

**Mapping Methods in Contemporary Political Science Research:
An Analysis of Journal Publications (1998-2018)
Pre-Analysis Plan – Appendix B: Codebook**

In this codebook, we describe our operational rules for coding the sample of 1,926 articles under study in the “Mapping Methods in Contemporary Political Science Research” project. We describe both our general coding rules and our rules for coding specific variables.

General Coding Rules

We code every article that fits our criteria on every code type, whether the article involves one method or multiple methods of data collection or analysis. We load all articles as PDF files into the Dedoose qualitative data analysis software, and code all articles in this software.

The process of coding involves manually skimming or reading six parts of each article: (1) the abstract; (2) the introductory paragraphs; (3) the data and methods sections, to the extent they are clearly discernible; (4) all other parts of the article in which the author(s) discuss data or methods; (5) the footnotes and / or endnotes; (6) the appendix, if the author(s) include that section as part of the main body of the article. We do not code online appendices or references to information in online appendices. For example, if the author(s) write that they “constructed a measure” and discuss the details of the measure in their online supplementary materials, we do not code the author(s) as having “Generated data” because we are not able to observe the author(s) description of their data-generation process. In this respect, the article PDF is the unit of analysis for our data collection.

In Dedoose, we apply what Dedoose refers to as “child” codes---those categories at the second-highest level of aggregation---rather than the “parent” codes at the highest level of aggregation (e.g., “Regression” within “Statistical / Quantitative Analysis”). In this document, we reference parent codes using *italicized and highlighted text*; we reference child codes using underlined text.

Because we are coding for the presence of specific codes in the article rather than the frequency or intensity with which the author undertook the action to which they refer, we do not apply codes in every instance within an article to which a relevant code might apply. For example, if author(s) use the same statistical estimation strategy twice in the same article, we only apply the “Regression” or “Statistics with an identification strategy” code to the first instance in which the author(s) estimate their regression model.

In case of technical difficulties that preclude access to a discrete section of an article, we consult the original PDF of the article (i.e., outside Dedoose) and append relevant codes to another part of the Dedoose version of the article. Where Dedoose codes appear in an article does not matter for our purposes, other than facilitating cross-coder code application verification.

In general, we take the author(s)’ description of their research process at face value; we do not evaluate any replication materials associated with the article. We do not evaluate the quality of

the data collection or analysis that the author(s) conducted. We also do not differentiate between research projects involving different levels of effort. For example, the codebook that we describe below treats an article that relies solely on data that the author generated by conducting five interviews as equivalent to a project in which the author generated data by conducting 100 interviews, in that both rely on observational data gathered through interviews with human participants (HP).

Although all articles were published in the English language, author(s) sometimes reference titles of sources or individuals in non-English languages. Where the meaning of these titles is unclear, we rely on Google Translate to translate them into English.

Coding Type I: General Information

Year / Journal

First, we use the Descriptor button in Dedoose to associate the article with a specific ***Year*** and ***Journal***. The list of years includes all years from 1998 -- 2018, inclusive. The list of journals includes all journals referenced in Appendix A.

Subfield

We use six subfield codes (University of Kansas 2013):

1. American Government (AG), which refers to the study of politics in the United States, including the study of national institutions (Congress, the President, the Supreme Court, executive bureaucracy), state and local government, representative processes at all levels (elections, public opinion, interest groups, political parties, protest and extremist groups), policy and policy-making;
2. Comparative Government (CG), which refers to the study of politics outside the United States or politics compared across countries, possibly including the United States; includes the study of governing institutions, electoral behavior and procedures, public policy, political economy, social movements and organizations, protest and revolution, policy and policy-making;
 - a. AG and CG are mutually exclusive categories, so we code as CG any article that treats the United States as one among multiple cases of a political phenomenon.
3. International Relations (IR), which refers to the study of political relations between nation-states; includes the study of diplomacy, military conflict, and conflict resolution; international political economy, international organizations; and other processes that operate across the boundaries of nation-states;
4. Political Theory (PT), which refers to the study of one or more ideas, or theoretical or normative questions. Political Theory work is often focused on political ideology,

fairness, justice, and equity. Political Theory work may draw on empirical examples but usually without using empirical analysis to test the validity of a theory. Political Theory work may involve work that centers on (1) the analysis of canonical or counter-canonical texts; (2) historical or contextual analysis that situates concepts within a broader historical, biographical, or linguistic context; (3) normative or analytical work; or (4) anthropological or theoretically-informed empirical analysis;¹

- a. The subsequent codes about methods of data collection and analysis are not intended to address the methodological diversity of Political Theory work. We had planned to flag cases in which we were not sure about the application of the Political Theory code so we could discuss them with Political Theory faculty in our department, but we did not identify any “edge cases.”
5. Methodology, which refers to the development or advancement of one or more data-generation techniques or strategies for analyzing data in order to answer theoretically-motivated political questions;
 - a. We do not use this code when an article aims to refine concepts for studying a particular phenomenon (e.g., violence), but does not develop a particular data-collection strategy or analytic method.
 - b. We use this code when an article discusses the application of particular methods, but does not fit into a clear substantive field.
 - c. We also apply this code when articles either (1) discuss methodology and do not fit into a clear substantive field; or (2) employ formal modeling without any form of empirical analysis and do not fit into a clear substantive field.
6. Conceptualization and Measurement (CM), which refer, respectively, to (1) the process through which phenomena or ideas (captured in terms) are defined, imbuing them with specific characteristics; and (2) the process through which the degree or intensity or attributes of phenomena or ideas are assessed (quantitatively or qualitatively), potentially facilitating comparison across cases.
 - a. We use this code for articles that explore the bounds and characteristics of particular concepts, such as Collier and Levitsky (1997) or Friedman (2006).
 - b. We use this code if the article concerns approaches to or questions about “how we study” political phenomena, is not related to a specific subfield or method, and stops short of a general “philosophy of science” (e.g., studies of scientific paradigms).

Articles receive the following subfield-code combinations according to the following criteria:

¹ We thank XXXcolleagues for suggesting these categories of Political Theory work.

- AG / IR: Articles pertaining to US foreign policy processes, including military operations, trade, and foreign policy decisionmaking.
- CG / IR: Articles pertaining to the domestic consequences of international politics, or vice versa. These include articles, for example, pertaining to trade outside of the United States, the relationship between regime type and international conflict, and conflict-induced migration.
- AG / PT: Articles pertaining to American political thought, such as the political ideas surrounding the US Constitution or Alexis de Tocqueville's *Democracy in America*.
- IR / PT: Articles pertaining to international relations theory without significant empirical analysis, such as competing international relations paradigms or theories of international order.
- Methodology / another subfield: Articles that contribute to the body of knowledge about a specific method (e.g., survey design) and substantive knowledge about a specific thematic subfield.

We evaluate the subfield of the article on the basis of the article's main themes or empirical focus, especially in the abstract and introduction of the article. We do not use the subfield listed on the author(s)' personal or faculty website to evaluate the article subfield, because the author(s) may change subfields after publishing articles or conduct research in areas outside their main subfields. If the article's subfield is unclear, however, we use a Google search for the author(s) to provide context clues about the article's subfield.

Authorship

We evaluate the author(s)' gender---and, implicitly, the article's authorship structure by gender---on the basis of the pronouns that the author(s) use in the article's introductory / biographical footnote, if available, and on the basis of the author's name otherwise. If the gender associated with the author name is unclear, we draw conclusions about author gender from the author's personal website or social media accounts. We use five gender-and-authorship-structure codes:

1. Single-authored male, which refers to an article written by a single male author.
2. Single-authored female, which refers to an article written by a single female author.
3. Co-authored male, which refers to an article written by two or more male authors.
4. Co-authored female, which refers to an article written by two or more female authors.

5. Co-authored mixed-gender team, which refers to an article written by two or more male and female authors.

Natural Experiment

We evaluate whether the author(s) employ a natural experiment, which is a research design in which the subjects either select themselves into the treatment and control group or are selected by processes outside the control of the investigator (Shively 2017). We only use this code in circumstances where the author(s) make explicit reference to a “natural experiment” in the text of their article.

Policy Recommendation

We evaluate whether the author(s) offer an explicit recommendation for policy action in the concluding section of the article. We only apply this code in circumstances in which the author(s) use normative phrases such as “should” or “needs to,” even if the author(s) do not directly say “the policy implications of this analysis are as follows.” We only apply this code if the author(s) recommend actions by domestic governments or international governing bodies, although we exclude direct recommendations to international financial institutions such as the International Monetary Fund or World Bank. We do not apply this code if the author(s) recommend actions by “practitioners” if it is ambiguous whether the practitioners in question are governmental or non-governmental actors.

Coding Type II: Collection / Generation of Empirical Basis of Article

To identify the methods used to collect or generate the empirical basis of the article, we code the article’s research design and analysis sections. We do not use the introduction, literature review or literature synthesis sections, or online supplemental materials to identify the empirical basis of the article. To home in on the correct article section to code, we attempt to identify the “turning point” at which the author begins to describe and engage in analysis. We code methods used to collect or generate data used to develop and set-up any aspect of the analysis as long as it is after the article’s turning point. Where we are not able to identify a clear turning point, we code all sections of the article.

We assign data-collection codes to all articles except articles that present new formal models of political phenomena but lack an empirical basis. Applying data-collection / generation codes to these articles would be inappropriate because the author(s) draw conclusions by resolving a formal mathematical equation rather than through the empirical analysis of data.

With reference to all other articles, three common circumstances in which we do not assign data-collection / generation codes are as follows. (1) We do not assign data-collection codes to references to data-collection instruments (e.g., survey questions or interview protocols) that the author(s) reference separately from the data that they produce by using those tools. (2) We do not assign data-collection / generation codes when author(s) use a pre-existing list of geographic or temporal units to identify a universe of cases for subsequent analysis. For example, author(s)

may use a list of Organisation for Economic Co-operation and Development (OECD) member countries to restrict the global universe of countries to a subset of advanced industrial economies. We do not code the OECD list as a pre-existing data-collection source because the author(s) do not use the list for any analytic purpose other than case selection. (3) We do not use “findings from the literature”---or any similar formulation---as a data-collection source in formal modeling articles.

We do assign data-collection codes to articles associated with the Political Theory subfield. Because we did not design the data-collection codes to accommodate the full range of methods used by researchers in the Political Theory subfield, Political Theory researchers may find relevant applications of data-collection codes imprecise. For example, we apply the “Employed information / data from pre-existing primary or secondary sources” data-collection code to a Political Theory article that relies principally on a textual analysis of Thomas Hobbes’s *Leviathan* because the original text is a form of “pre-existing data or information.”

Our procedure for coding the empirical basis of the article is as follows: First, we skim the article from the “turning point,” as applicable, to the conclusion. Second, we look for references to the use of pre-existing primary and secondary data and the generation of new data. We use the words “data” or “information” and citations in parentheses, footnotes, and endnotes as indicators of data use. We only apply these codes once per article. We continue until references to all subordinate child codes are found or the article concludes. We also double-check the article’s footnotes, endnotes, or bibliography---and their corresponding in-line references---before completing our coding task for the article.

To differentiate between pre-existing and “author-generated” data, we look for explicit evidence that the author(s) employed either form of data. We try to identify unambiguous phrases such as “for this variable I used,” rather than assuming that the author(s) either employ pre-existing data or generate new data for specific measures based on implicit assumptions about the origins of the author(s)’ data. For example, if the author(s) indicate that they use a measure of “income per capita” without specifying that the income per capita data come from the World Bank, we do not apply a pre-existing data code. If the author(s) indicate that they “employed data from...” an ambiguous source, we apply the pre-existing data code. Bibliographic references to specific datasets or methods used to collect / generate data are adequate substitutes for explicit phrases. For example, if the author(s) write “the statistics on violence (Dell 2020) were used to...,” we infer that the author(s) employed pre-existing data from the Dell 2020 source. If the distinction between pre-existing and author-generated data is ambiguous, we do not apply a data-collection code to that source.

To illustrate the distinction between explicit and implicit references to data-collection methods, consider an article that employs UN Security Council membership as a control variable. If the author(s) do not reference a data source, we do not apply a data-collection code. If the author(s) reference a pre-existing dataset about UN Security Council membership as the variable source, we code the article as employing pre-existing data. If the author(s) indicate that they collect information about UN Security Council membership from the UN website, we code the article as

employing author-generated data because the author(s) transform unstructured information into structured data.

Non-HP Empirical Base

These codes refer to empirical sources that do not involve the author(s) interacting with other individuals in the process of collecting or generating data.

Employed information / data from pre-existing primary or secondary sources

Pre-existing information includes representations of the social world that have not been extracted or formalized into structured data. This information might include textual or multi-media sources. Pre-existing data includes information already in a form suitable for structured analysis, that was collected and assembled by another academic or non-academic party and possibly used in previous analyses. We only use this code to refer to the empirical material on which the author(s)' analysis relies; we do not use the code when the author(s) use (1) another author's interview protocol or survey instrument or (2) elements of another author's formal model.

We use this code when the author(s) draw information or data from a source without creating new structured data, when the author(s) use data already structured for analysis, or when the author(s) reference in the research design or analysis sections of their article information or data from another source that informs their analytic decisions. We also use this code when the author(s) draw on or synthesize academic sources to develop newly-structured data, such as in the widely-used Polity or Correlates of War datasets. Additionally, we use this code when the author(s) rely on pre-existing financial or economic data in previously tabulated formats (e.g., the *Statistical Abstract of the United States*), even if the author(s) transcribe these data from hard-copy versions of the same.

We also use this code when the author(s) use computational techniques to manipulate, combine, calculate, or lag variables from previously structured data. Even where these techniques involve complex computation, we do not treat these approaches as evidence of new data *generation*.

Generated data

Generating data refers to the act of engaging in some analytic process to convert a pre-existing source into an input into analysis. For example, authors often transform non-numeric information into quantitative measures for the purposes of statistical analysis. This code may apply to either qualitative or quantitative data, and may involve the use of either primary or secondary sources as the basis of data generation. We use this code for all data-generating techniques that do not involve structured content or discourse analysis of text or other media; we associate these techniques with the "Text analysis" code below.

We do not distinguish between manual and machine-directed or -assisted data generation techniques. We treat references to "original" datasets or databases as a non-dispositive indicator

of this code. In the context of an author(s) referring to a previous project of theirs, we only use this code if the article confirms that the author(s) generated the data associated with that project.

Text analysis / text mining

Text analysis refers to the act of examining large (i.e., 100 or greater units of observation) collections of structured or unstructured written resources to identify text pertinent or relevant to an analysis and / or to identify concepts, patterns, trends, topics, themes, keywords, or other attributes. This analysis typically aims to generate structured data or to advance other forms of non-literary or non-interpretivist analysis. Text mining refers to the use of software to automate portions of this task. For the purposes of our manuscript, information sources subjected to text analysis also include collections of other types of media such as images and audiovisual recordings, where the author(s)' analysis clearly relies on transformation of these unstructured resources into text.

In general, we do not apply this code to the practice of exegesis---critical or interpretive readings of text---common in contemporary Political Theory research.

Indicators of text analysis include manual and computer-assisted forms of scaling, content analysis, sentiment analysis, topic modeling, and categorization (Fr chet et al. 2020). Computer-assisted techniques also include algorithmic content analysis from a large corpus of text data and analysis using qualitative data analysis software (e.g., word clouds).

Generated synthetic data

Generating synthetic data refers to the task of creating artificial information through an algorithmic process rather than through an analysis of the empirical social world. In the social sciences, researchers often use synthetic data to validate mathematical models or train machine-learning models.

HP Empirical Base – Type of Observational Research

This family of codes includes all tasks related to observational HP research. Observational HP research refers to data-collection / generation techniques in which researchers observe or interact with people in order to gather information about the object(s) of inquiry, but that do not involve a pattern of randomization and researcher-directed assignment to treatment or control groups. We apply this code for all circumstances in which the author(s), or researchers contracted by the author(s) (including research assistants and survey firms), are directly responsible for capturing information from human interlocutors.

If the author(s) are directly responsible for transcribing the interviews they conducted, we do not apply a separate “Generated data” or “Text analysis” code to the creation or analysis of the interview transcripts.

Ethnography / participant observation

Ethnography is a method of data collection in which researchers intentionally immerse themselves in naturally occurring settings to study the “lifeworlds” (reality or reasoning) of individuals, social groups, and communities and how they make meaning of their social circumstances (Schwartz-Shea and Majic 2017, pp. 97 - 98). Ethnographic techniques emphasize the importance of context for the study of “meaning-making.” We include participant observation in this family of techniques. We only apply this code to explicit references to ethnography or participant observation.

We distinguish ethnography / participant observation as a data-collection strategy from interpretive methods writ large (Schwartz-Shea and Yanow 2013; see “Interpretive” below).

Interviews / focus groups

Interviews are interactions or conversations, often one-on-one, between a researcher and a respondent involving the researcher asking questions and the respondent conveying information about the object(s) of inquiry. Focus groups refer to a gathering of a small number of (i.e., less than 10) respondents, moderated and guided by a researcher or their assistants, in which respondents discuss, interact about, and convey information about the object(s) of inquiry.

We use dynamic in-person / phone / digital audio / video platform conversation as our threshold for interpersonal communication in HP research. As a result, we do not apply this code when the author(s)’ research involves “contacting” people or “personal communication” over email.

Survey

Surveys use a structured set of questions, fixed in content, form, and sequence, to systematically gather information about the object(s) of inquiry from a large sample of (i.e., greater than 50) people. If we apply this code, we do not also apply the “Survey experiment” code (see below) to the same survey.

We apply this code to all survey media, including in-person, phone-, and web-based (e.g., Mechanical Turk) survey platforms. We also use this code when the author(s) draw on a question or questions that they contribute to a collaborative survey, such as the Collaborative Multiracial Post-Election Survey project (Wilkinson 2018).

HP Empirical Base – Source of Observational Information

We collect information about the professional affiliations of individuals or groups who participate in observational HP research. When coding, we associate the application of each “Type of Observational HP Research” code with at least one “Source of Observational HP Information” code to denote the type group with which one or more respondents are affiliated. The types of sources are as follows.

International body / institution

International bodies or institutions connect or consist of states in the international system. We apply this code to individuals associated with (1) supranational organizations, such as the European Union; (2) intergovernmental organizations, such as the Economic Community of West African States; and (3) institutions that combine these two features, such as the United Nations.

Domestic government

Domestic governments refer to any other non-international institution with widely-acknowledged jurisdiction over a defined territory. These include federal, state, and local governments in the United States, as well as equivalent levels of government in non-US countries.

CSO (Civil society organization)

In practice, this refers to any non-governmental or non-state organization. We apply this code to international non-governmental organizations (e.g., Amnesty International), labor unions, religious institutions, and any other organization that mediates between state institutions and society. We also apply this code to political parties, including candidates, when the author(s) interact with the individual as a leader or member of a political party (e.g., Democratic candidate Nancy Pelosi). When the author(s) interact with the same individual as a representative or affiliate of a government institution (e.g., Speaker of the House Nancy Pelosi), we apply the “Domestic government” code.

Media

This category refers to any organization involved in public reporting or journalism about political and social events.

Academics / Researchers

This category refers to any individual affiliated with a university, think tank, or other institution that aims to produce or disseminate knowledge about political and social phenomena. We apply this code when the author(s) rely on expert surveys, as in the Varieties of Democracy project.

Other specified profession

This category refers to interactions between the author(s) and any individual affiliated with a specific profession not referenced in the previous categories, such as (1) business or commercial sectors or (2) educational sectors, such as high school teachers or administrators. We apply this code whenever the author(s) reference “workers” in a specific profession, unless the author(s) associate those individuals with a specific labor union.

Unspecified affiliation

This category refers to any group of individuals not associated with a specific profession. We apply this code, for instance, to references to a “nationally-representative sample” and convenience samples of university students. If the author(s) reference students because the object(s) of inquiry are student behavior or educational outcomes, we apply the “Other specified profession” code.

HP Empirical Base – Type of Experimental Research

Experimental HP research refers to data-collection techniques that involve collecting information through a process in which units of observation (e.g., individuals, groups, institutions, or geographic areas) are (1) randomly assigned to control and treatment groups and (2) the latter receives an assigned intervention. We differentiate between three types of experimental HP research, as follows.

Survey

Survey experiments refer to surveys in which the author(s) introduce systematic variation (i.e., manipulation of certain attributes) in the form or placement of items in a survey instrument, and in which assignment to control or treatment groups is random. Other than the process of assignment to control and treatment groups, this technique follows all above-mentioned attributes of observational survey research. If we apply this code, we do not also apply the “Observational survey” code (see above).

Field

Field experiments refer to data-collection techniques in which the author(s) or individuals contracted by the author(s) gather information in a “real-world” setting by applying realistic treatments to a randomly-assigned subset of subjects. Field experiments typically employ behavioral outcome measures to analyze the effect of these treatments, compared to individuals who do not receive the treatment (Gerber and Green 2012, p. 3).

Lab

Lab experiments refer to data-collection techniques in which the author(s) collect information *in a controlled setting*, in which the author(s) or individuals contracted by the author(s) randomly assign individuals to control and treatment groups. Lab experiments typically employ behavioral outcome measures to analyze the effect of these treatments, compared to individuals who do not receive the treatment.

If the author(s) describe their research effort as a “lab-in-the-field” experiment (Humphreys and Weinstein 2009), we apply this code rather than the “Field experiment” code. We also use this code when the author(s) apply game-type treatments (e.g., dictator games) in non-controlled environments such as computer labs.

HP Empirical Base – Source of Experimental Information

We also collect information about the professional affiliations of individuals or groups who participate in experimental HP research. When coding, we associate each application of a “Type of Experimental HP Research” code with at least one “Source of Experimental HP Information” code. These types of sources are identical to the types of sources that we associate with observational HP research, as follows:

- International body / institution
- Domestic government
- CSO (Civil society organization)
- Media
- Academics / Researchers
- Other specified profession
- Unspecified affiliation

Tendency in Empirical Basis

For articles that employ both pre-existing and author-generated data, we code the extent to which the author relied on one or the other data type to reach their analytic conclusions. We select between three child codes:

- Mostly pre-existing data
- Mostly author-generated data
- Fairly balanced

For articles involving quantitative analysis, we use the following rubric to apply the “Tendency in empirical basis” codes. We apply “Mostly pre-existing data” to articles in which the author(s) rely on author-generated data for fewer than 25 percent of the variables in the article’s central regression model; “Mostly author-generated data,” to articles in which 75 percent or more of the variables are author-generated; and “Fairly balanced,” for all other cases. We apply a similar “25 / 75” standard to in-text citations in articles involving non-quantitative methods, unless the author(s) specify that their analysis relies to a greater extent on either pre-existing or author-generated forms of data collection. Where the author(s) specify that their analysis relies more on pre-existing or author-generated forms of data collection, we apply the “Tendency in Empirical Basis” to match the author(s) description of their data-collection / generation process.

This family of codes describes the *quantity* of the underlying evidence of each type, rather than the degree to which the analysis relied on either type of data. In an article involving process tracing, for example, the author(s) might draw from a large body of pre-existing information but treat information garnered through one author-conducted interview as “smoking gun” evidence in support of the article’s central hypothesis. We would code this article as involving “Mostly pre-existing data” because the article relies to a greater extent on pre-existing information, although the author-generated data is arguably of greater analytic importance.

Coding Type III: Data Analysis Methods

We differentiate between four general categories of analytic methods that political science scholars use to analyze empirical information or data to draw conclusions: interpretive methods, qualitative methods, quantitative methods, and formal modeling. We also indicate where articles have “No discernible method.”

For interpretive methods and formal modeling, we apply the parent codes because we do not differentiate between sub-types. For qualitative and quantitative methods, we apply the child codes.

Across these four general categories, we apply codes for every type of analysis undertaken in an article; none of the parent-code categories are mutually exclusive. As we describe in the “Statistical / Quantitative Analysis” section below, however, we differentiate between levels of identification in quantitative methods.

We use the author(s)’ description of their analytic methods to guide our coding decisions. We do not evaluate the extent to which the author(s) description conforms to a general methodological standard.

Interpretive

Interpretive methods are a diverse universe of techniques for disclosing the meaning-making practices and interpretations of human actors located within particular linguistic, historical, and value standpoints. Interpretive methods reveal how those practices generate observable outcomes and allow concepts to emerge from encounters with people or text (Schwartz-Shea and Yanow 2013). Indicators of interpretive methods include references to “critical analysis” and “discourse analysis.” Discourse analysis is a method for conducting structured investigations of written and spoken language and / or images to explore how the socially-produced ideas and objects that populate the world were created and are held in place (Hardy et al. 2004).

We apply this code to references to “post-positivist” methods, unless the author(s) explicitly indicate that their methodological approach is not interpretive. References to “causal process observations” or other common phrases in positivist qualitative methods are typically a sign that the work is not interpretive.

As we discussed above, we do not apply this code to references to ethnography because we treat ethnography as a data-collection strategy rather than an analytic method.

Qualitative

Qualitative methods refer to a diverse universe of techniques for analyzing a small number of cases to draw conclusions about causal relationships. Contemporary qualitative research methods are diverse and follow different logics; they do not build on each other in a cumulative way (as

quantitative methods tend to do). Accordingly, we code as many qualitative methods as the author(s) reference.

Process tracing

Process tracing refers to detailed, within-case empirical analysis to trace and describe a causal process or identify causal mechanisms (George and Bennett 2005; Beach 2017).

With select exceptions, we only apply this code if the author specifically describes their analysis as a process-tracing study. To identify exceptions, we looked for references to both synonyms of process tracing (e.g., “I trace the process...” or “I trace the causal sequence...”) and key methodological texts (e.g., George and Bennett 2005; Brady and Collier 2010). We do not treat references to “causal mechanisms” as an unambiguous indicator of process-tracing analysis because researchers that employ quantitative analysis also refer to causal mechanisms. We do not apply this code to single-case illustrations of formal models.

QCA (Qualitative Comparative Analysis)

QCA involves formalizing the logic of qualitative analysis by assessing the causal contribution of different conditions to an outcome of interest in a “medium-N” number of cases using Boolean algebra (Ragin 2014). The method is grounded in the analysis of set relations and allows that different combinations of conditions produce equivalent outcomes. We only apply this code if the author(s) make explicit reference to QCA in the text of their article.

Congruence analysis

Congruence analysis involves testing a particular theoretical approach by evaluating whether the predicted value of the dependent variable in one of more cases matches the actual outcome in the case, in view of the values of the case’s independent variables (George and Bennett 2005).

Counterfactual analysis

Counterfactual analysis involves establishing a timeline of processual steps leading to an outcome, and specifying the potential outcomes that may have occurred if a certain key event or decision did not take place or was not present. The author(s) use counterfactual analysis to evaluate the validity of a hypothesis or an explanation based on an event or decision (Fearon 1991). We only apply this code when the author(s) refer to a counterfactual thought experiment in the context of a qualitative case study, rather than referencing the counterfactual logic of causal inference in a regression analysis.

Structured case comparison

Structured case comparison refers to textual, systematic, and comparative analysis of intentionally selected cases, with the objective of identifying or demonstrating some pattern of similarity or difference (George and Bennett 2005). For articles that compare two cases, we use

five paragraphs per case or ten total paragraphs as the minimum length standard for the cases under analysis. For articles that compare more than two cases, we use an average of three paragraphs per case as the minimum length standard. Cases can include a wide range of units, including time periods, sub-national geographic units, or political organizations.

In applying this code, we require that the comparison have some internal structure, organization, or logic that motivates a clearly specified conclusion. A comparative chart is an indicator of structured case comparison, but not unambiguous evidence for this code; we do not apply the code if the article only includes a comparative chart or table. These cases differ from the “illustrative case studies” that we discuss below in that the author is using the cases to systematically evaluate theoretical expectations. When author(s) classified their case studies illustrative but we concluded that their analysis amounted to structured case comparison, we coded their analysis as structured case comparison.

Other

We also code for forms of causally-oriented qualitative analysis other than those represented by the previous codes. We use this code to characterize specific portions of an article in which the author(s) attempt to generate some sort of causal argument using qualitative data, but without adhering to a specific methodological framework. We only use this code in tandem with another code describing methods of data analysis (of any type) because the qualitative methods that we discuss earlier in this section address the fuller universe of standalone qualitative methods.

Illustrative case study

Separate from the qualitative methods that we discuss above, we also include a parent code for illustrative case studies that do not aim to advance the author(s)’ causal arguments. By case studies, we refer to the intensive empirical study of a single spatially or temporally delimited phenomenon (unit) observed at a single point in time or over a period of time (Gerring 2011). We apply the same length requirements as we use in applying the “Structured case comparison” code.

We code illustrative case studies on the empirical base codes that we discuss above. We use this code when the author(s) use case studies to illustrate empirical applications of a formal model. Because we apply the “Structured case comparison” code to some case studies, references to “illustrative” cases are an indicator of illustrative case studies but not all case studies are coded as “illustrative case study”.

Statistical / Quantitative Analysis

This code refers to research methods that involve analyzing numerical data using statistical techniques to test a theory measured by numbers and, typically, to establish causal claims. We treat “Simple Probability,” “Regression,” and “Statistics with an identification strategy” in order of least to most causally identified, and consider them to be mutually exclusive. Thus, an article with which we associate a “Statistics with an identification strategy” code cannot have a “Simple

Probability” code. We only apply the “Machine learning” and “Fixed effects” codes when we have applied one of the three main codes.

Simple Probability

This code refers to methods that use basic probability to identify statistically significant differences or relationships. These methods include bivariate regression analysis, chi-square or Pearson’s r, visual representations of normal distributions, t-tests and z-tests, and differences of means.

Regression

This code refers to “statistical methods [used] to engage in [linear and non-linear estimation of] relationships between dependent and independent variables” (Bailey 2016, p. 46, fn. 2). These methods include ordinary least squares (OLS), maximum likelihood estimation, probit and logit regression, Bayesian estimation, statistical analysis with control variables, change point analysis, time series analysis, multi-level modeling, Heckman selection analysis, latent variable models, factor analysis, item response theory models, reduced-form models, system general methods of moments, and Monte Carlo simulations.

Statistics with an identification strategy

This code refers to statistical methods that attempt to combat endogeneity and use some source of exogenous variation to isolate causal relationships between dependent and independent variables. These methods include regression discontinuity, difference-in-difference estimation, two-stage least squares or instrumental variable models, and matching prior to regression analysis.

Machine learning

This code refers to the analysis of “big data” by building statistical models that estimate or predict outcomes using self-learning or automated programming methods. Appropriate methods include LASSO regression, random forest, and cluster analysis models. We apply this code only when one of the three previous quantitative analysis codes has been applied.

Fixed effects

This code refers to “a model that contains a parameter like α_i that captures differences in the dependent variable associated with each unit and / or period. The fixed effect α_i is the part of the unobserved error that has the same value for every observation for unit i” (Bailey 2016, p. 253). The fixed effects code is only used when we have coded an article as either “Regression” or “Statistics with an identification strategy”. We use this code whether or not the author(s) refer to “fixed effects” verbatim; other indicators may include “year dummies,” “country dummies,” or other binary variables that refer to invariant time, space, or cohort units.

Formal Modeling

This code refers to mathematical methods that identify and specify abstract concepts and interactions within and between actors, and those actors' choices, with the goal of identifying key logics and causal mechanisms or relationships, in a political process. These are not empirical methods. We apply this code even when the formal model presented was rudimentary or brief. Indicators of formal modeling may include simple game theory, decision theory, complex models with mathematical appendices, simulation-based modeling such as agent-based modeling, formal network analysis, and spatial analysis or modeling.

No discernible method

This code refers to articles in which the author's conclusions did not seem to be drawn through the use of the quantitative, qualitative, interpretive, or formal-modeling methods just described. We also use this code for Political Theory articles in which the author does not explicitly engage in any of these types of analysis. We also use this code to refer to qualitative network analysis.

Methodological focus of multi-method research

This code applies to articles that involve more than one method of analysis from among the four broad categories of (1) quantitative analysis (of all types); (2) qualitative *analysis*, rather than qualitative data collection or generation; (3) formal modeling; and (4) interpretive methods. The "methodological focus" refers to the method that drives the analysis on the basis of which the author generates the article's results, claims, and conclusions. This code contains five child codes:

- Overwhelmingly interpretive
- Overwhelmingly qualitative
- Overwhelmingly quantitative
- Overwhelmingly modeling
- No specific focus

We use a schematic "90 percent" standard to justify applying one of the "Overwhelmingly" codes; otherwise, we apply the "No specific focus" code. We only apply this code if the author(s) employ methods from two or more of our four broad categories. We do not apply a "methodological focus" code if the author(s) reference descriptive statistics in an article that otherwise rests on qualitative analysis.

In evaluating whether an article includes multi-method analysis, we do not include the use of an "Illustrative case study" as a component of a multi-method analysis because the case study does not aim to advance the author(s)' causal arguments.

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