The Promise of Text, Audio, and Video Data for the Study of US Local Politics and Federalism

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A large-scale study of US local policymaking has long been hindered by a lack of centralized data sources. Our own project, LocalView, supplements data collection efforts by creating the largest existing database of local government meeting transcripts, audio, and video yet released. In this article, we describe promises, implications, and best practices for using nontabular sources of meeting data in the study of federalism. Throughout, we argue that these new sources of data allow scholars to ask new kinds of research questions. We demonstrate this potential with an empirical application focused on the use of national partisan language in local government meetings. We find that nationally salient partisan phrases are common in local policymaking discussions (especially in large cities), although prominent national terms vary drastically in how often they are used at the local level. Finally, the *slant* of partisan language (i.e., the amount of partisan language that is identifiably Democratic or Republican) across local governments is correlated with local partisan preferences.

Key words: local politics; deliberative democracy; public meetings; data science.

Introduction

The lack of readily available data has long been a central challenge to large-scale empirical studies of local politics in the United States. Hopeful scholars of US federalism are often surprised to learn that there are few centralized, ongoing efforts to collect data on fundamental local institutions, such as public meetings and elections. Existing centralized datasets on local governments, such as from the US Census Bureau, enable rich and varied work but also restrict scholarly use to

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their few available outcomes, like specific budgetary expenditures. This lack of data limits not only our understanding of local governments but also their relations with state and local governments.

Facing this dearth of accessible data, scholars of federalism and local politics have frequently resorted to creating their own datasets for individual projects. These efforts have enabled pathbreaking research on local politics and intergovernmental relations and enabled investigations of data sources like meeting minutes (e.g., Trounstine 2009b; Bryan 2010; Holman 2014; Einstein et al. 2019) and election returns (e.g., Thompson 2020; de Benedictis-Kessner et al. 2023). Though such data collection efforts are admirable and critical for scholarly progress, they are slow, costly, and inherently restricted to their initial time and scope (Sumner et al. 2020). Nonetheless, these data collection efforts have enabled the recent resurgence of political science scholarship on local politics in the twenty-first century (Trounstine 2009a).

The study of local policymaking in public meetings has seen enormous growth in recent years. Meetings held by local governments, such as city councils and school boards, play a central role in the modern study of local policymaking (e.g., Dahl 1961; Trounstine 2009b; Bryan 2010; Holman 2014; Einstein et al. 2019; Yoder 2020; Einstein et al. 2023; Sahn 2024). This scholarship has advanced questions on participatory inequalities, representation, and policy responsiveness in local governments. However, these projects also require extensive data collection and result in datasets that are necessarily limited in scope and static in time. Perhaps as a result, scholarship has primarily emphasized outcomes that are more straightforward to measure from meeting records (such as attendance and the demographics of public commenters), while less attention has been paid to topics that are more difficult to measure, such as issue attention, framing, and intergovernmental relations.

In this article, we describe the promise and implications for the study of federalism by using new sources of meeting data, such as minutes, videos, and transcripts. We emphasize our own project, LocalView (Barari and Simko 2023), which supplements recent data collection efforts in the study of local politics by creating the largest existing database of US local government meeting audio, video, and transcripts yet released. Throughout, we argue that these new potential data sources offer vast potential opportunities for federalism scholars to understand both local governments in isolation and how they interact with other local, state, and federal governments. We draw connections between the study of federalism and the growing use of nontabular data sources like text (e.g., Grimmer et al. 2022), audio/video (e.g., Dietrich et al. 2019; Boussalis et al. 2021; Dietrich and Sands 2023), and social media data (Barberá 2015) in other areas of political science. Furthermore, we build on review articles of local politics like Brouwer and Troustine (2024) and Warshaw (2019) by focusing on how rapidly emerging data

on a particular type of local institution—meetings—can expand the *types* of research questions that scholars are able to ask.

Finally, we illustrate the potential value of these new data types with an empirical application of how national partisan language is used at the local level. We ask how often nationally salient political language (as identified by Gentzkow et al. 2019) appears in local policymaking discussions. Furthermore, we explore how the usage of nationally salient partisan language correlates with local covariates, such as population and residents' partisan voting patterns in national elections. Existing work has demonstrated that certain phrases clearly distinguish partisan speakers in national political venues like the US Congress and media outlets (e.g., Gentzkow and Shapiro 2010; Grimmer 2013; Gentzkow et al. 2019). However, much less is known about how (and whether) nationally salient issues like climate change, gun control, and immigration are discussed at the local level.

While existing work shows how the "nationalization" of politics has impacted outcomes like knowledge and voting behavior (e.g., Hopkins 2018), a lack of data has limited our ability to study how often national issues appear in actual local policymaking discussions at scale. Local attention to pressing, nationally salient issues is particularly important to investigate, as local governments have influence over policy areas as diverse as education, public health, and climate change. Furthermore, the agenda-setting literature often argues that attention is a precondition to policy change (e.g., Baumgartner and Jones 1993), yet we have little systematic evidence about how local governments allocate their attention. Unlike unilateral policy changes, where local governments are often legally and economically constrained, communities and officials have essentially unrestricted power over how they distribute time and attention to issues (Jones and Baumgartner 2005; Mortensen et al. 2022).

We offer four descriptive trends on how nationally salient language is used in local policymaking. First, identifiably national partisan language is *common* in local governments. Local governments devote a great deal of attention to issues that are also prominent at the national level, such as climate change, gun violence, and mental health. Second, national partisan phrases drastically vary in how often they are used by local governments. Some issues are discussed often by both national and local governments, while others like international affairs are discussed much less often at the local level. Third, we find that the amount of overall national partisan language tends to be higher in places with larger populations. Finally, the slant of partisan language (i.e., the amount of partisan language that is identifiably Democratic or Republican) varies between cities, and this slant is correlated with local national voting preferences.

Data for the empirical study of US local governance

A lack of centralized data has long been recognized as a fundamental problem in the study of local politics and policymaking (e.g., Peterson 1981; Trounstine 2009a; Marschall et al. 2011). Data sparsity has limited the nature and scope of questions scholars have been able to ask at a large scale. This limitation impacts not only scholarship on local politics in isolation, but also implicates our ability to study intergovernmental relations between local, state, and federal governments.

Thankfully, this long-lived limitation is rapidly evaporating—the study of US local politics is undergoing a data revolution. Scholars of local politics are increasingly collecting, using, and sharing novel sources of data on core topics in political science like election returns (Baltz et al. 2022; de Benedictis-Kessner et al. 2023). Furthermore, sources of subnational "non-tabular" data—including geographic, audio, video, and text data (McCartan et al. 2022; Barari and Simko 2023; Butler et al. 2023) are increasingly analyzed and shared. Scholars also routinely share and validate novel procedural techniques for *creating* subnational datasets, such as crowd-sourcing (Sumner et al. 2020) and geographic simulation (McCartan et al. 2022). These increasingly available data sources hold promise to change the scale and nature of questions that political scientists can investigate.

The ongoing growth in the field of local elections illustrates both the scope and impact of these developments. In 2011, Marschall et al. (2011) wrote "to say that a field of study on local elections exists would be a bit of an overstatement" (p. 97). They reported that the existing literature was small, "not particularly cohesive," and was notably limited compared to the study of state and federal elections. This was largely driven by a lack of readily available election data.

There has been a significant expansion in the field of local elections in the decade since Marschall et al. (2011). At the time of writing in 2024, a field of US local elections not only firmly exists, but is large, varied, and rapidly advancing. Scholars in recent years have extensively studied local elections for a range of offices—mayors (e.g., Gerber and Hopkins 2011a; de Benedictis-Kessner and Warshaw 2016), city council members (e.g., de Benedictis-Kessner et al. 2024), school board members (Shah et al. 2024), sheriffs (Farris and Holman 2017; Thompson 2020), and county legislators (de Benedictis-Kessner and Warshaw 2020). Further, scholars have made important advancements in the dynamics of subnational voter choice (e.g., Oliver et al. 2012; Boudreau et al. 2015), electoral institutions such as election timing (Anzia 2013; Kogan et al. 2018), and the role of electoral influences like endorsements (Benjamin and Miller 2019), interest groups (Benjamin 2023), and outside donors (Reckhow 2012).

Further, these studies are facilitated by access to new and varied types of data. Beyond traditional outcomes like expenditures and election returns, scholars of subnational politics in the United States and elsewhere have increasingly studied a host of data sources including press releases (Boussalis et al. 2019; de Benedictis-Kessner 2022), meeting records (Holman 2014; Einstein et al. 2019; Parthasarathy et al. 2019; Mortensen et al. 2022), social media data (e.g., Butler et al. 2023), geographic simulations (Kenny et al. 2023), and lab experiments (Collins 2021).

The study of local government public meetings

The study of public meetings is a particularly promising—and rapidly developing—area for scholars of federalism (e.g., Holman 2014; Einstein et al. 2019; Yoder 2020; Sahn 2024). Public meetings held by governments, such as city councils, planning commissions, and school boards, are the primary policymaking venues in local politics. Meetings feature a variety of political behaviors, including discussions on ordinances and resolutions, votes, public comments, and invited presentations. Meetings also play a valuable role in sharing information between constituents and officials about policy preferences. For example, nearly half of the surveyed mayors described neighborhood meetings as one of the top two ways that they learn about the views of their constituents (Einstein et al. 2019). This increased attention is likely driven in part by increased data availability, as local government meeting records are now routinely posted online.

This research is facilitated by state-level "open meeting laws," which generally require local governments to (1) hold publicly accessible meetings with advance notice, (2) cast votes in public, and (3) offer opportunities for public comment. For example, the New Jersey Open Public Meetings Act opens with:

The Legislature finds and declares that the right of the public to be present at all meetings of public bodies, and to witness in full detail all phases of the deliberation, policy formulation, and decision making of public bodies, is vital to the enhancement and proper functioning of the democratic process; . . . and hereby declares it to be the public policy of this State to insure the right of its citizens to have adequate advance notice of and the right to attend all meetings of public bodies at which any business affecting the public is discussed or acted upon in any way except only in those circumstances where otherwise the public interest would be clearly endangered or the personal privacy or guaranteed rights of individuals would be clearly in danger of unwarranted invasion. (N.J.S.A 10:4-7 (2023); emphasis added)

Often called "Sunshine Laws," these open-meeting laws generally require local governments to make records publicly available shortly after each meeting. Meeting "minutes" are often posted either directly on government websites or through standalone document portals like Legistar or Granicus. In New Jersey, the law requires that:

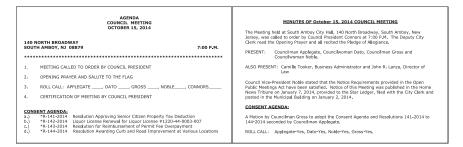


Figure 1. Example agenda and minutes from local government meeting.

Note: The left figure displays an example agenda from a 2014 meeting of the South Amboy City Council in New Jersey, where agenda items to be discussed are listed. The right figure shows minutes from the same meeting, which includes meeting attendance and vote results for each agenda item.

Each public body shall keep reasonably comprehensible minutes of all its meetings showing the time and place, the members present, the subjects considered, the actions taken, the vote of each member, and any other information required to be shown in the minutes by law, which shall be promptly available to the public to the extent that making such matters public shall not be inconsistent with section 7 of this act (N.J.S.A. 10:4-14 (2023)).

Minutes, the most common type of meeting record, are summarized accounts of meeting events. Minutes often list the names of government attendees, agenda items, and votes taken during the meeting. Soon after each meeting, minutes are posted alongside the meeting's corresponding "agenda," which provides a list of resolutions and ordinances to be considered, as well as any non-sensitive supporting documentation, such as policy drafts and budget proposals. An example meeting agenda and the corresponding minutes are shown in figure 1.

Scholars regularly use meeting minutes to study questions of local governance. Most often, minutes are manually collected, cleaned, and transformed into data for downstream descriptive analyses. For example, Einstein et al. (2019) use meeting minutes from dozens of Massachusetts cities and towns to study the role of participatory politics in land use. Minutes are particularly suitable for studying meeting attendance (by officials or members of the public), as many cities record the names of attendees. As a result, many scholars use minutes to study speaker demographics by supplementing meeting records with information from voter files or statistical predictions of race and ethnicity (e.g., Holman 2014; Einstein et al. 2019; Sahn 2024).

However, we emphasize three limitations of using minutes for federalism scholarship. Minutes across local governments (1) are not located in a centralized

location, (2) follow no standardized format, and (3) are idiosyncratic summaries, not exact accounts, of meeting actions. Perhaps, the most straightforward shortcoming of meeting minutes is that they are difficult to collect. Even if minutes are commonly posted on city websites, this requires researchers to locate and download minutes from a new website for each city in their sample. Websitespecific differences make web scraping difficult to scale, since researchers would need to write a custom or adaptable scraper for each new city. Without a centralized source, scholars generally turn to manual collection and coding. Bryan (2010) provides an illustrative example of the costs involved in this kind of collection. For his study of New England town meetings in Vermont, Bryan led a data collection effort where he and his students visited more than 1,500 town meetings over the course of three decades. For each meeting, they manually coded a set of indicators on speakers, issues, and votes. This magnitude of data collection is an extreme example, but scholars widely share the sentiment that manual coding is difficult. For her study of local political monopolies, Trounstine (2009a) consulted minutes from a 100-year period for several cities, writing: "Once this data collection was complete, my budget and time were exhausted" (p. 260).

Minutes also follow no standardized format or style, with governments varying significantly in the level of detail that they include in their minutes. This can be frustrating when meeting discussions, such as public comments, are the content of scholarly interest. For example, minutes from the City Council in Cambridge, MA are unusually detailed, yet still summarize and maintain only key details. One example from a meeting held on January 9, 2023, lists a public commenter's name, address, and reports that they "spoke on the Ordinance banning limited services pregnancy centers and noted that pro-life centers will not be afraid to operate in the City, and that it's a violation of first amendment rights" (Cambridge City Council, January 9, 2023). In contrast, minutes from the Westfield, NJ Board of Education are much more succinct. The public comment periods from the meeting held on December 19, 2023 are summarized as: "[The Board president] recognized the public on any topic. The Board heard from members of the public regarding various topics" (Westfield BOE, December 19, 2023). These idiosyncrasies make it difficult to statistically compare minutes between governments and over time, as inferences could be driven by differences in summarization style.¹

Local government meeting videos as a data source

We argue here and elsewhere that videos of local government meetings are an attractive data source for scholars of federalism that mitigate several of the issues with minutes (Barari and Simko 2023). Local meeting videos have been available online for well over a decade from some local governments, a trend that follows in the footsteps of similar transparency efforts like C-SPAN and local public access television. For example, the New York City Council has sporadic meeting videos on

their website from as early as 2010, with regular videos for most meetings appearing by 2015. This matches a pattern across many US cities: meeting videos often appeared on centralized sources like YouTube around 2014–2016, with a large boost in popularity during the coronavirus disease 2019 (COVID-19) pandemic, when many meetings were held virtually (Einstein et al. 2019; Barari and Simko 2023). Select cities maintain archives for even older meetings; the North Penn School District in Lansdale, Pennsylvania has full meeting videos as far back as 1993 on their district YouTube channel.

Meeting videos largely resolve at least two of the three problems with minutes data and partially address the third. First, meeting videos can be transcribed into complete, standardized records of all meeting discussions. Unlike minutes, which may idiosyncratically differ across time and between governments, meeting transcriptions can record everything that was said. Sources like YouTube automatically transcribe audio into transcripts that can be used for later text analysis. Audio-based transcriptions are not perfect and vary with audio quality (e.g., Tatman and Kasten 2017), but they are reliably accurate, rapidly improving, and becoming more widely available through Application Programming Interfaces (APIs) like Google Cloud and Whisper.

Transcripts provide opportunities for much richer analyses than are generally possible with minutes. For example, consider the Westfield Board of Education example described above. Here, public comment periods are noted in the minutes but summarized such that the board "heard from members of the public regarding various topics." Transcripts from meeting videos provide more context. The video shows two spirited public comment periods during this meeting. Members of the public spoke on a broad range of issues, including multiple comments on proposed changes to a "disorder and demonstration" policy following student-led demonstrations in reaction to the ongoing conflict between Israel and Palestine, district policies on mental health and physical screenings, buildings and facilities (including rumors of potential water leaks in a science building), curriculum concerns around the teaching of the Holocaust, and even comments on proposed board edits to the district's public comment policy.

Meeting videos also partially resolve the issue that minutes are not found in a centralized location. Although there is no comprehensive database of all local government videos, thousands of governments across the country upload their meeting videos to YouTube, the largest video-sharing site in the world. This is likely because uploading videos to YouTube is straightforward and free, allowing local governments to avoid the logistical and financial hassles of hosting videos on their own websites. While YouTube is certainly not comprehensive (Barari and Simko 2023), scholars could supplement videos collected from YouTube with other large sources of meeting videos, such as Legistar (a private service used, e.g., by the New York City Council) or Granicus.



Figure 2. Example meeting video.

Note: The figure shows an example of a local government meeting video from the meeting of the Omaha, NE City Council on July 26, 2022. The black text over the video is the audio transcription, provided here by YouTube. Metadata, including the video title, description, and date of upload, is shown below the video. This video is publicly available at www.youtube.com/watch?v=NXNHBydZkdI

Meeting videos offer a wealth of data to scholars of federalism. We anticipate that transcripts will be of wide interest to many scholars, as they contain the exact textual content of the meeting. We further illustrate the utility of the transcripts through our application below. Meeting videos are also rich in "metadata." Videos posted to YouTube can be matched with a wealth of additional information, such as the video title, description, information on the "channel" (YouTube account) that uploaded the video, likes, and comments. Figure 2 shows examples of much of these metadata (except comments, which are found below the video). Videos downloaded from official government sources, like Legistar, can be matched with the meeting agenda and minutes (see the *New York City Council* Legistar page for an example).

Meeting videos are also particularly valuable because they contain speech from *both* local officials and members of the public. Local government meetings regularly offer opportunities for public comment on items either on or off the day's agenda.

In meeting minutes, broad categories are often assigned to public comments, but transcribed speech from either officials or the public is rare. The availability of speech from both groups enables new kinds of research questions about, for example, interactions *between* the public and the officials (e.g., Parthasarathy et al. 2019).

One technical challenge for researchers using meeting videos is to identify whether the relevant research question requires speaker *grouping* (i.e., categorizing audio or text as coming from a member of the public or an official) or speaker *identification* (i.e., assigning audio or text to individual speakers across time). Speaker grouping is a simpler task: local governments generally follow a version of Robert's Rules of Order, which allows for a "public comment period" at most regular meetings. Using text data alone, we have found that researchers can often identify these comment periods using a set of common "phrase markers" that indicate when a member of the public (versus an official) has started their comment.

The vast variation in local government procedures and speaker idiosyncrasies means that there is no singular phrase that will perfectly identify all comment periods, but researchers can use "markers" like the phrases presented in Table 1 to identify potential speaker changes. Table 1 below shows a sample of phrases that researchers can use to identify public comments, separated into categories: Public Comment Announcements (referring to the beginning of a public comment period, which invites members of the public to state a comment); Public Comment Closures (when a public comment period may be closed); Speaker Introductions (when an individual speaker begins their comment); and Speaker Conclusions (when an individual speaker closes their comment). Researchers can then validate the accuracy of these markers by, for example, attaching timestamps to potential matches and checking the meeting video at that time.

Speaker identification—assigning audio or text to a particular person over time—is a more difficult task known as speaker diarization. Speaker diarization is challenging from text alone, as speakers will not always clearly introduce themselves in the way that many public commenters do. Instead, speaker diarization methods work by detecting patterns in an audio file (like pitch) that indicate the same person speaking over time. Many off-the-shelf tools for speaker diarization are available from services like Google Cloud and Microsoft Azure. However, we stress that the distinction between speaker grouping and identification remains important, since not all research questions will require identifying particular speakers. For example, certain research questions may require speaker identification (e.g., comparing text from speakers with particular demographic characteristics), while many others may not (e.g., comparing public comment dynamics across places).

Beyond transcripts, videos contain a wealth of audio and visual data that can be used for answering substantive questions. Scholars in other areas of political science

Table 1. Common phrases researchers can use to identify comments from members of the public

Phrase category	Common phrases	
Public comment announcement	anybody in the audience, anyone in the audience, anybody in the public, anyone in the public, anybody from the public, anyone from the public, comments from the public, members of the public, will now take comment, will now accept comment, now open for comment, now open for public comment, open it up for comment, who wishes to comment, who would like to comment, who wants to comment, who wishes to testify, who would like to testify, who wants to testify, who wishes to address, who would like to address, who wants to address, state your name, state your address, name and address, name and location, name address, come to the microphone, come to the podium, next signed up, would you come up please	
Public comment closure	end of the comment period, close comment period, conclude comment period, closing comment period, end of public comment, close public comment, seeing none, no one else, don't see anyone, no one from the public, public hearing is closed, ends the public hearing, go to the council, go to the board, comments from the council, comments from the board	
Speaker introduction	my name is, my name's, hello I'm, hello I am, my address is, my home address is, I'm here to, I live at, come to the microphone, come to the podium	
Speaker conclusion	thank you, thanks so much, thanks very much, that's all, next we have, next up we have, time is up, time's up, minutes are up, reached time limit, anyone else	

Note: The table above lists phrases that researchers can use to identify public comment periods. We anticipate such an approach can be useful to scholars who hope to separate meeting speech from officials and members of the public. We present the phrases in four categories indicating different identification approaches: Public Comment Announcement (referring to the beginning of a public comment period, which invites members of the public to state a comment); Public Comment Closure (when a public comment period may be closed); Speaker Introduction (when an individual speaker begins their comment); and Speaker Conclusion (when an individual speaker finishes their comment).

are increasingly using audio and video data to answer questions on legislator behavior (Dietrich and Yao 2020), polarization (Dietrich 2021), emotional expression (Boussalis et al. 2021), and human interaction (Dietrich and Sands 2023). Meeting videos enable scholars to study similar questions for subnational

politics using methods that leverage these data sources, such as motion detection, image tracking, and speaker diarization. Next, we turn to the substantial implications of these data for scholars of federalism.

Implications of meeting videos for the study of federalism

Beyond the study of local politics in isolation, we argue that meeting video data offers substantial opportunities for scholars of federalism. Meeting data provides a full account of the definitive policymaking venue in most local governments. Scholars can leverage ground-level data from these community discussions to study a wealth of intergovernmental relations in new ways. We briefly offer several potential paths for future research below, before illustrating an example analysis.

First, meeting data can be used to study the *preemption* of local authority by federal and state governments. For example, how do local policymaking processes respond when preempted by state governments? (Riverstone-Newell 2017; Davidson et al. 2017; Fowler and Witt 2019) Meeting data could be used to discover and analyze the ground-level emergence of local "activism," such as when local governments actively refuse to comply with state preemption (Riverstone-Newell 2012). Are these efforts primarily driven by interest groups, stoked by local officials, or from other sources? These most newsworthy incidents, often undertaken by governments in large cities (such as Cleveland, Ohio's unsuccessful public battle against HB 180, outlawing residency employment quotas), may mask other patterns of response among other local governments that are more difficult to measure.

Scholars could use local policymaking discussions to study competing hypotheses of preemption response throughout a wide range of local governments. For example, perhaps local attention to preempted issues should decrease, as some officials recognize there is little chance of ultimate legal victory or fear of personal liability. Officials may use meeting time to allocate blame to state-level officials in the short term and try to divert constituent demand for preempted issues to attention on other issues. Alternatively, residents and interest groups may continue to be frustrated by inaction, pushing local officials to respond and increasing attention to preempted issues in local meetings. Further still, local officials (perhaps of the opposing party to the state-level majority) could use meeting time as an opportunity to grandstand (e.g., Park 2021), thus increasing attention to preempted issues and diverting attention away from others. Careful analysis of meeting data could help shed light on these and many other questions regarding the impacts of preemption.

Second, meeting data offer new ways to study a host of *intergovernmental dynamics*. For example, how do city governments respond to state and federal leadership on issues like climate change (e.g., Bromley-Trujillo and Holman 2020;

Stokes 2020)? Action (or inaction) from higher-level governments could stoke interest at the local level, perhaps leading to local innovation as a result (Riverstone-Newell 2017). Existing datasets on traditional measures like spending and policy outcomes may mask more subtle changes in local policymaking dynamics, such as when policies pursued in response to state-level action fail on a local vote. Alternatively, meeting data could be used to track changes in attention and attitudes toward public policy issues after action by other levels of government. For example, state-level initiatives (such as Washington's carbon tax) are opportunities to study changes in policymaking dynamics, as increased issue salience could influence support for climate change policy across local governments. Even federal or state policies that fail or stall could benefit local policy movements by indirectly increasing issue attention—and issue affect, as measured using rich audio data on vocal speech patterns—in local governments across the country.

Third, meeting data provide new ways to study policy implementation and dynamics *between* local governments, such as policy diffusion (e.g., Shipan and Volden 2008, 2012; Volden et al. 2008) and the spread of "model" legislation (e.g., Callaghan et al. 2020; Kroeger et al. 2021). Meeting videos, available over time and across many governments, allow scholars to track the spread and adoption of public policy. Further, meeting transcripts allow scholars to explore how various policies are discussed and framed in different places (e.g., Gilardi et al. 2021). Characteristics of these discussions may vary across features like local partisan preferences, institutional characteristics like electoral timing, and previous successes and failures of considered policies.

We stress that these suggestions are a small sample of the kinds of questions that scholars of federalism could use meeting data to illuminate. Scholars could also explore issues like intergovernmental lobbying (Goldstein and You 2017; Wesley Leckrone 2019; Payson 2020, 2021); the role of polarization and "punitive" federalism (Volden 2017; Goelzhauser and Konisky 2020); or information sharing between local governments and actors like local businesses and consultants (e.g., Ban et al. 2023). We are eager to see scholars leverage these new sources of data to answer novel questions.

Illustration: national partisan language in local governance

Here, we illustrate the power of meeting data to study federalism by asking how nationally salient partisan language is used in local policymaking discussions. Specifically, we measure how often local government meetings from Barari and Simko (2023) feature highly salient national partisan phrases like "climate change" and "gun control" as identified by Gentzkow et al. (2019). We ask how *common* this partisan language is in local governments and explore how attention to

nationally salient issues differs between local governments with different characteristics. Furthermore, we explore whether there is a relationship between the *slant* of this national partisan attention and local partisan voting preferences.

Our goal is to present an archetypal analysis that scholars could follow when using meeting data to study questions in political science. For example, scholars could ask whether US local government policymaking deliberation is responsive to the political preferences of constituents. Responsive local governments, whose policymaking processes and outcomes are tailored to residents' preferences, could be a desirable check on the federal government's broader and more diffuse national agenda (Gannett 2005). Intimately responsive democratic systems may be more feasible to achieve in local governments, due to their smaller sizes, which bring politics closer to the people (Dahl and Tufte 1973; Bryan 2010). Others highlight that mechanisms like residential choice help enforce a relationship between public preferences and local policies (Tiebout 1956; Fischel 2002).

While there are notable potential limits on local governments' responsiveness to their constituents—including jurisdictional constraints and the risk or reality of preemption by higher governments (Peterson 1981; Fowler and Witt 2019; Sances 2021)—previous work has largely found that local government policies across issues correspond with the political preferences of at least some residents (Tausanovitch and Warshaw 2014; Einstein and Kogan 2016). However, others emphasize that there are systematic class and racial biases in which ideologies are represented in local governance (Einstein et al. 2019; Schaffner et al. 2020). Meeting data could be used to study whether (for example) a positive correlation exists between public preferences (as revealed by voting behavior) and political outcomes (in our case, as measured by the partisan slant of local meeting deliberations) (Erikson et al. 1993; Lax and Phillips 2012).

Here, we aim to showcase the utility of public meeting data to answer questions like these. Below, we provide a descriptive analysis of how nationally salient partisan phrases are used in local governance. We do not pursue a fully-fledged research design to investigate a theoretically motivated argument on a topic like responsiveness. Instead, we provide a "user guide" that focuses on descriptive results to showcase the new kinds of research questions that meeting data enable.

Data and measurement

Studying the content of local meeting deliberations requires a dataset of how politics is conducted at the ground level. Here we use LocalView, which includes textual transcripts of local government meetings in more than 1,000 places across the United States between 2006 and 2022. Further information about the sample creation, coverage, and validation is available at Barari and Simko (2023). For this illustration, we focus on a sample of 70,590 "regular" local government meetings

where recurring business is discussed in public (i.e., not special meetings, work sessions, or committee meetings).

This sample includes 1,107 places in forty-nine states, including large cities like Boston, MA and Houston, TX, mid-sized cities like Burbank, CA and South Bend, IN, and small towns like Duck Town, NC and Kettle River, MN. Our approach offers us the opportunity to study local politics in a broader range of places than most existing work, which generally focuses on the largest cities (e.g., Tausanovitch and Warshaw 2014) or individual states (e.g., Einstein et al. 2019; Yoder 2020) due to the logistical difficulties described above in collecting data on local governments.

Measuring partisan attention in local politics

We measure the partisan attention of local meeting deliberations by comparing the language used in local government meetings to that used by national partisan elites. It is widely acknowledged that Democrats and Republicans use different language when discussing political issues (Diermeier et al. 2012; Gentzkow et al. 2019). One reason is that certain issues themselves are disproportionately associated with one party or another (e.g., civil rights with the Democratic party, business interests with the Republican party). Elite cues can steer mass partisans to pay attention to and, thus, discuss some issues more than others (Egan 2013). Another reason is that Democrat and Republican elites adopt different linguistic frames for the same issue (e.g., gun ownership) denoting support (e.g., "gun rights") or opposition (e.g., "gun control"), which co-partisans in the public mimic (Druckman 2001; Chong and Druckman 2007). We rely on the collection of bigrams from the Congressional Record analyzed by Gentzkow et al. (2019) and released in Gentzkow et al. (2018) that are most differentially associated with Democrats and Republicans in the 114th Congress (2015–2017).

Each bigram j from Gentzkow et al. (2019) is associated with an estimate of its differential usage or partisan valence, γ_j , where a more positive value indicates a greater differential usage by Republicans (and a more negative value indicates more disproportionate usage by Democrats) in the 114th Congress. For example, the scores indicate that a bigram like "religious freedom" is much more likely to be used by a Republican member of Congress than a Democrat, while a bigram like "climate change" is much more likely to be used by a Democrat than a Republican. We note that this approach is distinct from a measurement scheme that classifies certain phrases as "political" or not. Instead, the Gentzkow et al. (2019) measures capture the intuition that certain phrases are much more likely to be used by Democrats than Republicans (and vice versa).

This intuition may also hold in local governments too. For example, consider the city council meeting held in Orlando, FL on July 11th, 2016.² Held less than a month after the Pulse Nightclub shooting in Orlando, City Commissioner Patty Sheehan delivered a statement about gun violence and hate faced by the LGBT

community. We include an excerpt from the comment below, and the full quote is available in the Supplementary Appendix:

This was the first generation of LGBTQ youth—that's lesbian, gay, bisexual, transgender, queer youth—who had the right to marry, who had protections from discrimination in public accommodation, employment. They were the first generation that could really authentically and truly be themselves and this is what, this is what happened to them. They were, they were young people who are successful in their jobs, who are able to be open about who they are, who had friends and allies that were partying with them because it didn't matter who they were. They had members of the Black community, members of the Hispanic community, everybody kind of got along at this club. This was a microcosm of what's right in this world and the fact that the killer didn't just take LGBTQ, but our allies and members and friends. We have to come together to show that this kind of violence and hatred will not be tolerated.

The partisan usage scores by Gentzkow et al. (2019) capture the intuition that this speech, *if it had been delivered on the House floor by a member of Congress*, would be much more likely to have been delivered by a Democratic member of Congress than a Republican. For example, Gentzkow et al. (2019) estimate that Democratic members of Congress are much more likely to make direct references to the LGBT community than Republicans and assign the phrase "LGBT community" an estimated partisanship score of –19.23, which is near the seventh percentile of all phrases.

Partisan language appears often in local policymaking

Next, we demonstrate that identifiably partisan national language, like the example above, appears often in local government meetings. For this illustration, we use the 10 percent most Republican and 10 percent most Democratic phrases according to the Gentzkow et al. (2019) scores of the 114th Congress. These phrases represent terms that are most likely to distinguish between a Democratic and Republican speaker and include phrases like "climate change," "gun violence," "Planned Parenthood," "background check," and "student loan" (which are all identified as leaning Democratic) alongside others like "religious freedom," "radical Islam," "Air Force," "economic growth," and "illegal immigration" (which are all identified as leaning Republican). We count the number of times each of these 200 phrases appears in each meeting from our sample.³

Table 2 lists the top 25 most frequently used phrases from this set and offers two clear observations: (1) local policymaking discussions often feature language that overlaps with national partisans, but (2) many phrases likely have very different connotations at the local and national levels. First, we note that phrases with clear shared relevance at the national and local levels, such as "climate

Table 2. Most common highly partisan national phrases used in local deliberation

Phrase	Total uses	Proportion of sample meetings (%)
public_health	15,288	9.30
first_respond	8,018	7.17
tax_dollar	6,971	6.99
mental_health	15,019	6.86
properti_right	5,181	5.24
state_depart	3,315	3.54
tax_credit	6,953	3.52
health_safeti	3,109	3.22
background_check	4,225	2.97
taxpay_dollar	2,583	2.88
air_forc	3,395	2.78
energi_effici	3,470	2.58
climat_chang	4,003	2.48
care_act	3,611	2.42
rais_tax	2,811	2.36
gas_tax	3,657	2.31
creat_job	1,825	2.11
attorney_gener	2,515	2.02
econom_growth	1,740	1.97
million_peopl	1,644	1.94

Note: The table shows the most common twenty phrases in our LocalView sample that are among the most partisan as measured by Gentzkow et al. (2019). Specifically, we search for bigrams that Gentzkow et al. identified as being in the top 10% most partisan phrases that best identify either Democratic or Republican speakers. The first column lists the bigrams, the second lists the total number of uses among the 70,590 meetings in our analytic sample, and the third column lists the proportion of meetings where the phrase was used at least one time.

change," "background check," and "voting rights" are used regularly in local governments. These phrases can be used commonly—the phrase "tax dollars" is used thousands of times across 7 percent of meetings in our sample. Further, these phrases can evolve in usage over time—for example, the phrase "public health" is popular throughout our sample (e.g., used in 9.5 percent of meetings in 2019) but drastically increased in popularity during the COVID-19 pandemic (e.g., used in 24 percent of meetings in 2020). We note that bigrams provide a conservative estimate of usage and that general concepts are likely discussed more commonly than these terms might suggest (e.g., tax dollars and taxpayer dollars are two separate bigrams but related concepts).

However, these results also suggest that language can adopt different meanings at the national and local levels. In many cases, these differences are likely explained by differing jurisdictions and contexts. For example, "first responders" is estimated by Gentzkow et al. (2019) to be in the fourth percentile of all partisan phrases, but references to "first responders" at the local level may carry much less partisan connotation due to staffing and employment discussions. Similarly, discussions of "air force" may carry clearly partisan connotations at the federal level (Gentzkow et al. estimate its usage is above the 98th percentile, identified as Republican), but many discussions at the local level refer to nearby air force bases in their community. For example, meetings in our sample from Goldsboro, North Carolina use the term "air force" 188 times. However, this usage is likely driven by the Seymour Johnson Air Force Base in Goldsboro and does not necessarily represent an intended partisan cue. We encourage scholars to investigate whether it is necessary for their research question to use phrases that have shared *meaning* at the national and local levels (Rodriguez et al. 2023).

Though national partisan language is common overall at the local level, next we show that partisan phrases drastically vary in how often they are used by local governments. Figure 3 below visualizes how often each of the most partisan 200 phrases discussed above are used in all 70,590 meetings across our sample. For each phrase, we plot the partisanship score by Gentzkow et al. (2019) on the x-axis and the number of times each phrase is used across our sample on the y-axis (we use a log scale for visual clarity). This plot visualizes the intuition described above that some phrases are used much more often by Democrats than Republicans (e.g., "climate change") and vice versa ("religious freedom"). Further, this plot also visualizes that local governments use nationally salient phrases at different rates. While some phrases are used very often in both national and local governments, such as "gun violence" and "sea level," others (such as those referring to international affairs like "Iranian regime") are hardly ever used at the local level.

Next, we show that the usage of partisan phrases differs *across* local governments with different characteristics. First, we show that places with larger populations use more partisan language overall. The left plot in figure 4 shows the relationship between population (as measured by the American Community Survey) and the number of partisan phrases per meeting (as measured by the total number of partisan phrases divided by the number of meetings in our sample). We see a clear upward trend, where deliberation in local governments features more partisan words as population increases. This relationship could reflect that larger cities may be more likely to have more professionalized, high-capacity local governments than small towns. We label four cities across a wide population range. Freedom Town, Oklahoma (population ~ 300) and Belle Plaine, Minnesota (population $\sim 7,000$) both have small populations and feature nearly no partisan language in our sample (e.g., deliberation in Belle Plaine used only 0.044 partisan phrases per meeting,

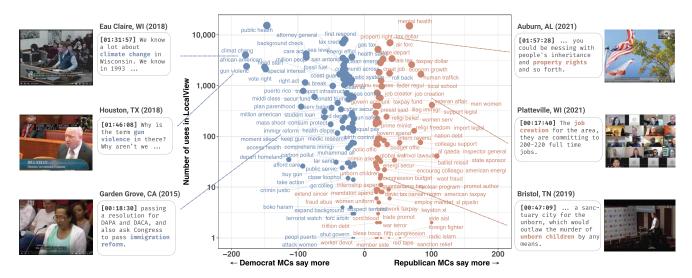


Figure 3. Partisan phrases used in local deliberation.

Note: Each point represents a bigram uttered by Democrat and Republican members of Congress during Congressional debate (2017–2019), based on their differential association with the two parties as measured by Gentzkow et al. (2019). The *x*-axis shows the bigram partisanship score, and the *y*-axis shows how often each bigram is used on a logarithmic scale in public meetings, as captured by Barari and Simko (2023). We also scale the size of each point by the logged number of times each phrase is used in our sample. We include example meeting excerpts and screenshots on either side of the scatterplot.

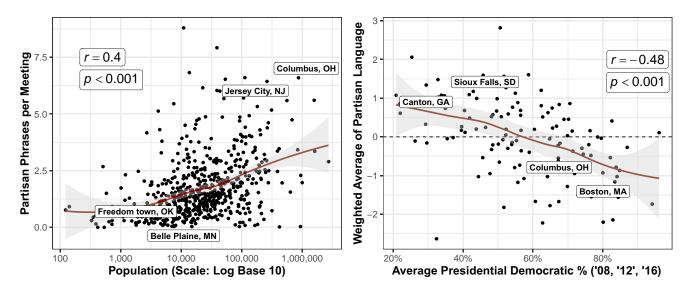


Figure 4. Describing where partisan phrases are used most in local deliberation.

Note: Each subplot compares how highly partisan phrases described in the sample above are used in cities in the LocalView database. The left subplot shows how the average number of partisan phrases used per meeting in each place (y-axis) varies across cities of different population sizes with at least twenty-five meetings in our sample, as measured by the American Community Survey population estimates (x-axis). The right subplot shows how the distribution of partisan language, as measured by a standardized weighted average of the scaled partisanship of phrases and the number of times it is used per place among places with at least 250 total phrases, is used across a measure of the partisan preferences of voters, the average Democratic vote share in presidential elections between 2008 and 2016 (x-axis). We drop the terms "public health" and "mental health" in both plots due to their extremely high usage during the COVID-19 pandemic. Lines are LOESS curves, and Pearson correlations are shown in both plots with associated p-values.

from seven phrases in total across 156 videos). Alternatively, Jersey City, New Jersey, and Columbus, Ohio, have much larger populations and feature many more partisan phrases (e.g., Columbus saw a much higher rate of 6.59 phrases per meeting, calculated from 1,569 phrases across 238 meetings).

Finally, we capture the partisan lean of the distribution of partisan terms used in each place in two ways. Even among places with similar amounts of partisan language, the share of that language that is identifiably Democratic or Republican also differs between places. First, the right subplot of figure 4 shows a weighted average of the partisan lean of partisan phrases used within each place in our sample that used at least 250 partisan phrases. This average is calculated by multiplying the partisanship score reported by Gentzkow et al. (2019) by the number of times each phrase is used in each place and standardizing the resulting values. This calculation is equivalent to a weighted average, where we average over the partisanship scores of all phrases used in a place, with the number of times each phrase is used as weights. While the raw values of this average are difficult to interpret, the intuition is that places featuring more identifiably Republican language will have a higher value on the y-axis, places that feature more identifiably Democratic language will have a lower value on the y-axis, and places featuring identifiably Democratic and Republican language about equally will appear near zero. We plot this value against an average of Democratic presidential vote share (2008, 2012, 2016) in each place on the x-axis.

We see that places with higher Democratic shares of the presidential vote also tend to use partisan language in their meetings that lean Democratic. For example, Columbus, Ohio has a low weighted average on this score (-1.02), around the 15th percentile of all cities in our sample. This score indicates that the partisan dialog in Columbus leans left. This is intuitive when looking at the raw word counts, as this left-leaning score in Columbus is driven by high counts of phrases like "gun violence," "energy efficiency," "background check," and "climate change." The correlation between the weighted average of partisan language and the average Democratic vote share across our sample cities is strongly negative and significant $(\rho = -0.48, p\text{-value} = 1.85 \times 10^{-8})$.

Second, we visualize place-specific "slants" among partisan language in figure 5. For each of ten cities with a range of populations and partisan preferences, we plot a histogram where the x-axis values represent the phrase-specific partisanship scores shown in figure 3. We standardize these scores for visual clarity. The plot shows that cities differ drastically in both the amount of partisan language in their meetings and the *slant* of that language. For example, large cities like Boston, MA; Columbus, OH; and Orlando, FL have phrase distributions that skew left. This means that highly Democratic-leaning phrases like "climate change" and "gun control" are used very often in these cities. The bottom row of this figure shows that other cities skew Republican in their language. While the total amount of

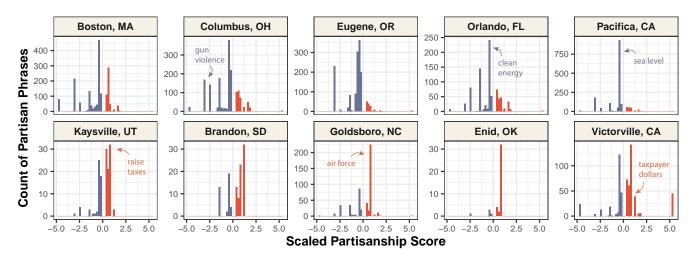


Figure 5. The distribution of partisan phrases used in local deliberation.

Note: Each subplot is a histogram where values represent the number of times that highly partisan phrases were used in each city. The *x*-axis shows a scaled version of the partisanship scores developed by Gentzkow et al. (2019), while the *y*-axis shows the number of times phrases with that score were used. Red values (corresponding to bars to the right of zero) indicate phrases that lean Republican as identified by Gentzkow et al., and blue values (corresponding to bars to the left of zero) indicate phrases that lean Democratic.

partisan language is much lower in Kaysville, UT than in Boston, MA (note the differing *y*-axes), the slant of Kaysville's discussion leans much more Republican. In Kaysville, instead of Democratic-leaning phrases like "climate change" (which never appears in any of our sample meetings from Kaysville), the partisan phrases that appear most often are "property rights," "air force," and "tax dollars." Further, many of these phrases are locally relevant—for example, the most used partisan phrase by far in coastal Pacifica, California is "sea level."

Discussion

Collectively, we argue that these four descriptive results provide valuable information about the nature of local deliberation and motivate future research questions. First, identifiably national partisan language is *common* in local governments. Second, national partisan phrases vary drastically in how often they are used by local governments. Third, we find the amount of overall national partisan language tends to be higher in places with larger populations. Fourth, the *slant* of partisan language (i.e., the amount of partisan language that is identifiably Democratic or Republican) varies between cities, and this slant is correlated with local national voting preferences.

Our results suggest that local policymaking is neither entirely idiosyncratic nor solely defined by residents' national partisan preferences. Although nationalization has increasingly shaped Americans' political preferences and knowledge about local politics (Hopkins 2018), our findings suggest that the everyday practice of local meetings has not (yet?) been fully co-opted by national politics.

Conclusion

The study of US local politics and federalism is undergoing a data revolution. Never before have so many large-scale sources of data been readily available on governments like city councils, school boards, and planning commissions. New datasets that cover local institutions, such as public meetings, district boundaries, and election returns enable scholars to study local governments at a larger scale than ever before. We argue that sources of "non-tabular" data, such as text, audio, and video, offer particularly exciting potential for future analyses.

We believe these new data sources are particularly beneficial for the study of local meetings and allow scholars to investigate *new* types of research questions on issues like deliberation and intergovernmental relations. We have argued that scholars can use novel sources of data to better understand a variety of settings: local governments in isolation, their role in the federal system, and how they relate both with one another and with other federal, state, and local governments. Meetings—the central policymaking venue in local politics—will continue to play a fundamental role in this research agenda.

We have also argued that the *relationship* between speech and action may be a particularly fruitful avenue for future research. A great deal of past work has emphasized that local officials face many constraints on unilateral policy action (e.g., Peterson 1981; Gerber and Hopkins 2011), while others still find that policy is generally responsive to public preferences (Tausanovitch and Warshaw 2014). Yet, how should speech and issue attention be considered? Despite constraints on policymaking ability, local governments have a great deal of control over speech and how they allocate attention to issues. Agenda control is extremely diffuse in local governments, as there are many opportunities for members of the public or officials to state their preferences on the official record. This could introduce opportunities for minority preferences to still receive a great deal of attention, even when policy action is unlikely.

We illustrated the potential of this type of data by presenting new descriptive facts about the usage of nationally salient partisan language in local governments. We document that nationally salient issues are commonly discussed in local governments, especially in larger cities. Yet, not all national issues percolate to the local level. Finally, the *slant* of the nationally salient language used in local governments generally reflects the partisan preferences of residents. We argued that similar analyses could be performed following these steps to pursue research designs around questions like whether policymaking discussions are responsive to local partisan preferences.

This is a uniquely exciting time to study local governments and federalism in the United States. We hope that newly available data sources will enable advancements in the study of local policymaking and intergovernmental relations.

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Supplementary data

Supplementary data can be found at www.publius.oxfordjournals.org.

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Notes

- Here, we note that meeting agendas suffer from this same standardization issue. Agendas
 are less frequently used so far in political science research (though, see important
 exceptions like Mortensen et al. 2022), but similarly follow no centralized format
 between cities.
- 2. Meeting video found here: https://www.youtube.com/live/ECRYn2M0SP8?si=_2Oar2GRGwM0qdPA&t=1552.
- 3. We remove the following phrases from Gentzkow et al. (2019) which are not applicable or highly generic in a local context: "year ago," "come together," "task force," "year old," "take away," "school board," and "billion dollar."

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