather is one that defines monetary policy oversight in the US over at least the past three decades (Schonhardt-Bailey, 2013). In the UK, no such bifurcation of discourse on monetary policy emerges. Rather, members of the MPC speak to each of the thematic classes, as do members of the parliamentary committee.
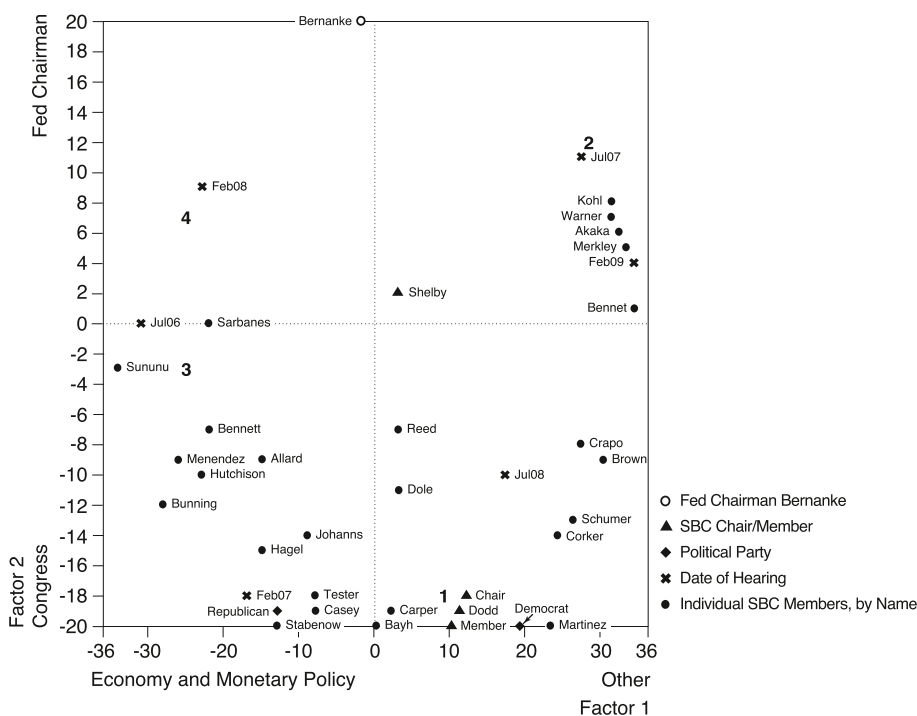
The split in discourse between the central bank and legislators that is evident in the US and absent in the UK suggests that members of the MPC and TSC are more engaged with each other on each of the thematic classes during the monetary policy hearings than are their American counterparts—which supports the reciprocal measure for deliberative accountability.

The very different findings for monetary policy hearings suggest that the UK conducts accountability by committee whereas the US conducts it by individuals. That is, members of the TSC hold the BoE accountable by questioning multiple MPC members across a variety of topics and then teasing out shades of differences in opinion among the MPC members, thereby making the decision-making process *by a committee* (and therefore subject to varieties of opinion) more transparent. Appearances by multiple members of the MPC also facilitates specialization by theme. In the US case, legislators question only the Fed chair, who (as an individual) is presumed to represent a decision by the FOMC that is more consensual than the more individualistic nature of the MPC. And yet, by virtue of speaking alone, testimony by the Fed chair prevents legislators from directly challenging or exploring variations of opinion among FOMC members or allowing specialization by monetary policy maker.

6. Close reading and coding of deliberative exchanges

Quantitative text analysis enables a systematic examination of the thematic content of the accountability hearings in both the UK and the US. This approach to gauging reciprocal deliberation is particularly adept at capturing the entirety of the hearings and subjecting them to systematic analysis, while at the same time treating text *not* as simply a "bag of words"[28] but rather retaining the

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[28] For a comparison of thematic approaches to text analysis (like Alceste) and a topic modelling approach (which typically treats text as "a bag of words"), see (Sanders et al., 2018).

Fig. 3. Correspondence analysis of Senate Banking Committee hearings on monetary policy oversight.

	% Association	% Cumulative
Factor 1	47.0	47.0
Factor 2	29.7	76.7

1 Process and Pleasantries
2 Financial Stability (Banks and Bank Failures)
3 Economic Activity and Growth (Pre-crisis)
4 Inflation

context and sequencing of language. Nonetheless, it is a macro-level approach which does not examine exchanges between sets of actors in any detail.

We thus employ a second approach in order to explore both reciprocity and partisanship at a "micro-level", by assessing exchanges between a given committee member and witness. For instance, if we envisage a reciprocal dialogue as involving responses that ostensibly address the arguments of the questioner, we might expect to find nuances and subtleties in both the questions and the responses that may not be well-captured by a quantitative (or "macro-level") approach.

Indeed, these nuances may require considered and even expert judgment. First, *partisan rhetoric* may distort both the content and direction of questioning, perhaps by infusing the meaning or interpretation of a question with considerations which seek to defend or criticize a particular political party. Second, the use *of narratives or storytelling* (e.g., relaying one's own experiences, telling stories) (Thompson, 2008, 505) may also feature in the way that questions are posed. The use of narratives may be seen as a way to break the ice, and thereby encourage opponents in a discussion to better listen to, engage with and recognize one another's arguments and positions (Steiner, 2012, Bevir et al., 2018, 684). However, these narratives may also serve as a means to enhance a legislator's electoral prospects, as, for example, in the mode of the "electoral connection" literature pioneered by Mayhew, where members of Congress exploit opportunities (such as nationally televised monetary policy hearings) to emphasize their personal accomplishments by linking them to their constituents, or take a political stand/assert a political judgment which is of interest to voters (Mayhew, 1974; Hurley, 2001). Mayhew contrasts the US congressional system with the British parliamentary system, where in the latter case MPs are motivated more by party concerns, and so tend to impress the leaders of their own party as a means of career advancement (Mayhew, 1974, 22). Mayhew's assessment may suggest that *partisan rhetoric* may be more prevalent in parliamentary hearings, as MPs demonstrate partisan identity to their party leaders. *Narratives* on the other hand may be observed in at least two ways: (a) a partisan-neutral breaking of the ice; or (b) highlighting to constituents a member's individual accomplishments or asserting a political judgment or stance. And for these narratives we may expect more attempts to use the highly publicized hearings to highlight individual accomplishments and take political stands in congressional hearings than in parliamentary hearings. By examining more closely how

legislators use partisan rhetoric and how they employ narratives, we begin to understand in a more nuanced way the influence that the political system has in shaping the ways in which legislators practice their accountability roles.

Third, subtleties in the dialogue between committee members and central bankers might also include the extent to which the questions by a given committee member fall within the statutory remit of the policy to which the witness is being *held to account*—in this case, monetary policy. A committee member may ask the governor or Fed chair to respond to aspects of public policy which fall well outside the remit of the central bank. In short, we might seek to ascertain the extent to which the questioner has posed questions which (1) employ partisanship rhetoric; (2) use narratives to embellish or otherwise "frame" questions; and (3) focus on questions which could be described as ones for which the central bank could reasonably be held accountable, according to its statutory remit.

These three indicators focus on the nature of questioning, but a fourth indicator for reciprocity concerns the *quality of the response*. How well does the witness from the central bank respond to the questions given? Does the witness evade questions or respond in an obscure way? If faced with a poorly focused (possibly even irrelevant) question, does he attempt to focus his answer on the areas of policy for which the central bank is accountable? That is, does he re-direct the discourse back to monetary policy and then provide a response? How does he handle indirect, incomplete questions? In short, how competently and directly does the central bank witness respond to the array of questions posed by committee members?

Measuring the hearing transcripts with reference to conceptual clouds and thematic classes is just one way to assess reciprocity. The measures by which we can effectively judge deliberation in accountability settings to be reciprocal are, however, multi-faceted. The quantitative text analysis captures the extent to which questioners and witnesses cluster around "conceptual clouds" but the far more nuanced, question-by-question, answer-by-answer aspect of reciprocal dialogue requires a more granular methodology. For this task, we rely on extensive close reading and a subsequent coding of hearing transcripts in the UK and the US. We randomly select a sample of deliberative exchanges between committee members and the respective heads of the central bank, and then subject these to a close reading to obtain measures for key indicators on deliberative quality in each set of hearings.

Our close reading and coding approach is broadly similar to other studies in the political economy of central banks, where researchers have developed indices or scores from an underlying qualitative criteria and then manually coded documents (Eijffinger and Geraats, 2006; Ehrmann and Fratzscher, 2007, Rozkrut et al., 2007; Masciandaro et al., 2008; Masciandaro and Romelli, 2018, Anderes et al., 2021). While the areas of focus in these studies differ from ours, the approach to capturing nuanced content is broadly similar.

7. Coding scheme and sampling procedure

The nuances in questioning and responses outlined above suggest four key indicators to gauge deliberative quality, question-by-question: partisanship, use of narrative, accountability, and quality of response. In Table 2, we present these indicators, along with the associated coded values for each. As each indicator requires a subjective judgment for its coded value, the approach required an initial first reading of the transcript, and a piloting of the coding scheme. We, together with an expert in central banking who has also testified before parliamentary committees for many years, then reviewed and modified (where needed) the coding scheme. Care was taken to clarify to the coders the "statutory remit" of monetary policy decision making in both the UK and US. Two coders then sampled and independently coded all exchanges in the sample (explained below).

7.1. Definition of exchange

The unit of analysis here is an exchange between a given committee member and either the governor of the Bank of England or the Federal Reserve chair. For each year and for each committee, exchanges were enumerated. An exchange constitutes a series of questions and answers by one member of a committee (a congressperson, senator, or MP) and the chair of the Fed or the governor of the Bank (or, in other words, an exchange is the "turn" of each committee member). An exchange begins when a single member asks a question (and that question is answered) and the exchange ends when the questioning moves onto another committee member. An exchange, at the minimum, involves one question by a committee member and one answer by the Fed chair or Bank governor.

In the TSC, a single exchange often contains interlocutions by the governor's colleagues who are members of the MPC. The governor may have discretion to delegate an MP's question to members of the MPC. Nonetheless, if the governor inserts himself back into the discourse, or if the MP directs further questions to the governor after discourse with the MPC member, an exchange occurs.

In the HFSC and the SBC, exchanges involve the chair of the Federal Reserve exclusively. (That is, no other member of the FOMC appears alongside the Fed chair at these hearings.) Occasionally, the chairs of the respective committees interject to give time warnings or to clarify a definition of a question. This does not qualify as an exchange.

7.2. Population and sample numbers of exchanges

The "population" required a further judgment on the relevant unit of analysis. For the Treasury Select Committee, this required *excluding* when the governor might delegate a question to other MPC member(s) *without* inserting himself back into the discourse, or when an MP directs a question at another MPC member. The intention was to create a sample for each country in which the only witness is the head of the central bank, and thereby enable a more direct comparison across the cases (that is, one that enables an

Table 2

Coding scheme for verbal exchanges between legislative committee and Bank of England governor or Federal Reserve chair.

Indicator	Coded Value	Description
Partisanship		
	0	Absent
	1	Minor
	2	Present
	3	Prevalent
	4	Exhaustive
Use of Narrative		
	0	Absent
	1	Minor
	2	Present
	3	Prevalent
	4	Exhaustive
Accountability		
	0	Not within the statutory remit of monetary policy
	1	Within the statutory remit of monetary policy, but with no clear relevance to holding Governor/Fed Chair to account
	2	Relevant to remit of monetary policy
	3	Relevant to remit of monetary policy, and pursues with follow-up questions
	4	Comprehensively relevant to monetary policy, and pursues with follow-up questions
Quality of Response		
	0	Evades question entirely (refusal to answer a question relevant to statutory remit of monetary policy)
	1	Answers evasively or obscurely; no attempt to focus response when presented with a vague/ill-focused question
	2	Answers but with little justification/explanation; little attempt to focus response when given vague/ill-focused question
	3	Answers competently; focuses response when given vague/ill-focused question
	4	Answers competently with full justification/explanation. If question is ill-focused, he re-directs discourse back to monetary policy and provides direct response

assessment of each central bank head vis-à-vis committee members). To establish this equivalence and yield a roughly similar number of units of analysis for each committee, a larger sample size (50%) was thus required of the UK committee (in which the governor shares the task of responding with other MPC members)[29] than the sample size (25%) for the congressional committees (where the Fed chair appears alone). Additionally, since the analysis consists of two US committees but one UK committee, sample sizes were intended to also balance the total number of exchanges coded between the two country cases.[30]

From a close reading of the transcripts, the total number of exchanges were discerned for each committee, per year. A random sample was generated for the TSC, HFSC, and SBC.[31] Both total numbers of exchanges and the samples for each are given in Table 3. Of the total 363 exchanges across all three committees, the number sampled was 119, or about a third of all exchanges.[32]

8. Analysis of Coded Indicators

The four indicators were coded for each exchange, as sampled from each committee for each of the four years (2006, 2007, 2008 and 2009). Online Appendix 2 provides examples for how the codes were applied, giving two examples of exchanges for each committee, along with the associated codes and an explanation for each exchange. Each coder assessed the exchanges independently at first, and where the coders disagreed, they met to re-read, discuss and agree a single set of codes for each exchange. Table 4 provides the distribution and rates of initial disagreement on codes, where it is clear that far more consistency and agreement was obtained for the TSC than for either of the two congressional committees. Overall, however, most disagreements pertained to just one of the four indicators for any particular exchange. Anecdotally, the coders noted that as the TSC questioning was simply more focused—particularly relative to the House Financial Service Committee—this lent to greater certainty in the process of coding.

The individually coded data are given in Online Appendix 3. From these individual codes, averages were calculated for each committee and for each year, and these averages are presented in Figs. 4 and 5. These figures provide a unique perspective on deliberative accountability in each committee, and how this varies across the two country cases.

With respect to partisanship rhetoric in the questioning by committee members, representatives in the HFSC exhibit the highest levels of partisan questioning. The overall average (on a scale of 0–4) in 2006, 2007 and 2008 is nonetheless around 1 (or minor), and in 2009, it reduces to less than half this amount. Partisanship in the SBC is less than or equal to that in the House in 2006–07, but then

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[29] Sampling from the UK required excluding exchanges which included MPC members other than the governor.
[30] Sample sizes also varied slightly across the years, from rounding.
[31] We used https://www.randomizer.org/.
[32] We do not seek to obtain exchanges of equal length, since our focus is on the *quality* of the exchange, not its *quantity*.

Table 3

Verbal exchanges between legislative committee and bank of England governor or federal reserve chair: Population and sample totals.

Committee	2006		2007		2008		2009		TOTAL	
	Exchanges		Exchanges		Exchanges		Exchanges			
	Total	Sampled	Total	Sampled	Total	Sampled	Total	Sampled	Total	Sampled
Treasury Select	24	12	26	13	44	22	16	8	110	55
House Financial Services	23	6	53	13	49	12	26	7	151	38
Senate Banking	13	4	35	8	30	7	24	7	102	26
TOTAL									363	119

Table 4

Distribution and rates of disagreement between coders.

Committee	2006	2007	2008	2009
Treasury Select	48	52	88	32
Total indicators for Sample (= sample n x 4)				
Disagreed on 1 of the 4 indicators	1	1	3	0
Disagreed on 2 of the 4 indicators	0	1	0	0
Disagreement Rate	**2.08%**	**5.77%**	**3.41%**	**0%**
House Financial Services	24	52	48	28
Total indicators for Sample (= sample n x 4)				
Disagreed on 1 of the 4 indicators	2	7	5	0
Disagreed on 2 of the 4 indicators	1	1	3	2
Disagreement Rate	**16.67%**	**17.31%**	**22.92%**	**14.29%**
Senate Banking	16	32	28	28
Total indicators for Sample (= sample n x 4)				
Disagreed on 1 of the 4 indicators	1	1	0	2
Disagreed on 2 of the 4 indicators	0	0	0	0
Disagreed on 3 of the 4 indicators	0	1	0	0
Disagreement Rate	**6.25%**	**12.50%**	**0%**	**7.14%**

nearly disappears in the latter two years. For the TSC, there is virtually no partisanship except for a negligible amount in 2008.

The coded scores for use of narrative show that all three committees employ some narrative in questioning, but the use of this by the congressional committees is about double that of the parliamentary committee. Importantly, the coders found that MPs and MCs tend to employ narrative in very different ways, with different intended purposes. As illustrated in the next section, for MPs, narrative is employed as an ice breaker, whereas for members of Congress, narrative appears to be used more for electoral purposes.

The scores for accountability tell yet another intriguing story. The TSC exhibits consistently high scores (3.5 or higher, on a scale from 0 to 4) for accountability. Committee members consistently, across all four years, ask questions that are either relevant or are "comprehensively relevant" to the Bank's statutory remit for monetary policy. These members also then pursue the line of questioning with a series of follow-up questions, which illustrates a pattern of reciprocal dialogue. In contrast, in 2006 and 2007, both congressional committees exhibit considerably lower scores for accountability (from 1.75 to 2.83). These scores suggest that while members may often pose questions that might fall within the statutory remit of the Fed, they had little relevance to holding the Fed chair to account or members were unable/unwilling to pursue the line of questioning with follow-up questions. Strikingly, however, the accountability scores for both congressional committees improve considerably in 2008 and 2009, approaching the standard of questioning found consistently in the UK committee. What changed between the first two years (2006–07) and the second two years (2008–09)? It seems evident that the financial crisis prompted both congressional committees to improve their questioning of the Fed chair, to better hold him and the Federal Reserve to account for decisions taken and policies enacted in response to the financial crisis. While the UK committee consistently achieved high levels of scores for its ability to hold the Bank to account during the hearings, the two congressional committees only improved their questioning in the midst of the financial crisis.

Finally, the scores for the response quality of the head of each country's central bank show less variation between the UK and US. For 2006, the average scores are identical across the three committees. Even so, we nonetheless observe that as governor, Mervyn King achieved near perfect response quality scores (3.75–4.0) for 2007–09, while Fed Chair Ben Bernanke obtained somewhat lower average scores of 3–3.57 during these same years. This difference may well be attributed to (a) the higher quality of questions received by King relative to Bernanke; and/or (b) that King was able to delegate some questions (perhaps of a specialist nature) to MPC colleagues whereas Bernanke had no other FOMC colleagues at the hearings for this purpose.
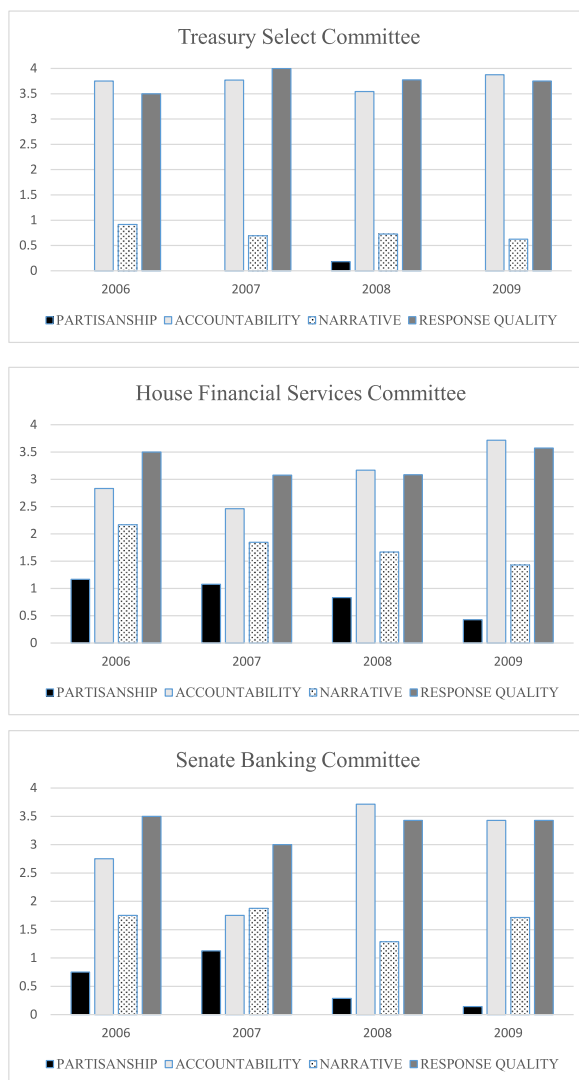
Fig. 4. Coded indicators for deliberative quality, by committee.

9. Unique usages of narrative

Partisanship, accountability, and quality of response elicited parallel types of coded responses. The use of narrative, however, is seen to be substantively different in each of the country cases. In the TSC, members tend to employ a narrative style as an icebreaker at the beginning of their turn, prior to delving into the question more fully. In the two congressional committees, narrative is employed more in the form of enhancing one's own political accomplishments or taking a political stand, as opposed to setting up or contextualizing the question (as in the UK committee). To illustrate, below is an example from both country cases. For this example, we select a single topic—inequality in living standards—which all three committees discussed during a hearing, so that we may observe the difference between British and American legislators in their use of narrative.

In the June 2008 TSC hearing, Jim Cousins, MP (Labour), posed his initial query to Governor King:

> It seems fairly clear from that we are facing in the immediate period a reduction in the living standards of workers and that those bargaining on behalf of workers and the workers themselves are in a very difficult situation. As Governor of the Bank of England and Head of the Central Bank, what can you do to restrain the compensation packages in the City which will provoke, in a setting in which living standards are under pressure, a very strong reaction if people perceive that there is a part of society that is not sharing in those difficulties?

He followed up with:

> Governor, the last time you appeared in front of the Committee on 29 April you referred very clearly to small, medium-sized companies whose managers and employees were paid "far less than people in the City". Those were your words. On the
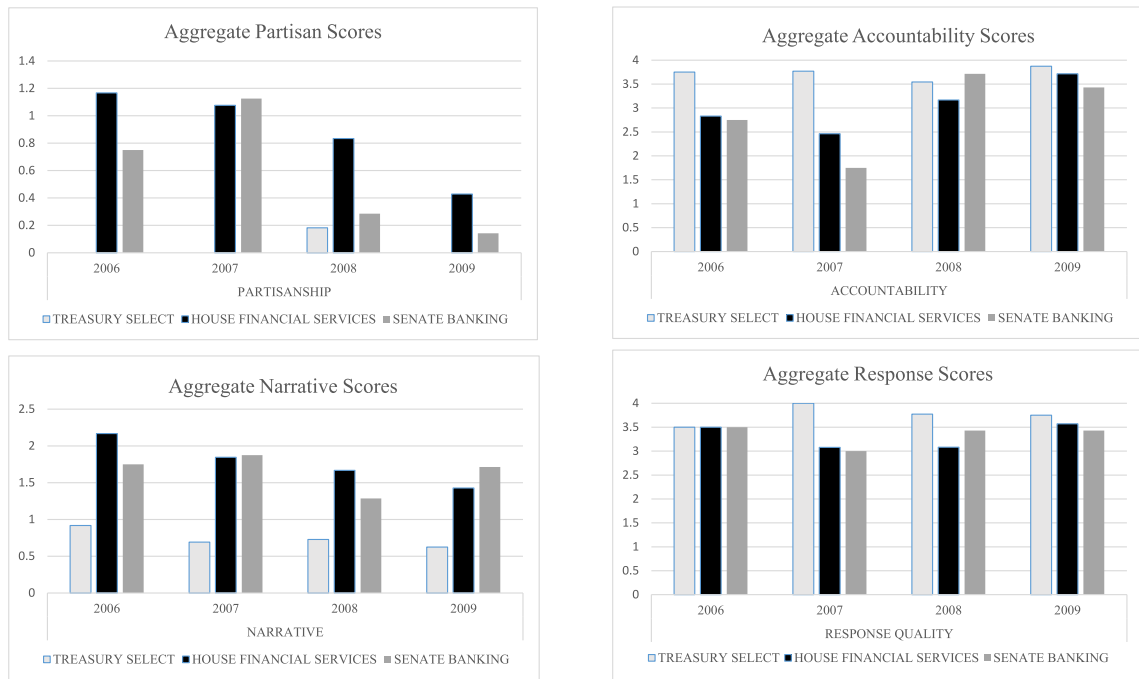
Fig. 5. Coded indicators for deliberative quality, by each indicator.

same occasion you also referred to banks having "designed compensation packages which provide incentives that are not in the long-run interests of the banks". Do you not think it is very important that you follow through on that with … clear words and deeds that will assist wage bargainers, and those they bargain for, in not having a perception that there are parts of the economy, and people in those parts of the economy, who are not sharing in the general difficulties of living standards that everyone else experiences?

Undoubtedly, bankers' compensation packages during the financial crisis could have been used for taking a political stand. As a Labour MP, Cousins could have treated compensation packages as a partisan issue. However, Cousins does not pursue an electorally relevant or partisan narrative, which might have been phrased as: "back in my constituency, I have seen my constituents experience a huge drop in living standards, whilst bankers who work close to you, Governor, have sustained large bonuses, which is thus clearly a result of a flawed capitalist casino economy …" and so on. Indeed, Cousins simply prefaces his first question very briefly by pointing to structural changes in living standards and the strength of wage bargaining. This is indicative of the "icebreaker" narrative used by members of the TSC, as they preface and contextualize their questions for the governor and other MPC members.

In Cousins' follow-up to Governor King's reply, he focused on the inequality between City and non-City living standards. Cousins, again, did not exploit the issue for personal or partisan purposes.

Comparable questioning on inequality in living standards in the two congressional committees shows a clear contrast between the UK and the US. In the July 2006 HFSC hearing, Representative Gwen Moore (Democrat) asked Fed Chair Bernanke:

> You point out that some of the weakness in our economy prior to the last few years was seen in the lack of productivity of employees, but yet people are working harder, and they are earning less. … They have less purchasing power. So they can't really buy things. You have admitted in your testimony that we are adding jobs at a much lower *pace*. And of course, we all know that the unemployment rate does not reflect the numbers of people who are eligible to be in the workforce that have just given up. In my own hometown of Milwaukee, Wisconsin, we have a 52 percent unemployment rate among African-American men. But yet, on the other hand, in the last 5 years, we have seen corporate profits increase by 69 percent. … we have seen the increase in corporate wages such that a corporate executive, on January 2nd, by lunchtime, has earned as much as a minimum wage worker will all year.

Moore's questioning is starkly dissimilar to Cousins' narrative style. Moore spends a significantly greater amount of time discussing compensation packages and inequality in living standards, such as when she compared the unemployment rate of African-American men in her "hometown" with an increase in "corporate profits". She appeared to be taking a political stand on economic inequality.

Moore continued to elaborate on this issue before finally asking her question: "… should I conclude that strengthening our strong economy is because we prefer the accumulation of capital as opposed to our labor assets?" Contrast this with Cousins' icebreaker narrative: "It seems fairly clear from that we are facing in the immediate period a reduction in the living standards of workers and that those bargaining on behalf of workers and the workers themselves are in a very difficult situation." Although arguably Moore does not explicitly try to appeal to constituents, her personal connection to "my hometown of Milwaukee" evidences some flavor of the electoral connection by linking herself to voters.

In the SBC, we find similar evidence of taking a political stand in the narrative style. The following is an exchange from July 2006, between Fed Chair Bernanke and Senator Bob Menendez (Democrat), and is again on the issue of income inequality:

> It appears to me that we have an economy in which increasing productivity and large tax revenues are driving up our GDP. But that, in turn, has benefited a very small number of people who own capital. As I said to you in my opening statement, in New Jersey when I talk to people, they tell me that they are constantly feeling squeezed by higher tuition rates as they try to send their kids to college, facing the challenges of the costs of taking care of a loved one, facing higher energy prices to heat or cool their homes, facing higher gas prices, facing higher insurance premiums and co-pays, and yet finding their median incomes are flat over the last 5 years. And so, with all of those challenges and negative personal savings, who is this economy working for?

Senator Menendez appears to have taken a political stand when he remarked about the specific incidences of economic suffering by his constituents in New Jersey, which differs from the icebreaking narrative by Cousins in the TSC.

This income inequality example illustrates the difference in narrative styles in the UK versus the US. Repeatedly, TSC members contextualize their questions briefly with a preface or icebreaker, even on issues that could be exploited to enhance political party values. In contrast, congressional committee members tend to employ a narrative style which features components of taking a stand. Including further exchanges would unnecessarily lengthen our analysis; however, it is worth briefly illustrating that this form of narrative extends to other issue areas for congressional committees (e.g., debt, foreclosures and retraining of workers) but is absent in the TSC. Compare, for example, the first excerpt from the TSC, with examples each from the Senate and House committees:

> In the November Inflation Report you have a very interesting box detailing some survey work you have done in respect of the distribution of debt and repayment difficulties, particularly in respect of unsecured debt. Some quite interesting information came out there. First of all, you chose to use terminology within that chart which asked people to say whether they thought the burden of their unsecured debt was somewhat of a burden, or a heavy burden, or perhaps not even a burden at all. In my experience some years ago when I was a lending bank manager, I am not quite certain that the majority of my customers who I thought were in a bit of a problem actually considered they were in a bit of a problem. First of all, are you sure that those who indicated what they thought was somewhat of a burden actually was probably more of a heavy burden and that those heavily burdened probably were disasters?
>
> Colin Breed (Liberal Democrat MP, 2006)

> … there has been a lot of discussion of the fact that in general, when we start looking at the number of borrowers all seeking renegotiation at the same time, that lenders are ill equipped with the kind of trained workforce to be able to pursue those negotiations. In fact, I held a foreclosure mitigation workshop out in Oregon last week, and the single message that came through was the enormous frustration of homeowners trying to get in contact with anyone who could actually have the authority to talk to them about renegotiating their loan.
>
> Senator Jeff Merkley (Democrat), 2009

> And you talk about opportunity and ensuring a fairness and opportunity, but not guaranteeing any outcomes, and you talk about the responsibility of the individual, but in this discussion it was quite expansive. I watched the closing of a Goodyear plant in Los Angeles when I first ran for office, and I saw people who had worked at that plant for 20, or 25 years who paid taxes, sent their kids to school, and had mortgages, suddenly out of a job, and I watched men go to the bar across the street from the plant for the next 5 or 6 years and just drink themselves into oblivion–not being retrained, unable to get jobs because of their age, etc.
>
> Representative Maxine Waters (Democrat), 2007

Both Merkley and Waters seek to enhance their connection with and empathy for their constituents, whereas Breed's narrative serves both to break the ice by engaging directly with the Inflation Report data, but also linking this to personal experience as a "lending bank manager", which appears to demonstrate his expertise around debt.

These differences in narratives uncover quite distinct ways in which MPs and MCs engage with monetary policymakers, and thereby exhibit two approaches to holding the latter to account. For MPs, incentivized more by career pursuits which are bolstered by impressing front bench ministers, the use of narrative is to engage central bankers in a way that demonstrates some expertise in the subject matter . For MCs the narrative is used to enhance the electoral connection with constituents or make a political stand or judgment. Both types of narratives are suited to the political system in which they operate, and both serve to enhance the career objectives of their respective legislators. The use of narratives may serve political purposes, but they also demonstrate that central bank accountability is partly contingent on the type of political system, where this system in turn shapes the motivations of politicians whose task it is to question monetary policymakers. Inasmuch as the system incentivizes means of career advancement, it also shapes the way in which legislators then carry out their roles in holding central bankers to account for monetary policy. These narratives may serve to enhance career objectives, but they also encourage legislators to communicate with monetary policymakers in distinct ways.

10. Conclusion

This paper has explored, in comparative perspective, monetary policy hearings to gauge the extent to which central bankers are effectively held to account. Do they answer the questions asked? Is the dialogue reciprocal or diversionary? Are legislative committee members interested in uncovering and understanding the reasons for decisions made and actions taken? We have focused on both reciprocity and partisan/electoral motivations as the metrics for deliberative accountability.

This paper finds that central bank accountability is highly specific to the political system in which the accountability is conducted:

the legislative setting shapes the quality of accountability. In the UK, select committees strive to be non-partisan, focus predominantly on conducting oversight, have small memberships, and carefully monitor attendance. In the US, congressional committees are more partisan, engage in drafting legislation as well as conducting oversight, have large memberships and monitor attendance less stringently. The two systems also differ in that in the UK, multiple members of the Bank's MPC appear in oversight hearings, whereas the Fed Chair appears alone before Congress. Given these differences in the legislative settings for accountability, one would expect some sort of difference in outcomes. This paper has framed the contrast in terms of the quality of deliberation, employing two empirical measures—reciprocal dialogue and partisanship.

Our quantitative text analysis has captured contrasting ways in which the UK and US conduct central bank accountability, with the important measure of reciprocal deliberation. This analysis shows a clear difference between the two country cases in terms of the extent to which legislators and members of the respective central banks share a common thematic discourse. The picture in the UK is one of a shared thematic discourse between MPs and central bankers, while that in the US is one of an institutional discourse divide between members of Congress and the head of the US central bank. From this analysis, reciprocity in deliberation was clear in the UK setting, but not in the US congressional committees. What this means is that, taken in the aggregate across all the hearings during the financial crisis, MPs engaged with MPC members on every major theme in the accountability hearings. The appearance of multiple MPC members allowed MPs to engage some monetary policy members on certain themes and other MPC members on other themes; the MPC as a committee was held to account in a way that allowed MPC members to specialize in areas of expertise. In the US, with only the Fed chair testifying, reciprocity was institutionally constrained with no scope for specialization among FOMC members. Moreover, the very themes discussed by the Fed chair and MCs were distinct and separate.

The granular approach to gauging both the quality of deliberation and the degree of reciprocity between questioner and witness has allowed us to narrow our focus to four key indicators for deliberative accountability—level of partisan rhetoric, use of narrative, extent to which the questioning pertained to the policy area being held to account, and the quality of responses. From this analysis, we lend further evidence to the conclusion that the UK committee delivers better quality deliberative accountability than its American counterparts. In questioning the head of the central bank, British MPs are found to invoke almost no partisan rhetoric. They also tend to use narrative less in their deliberative language, but when they do, it serves to contextualize the question. In contrast, members of Congress tend to use more narrative and, when they do, it is invoked to appeal to their constituents or take a political stand of judgment. Arguably, the ways in which parliamentarians and congresspersons use narratives might be seen as serving political purposes—for MPs this means demonstrating their policy expertise (perhaps to seek elevation to ministerial positions) whereas for MCs, this means aligning themselves with their constituents, to enhance their electoral connection.

Members of the UK TSC also target their questions more to the policy being held to account (here, monetary policy). Representatives and senators veer away from the policy to which they are seeking to hold the Fed chair to account. The interesting exception to this is during the financial crisis, when the questioning of members of Congress adheres more closely to the statutory remit of the central bank. In short, the questioning by parliamentarians, as gauged by these indicators for deliberative accountability, appears to be better than that of members of Congress.

Earlier in our paper, we outlined a number of institutional differences between the oversight committees in each country (e.g., the ability to draft legislation which may make congressional committees more susceptible to lobbying and partisan pressures; contrasting numbers of support staff and committee members; appearance of multiple MPC members versus the Fed chair appearing alone; reading out prepared statements; and attendance for committee hearings). Rather than untangling and isolating the individual effects of each of these differences as *inputs*, we sought to examine the deliberative *outcomes* of these oversight hearings. That is, cumulatively, these different institutional features appear to create very different outcomes in deliberative accountability. We have sought to identify and measure these different outcomes but do not seek to offer policy prescriptions.[33]

Declaration of competing interest

We have no conflict of interest regarding our submission, 'The Accountability Gap: Deliberation on Monetary Policy in Britain and America During the Financial Crisis'.

Data availability

Data will be made available on request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ejpoleco.2022.102209.

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[33] Having testified before the two congressional banking committees and the Treasury Select Committee, Donald Kohn was in the unusual position to offer policy prescriptions to improve accountability for the Federal Reserve (Kohn and Wessel, 2016). If adopted, we anticipate that these prescriptions would improve deliberative accountability in congressional hearings, at least to some extent.

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