Using Databases to Study Constitutional Law*

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To claim that research based on data—that is, empirical work—has infiltrated the legal community borders on the boring. Social scientists and historians have long brought data to bear on the study of law and legal institutions (for a review, see Kritzer 2009). In ever-increasing numbers, legal academics throughout the world are following suit (for documentation, see George 2005, Diamond & Mueller 2010, Ho & Kramer 2013).

But not all legal academics. We may live in an "age of empiricism" but in that age "constitutional law is a relative backwater." Of 161 articles published in 2014 in top law reviews 59 addressed constitutional law issues and 102 focused on other areas of the law. As Figure 1 shows, only 27% of the constitutional law articles (16 of 59) made use of even a modicum of data, compared with 54% of the articles in other fields (55 of 102).²

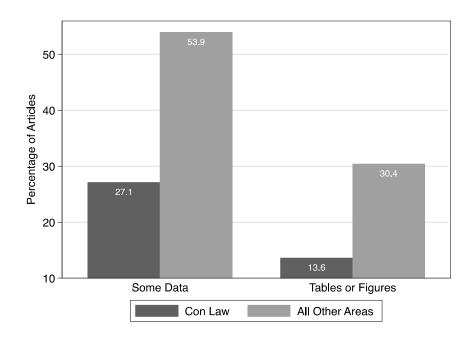


Figure 1. Percentage of articles published in the top law reviews that include data or tables/figures. The difference between constitutional law articles and all others is statistically significant (p < .05) for both "Some Data" and "Tables or Figures." Source: Epstein, Friedman, & Stone 2015, 1007.

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¹ We adapt the next few paragraphs from Epstein, Friedman, & Stone 2015.

² The difference is statistically significant (p < .05).

Con law scholars may be blasé, even hostile toward numerical evidence. But not so of the U.S. federal judges and justices who create constitutional doctrine. In contrast to the scholars, they are increasingly relying on data in their constitutional jurisprudence. Consider *Riley v. California* (2014, 2490), which asked whether police could search cell phones without a warrant as part of a search incident to a lawful arrest. Writing for the Court, Chief Justice Roberts, a self-proclaimed "legalist," used data to underscore Americans' attachment to their cell phones: "According to one poll, nearly three-quarters of smart phone users report being within five feet of their phones most of the time, with 12% admitting that they even use their phones in the shower." In *Hall v. Florida* (2014, 1995), decided the same year, the Court considered the constitutionality of a Florida law that foreclosed further exploration of intellectual disability for prisoners sentenced to death with an IQ above 70. In his majority opinion Justice Kennedy wrote, "The professionals who design, administer, and interpret IQ tests have agreed, for years now, that IQ test scores should be read not as a single fixed number but as a range." He followed that statement with a detailed discussion, citing several social science papers. In dissent, Justice Alito responded with some studies of his own.

These are cases in which the Court relied on (or at least cited) studies done by others; justices have also conducted empirical studies of their own devising. The most elaborate example appears in Justice Breyer's majority opinion in *NLRB v. Noel Canning* (2014, 2589-91). Breyer drew a "random sample" of recess appointments made by Presidents George W. Bush and Barack Obama to determine whether the vacancy arose before or during the recess. Justices have even adopted the social scientists' modus operandi for displaying data. Justice Breyer's table of the appointees in his sample runs three pages in the *U.S. Reports*—explanatory notes and all. And Justice Sotomayor has now upped the ante, using figures instead of tables (social scientists almost always prefer graphs to tables; see Epstein & Martin 2014, 224). In *Schuette v. BAMN* (2014, 1680-82), for example, she reproduced several figures showing declines in Hispanic and Black student admittance to several U.S. law schools.

All in all, in recent terms *every* justice has made some use of empirical evidence—whether data or results—in a constitutional law opinion (Epstein, Friedman & Stone 2015). And who knows what's next? With reliable, easy-to-use, and readily available software, perhaps the justices (or their clerks) will collect data, perform statistical inference, and display their results in graphs with confidence intervals!

But it is the larger point that should not be missed: There is a growing disjuncture between what courts and scholars are doing—and that disjuncture means that constitutional law scholars are missing opportunities to inform judicial work. It also suggests that they are neglecting important avenues of research. Scholarship in other fields in law has benefited profoundly from the analysis of empirical analysis of quantified data; such analysis has reshaped the questions scholars ask and the knowledge they have developed. A "dash of data" (Epstein, Friedman, & Stone 2015, 1003) would do the same for constitutional law—and we hope to encourage a bit of experimentation.

Given space limits, we can't provide a primer on statistical analysis or even the basic rules of inference. Besides, interested scholars can turn to other resources (including Epstein & Martin 2014, a book on empirical research written explicitly for lawyers, judges, and law professors). Our goal instead is to highlight some existing datasets that scholars of constitutional law can use immediately—even as they're reading this chapter!—to illuminate current questions and raise new ones, to shore up empirical claims, and, more generally, to begin to reshape the landscape of constitutional law.

We begin with a general discussion of what we mean by a "dataset;" we also describe the special kinds on which we'll focus. We next turn to datasets covering Cases, Judges, and Courts; Constitutions; and People's Opinions and Attitudes.

1. An Introduction to "Datasets"

The term "dataset" gets thrown around a lot but what does it mean? It is simply a collection of data that someone has organized in a form that is *susceptible to empirical analysis*. To illustrate: Suppose we wanted to study whether U.S. federal courts are more likely to decide for plaintiffs alleging gender-based discrimination when the plaintiffs are females. To answer this question, we might start with piles and piles of judicial decisions (or, more accurately, thousands of pdfs on a hard drive) that we've collected.³ Because we can't do much systematically with these cases (our "raw data"), we must translate the legal documents into data that we can analyze.

Empiricists refer to this process as "coding data," and although it can take different forms and involve different tasks (see Epstein & Martin 2005, Epstein & Martin 2014), here we keep it simple: For each case, we simply record (A) the name of the case, (B) the plaintiff's gender, and (C) whether the plaintiff won or lost the case.

These recordings are the makings of a dataset, as we show in Figure 2. This dataset happens to reside in a Microsoft Excel file but datasets relating to law come in other formats too (e.g., comma delimited text, Stata, SPSS Portable, SAS Transport, R Data Format). Datasets also take different forms, though Figure 2 is fairly typical. Notice that that the units of study (sometimes called the units of analysis) are on the rows. Here the units are U.S. Court of Appeals cases; they also could be people, countries, constitutions, and so on. Further note that for each case the factors of interest are in the columns. We call these factors "variables," which is just a fancy name for a characteristic or other factor that varies. Here Plaintiff can vary by gender: male or female; and Outcome, by whether the plaintiff won or lost the case. (From this point forward, we will use italics to indicate the names of variables.)

	A	В	C
1	Case	Plaintiff	Outcome
2	Love v. Runyon, 164 F.3d 1150	Male	Plaintiff Lost
3	Krystek v. University of S. Mississippi, 164 F.3d 251	Male	Plaintiff Lost
4	Holley v. Department of Veteran Affairs, 165 F.3d 244	Female	Plaintiff Won
5	Carpenter v. Fannie Mae, 165 F.3d 69	Female	Plaintiff Lost
6	Bauer v. Albemarle Corp., 169 F.3d 962	Female	Plaintiff Lost
7	Hill v. Ross, 183 F.3d 586	Male	Plaintiff Won
8	Rutherford v. Harris County, 197 F.3d 173	Female	Plaintiff Won
9	Lawrence v. Curators of the Univ. of Missouri, 204 F.3d 807	Female	Plaintiff Lost
10	Lee v. GTE Fla., Inc., 226 F.3d 1249	Female	Plaintiff Lost

Figure 2. A snippet from a dataset of gender-based discrimination cases. Cases, the units of analysis in the dataset, are on the rows; the variables are in the columns. *Plaintiff* indicates the gender of the person who brought the suit;

³ This is a hypothetical. We encourage you to start with one of the datasets we describe in the next section rather than embark on an expensive and labor intensive data-collection project from scratch.

⁴ More technically, variables are characteristics that vary across units of analysis in the population—for example, whether a male or female brought the suit in *all the cases of interest*—say, in all U.S. Court of Appeals cases. Because datasets usually (though not always) consist of a random sample, and not the entire population, these characteristics might not vary in the sample. We could, for example, imagine drawing a random sample of appellate court cases that included only female plaintiffs because they are more likely to bring gender-based claims. But the characteristics do need to vary in the population if they are truly "variables."

Outcome is whether the plaintiff won or lost.

In Figure 2 we use actual labels to indicate the values of the variables: the plaintiff's gender is "Male" or "Female" and *Outcome* is "Plaintiff Lost" or "Plaintiff Won." We could have used numbers instead. For example, Male=0 and Female=1; or Plaintiff Lost=0 and Plaintiff Won=1. And, in fact, the creators of datasets often use numbers to signify the values of variables because numbers are more useful for statistical analysis. If you come across a dataset that is full of numbers (*e.g.*, "0", "1") instead of the actual labels ("Male", "Female"), there's probably a guide to the data (called a "codebook") that explains what the numbers mean.

Finally, we should note that Figure 2 is indeed just the makings of a dataset—a snippet. In the first place, most datasets contain a lot more rows (here, cases). For our hypothetical project on gender-based discrimination, we know that the U.S. Courts of Appeals decided many more than 10 gender suits (based on Boyd et al.'s 2010 study, over 600 cases between 1995-2008 alone). A dataset need not house all the cases of interest (the "target population")—and, in fact, many datasets consist of a (randomly drawn⁵) sample from the target population. The only point is that even a sample of the cases is likely to be larger than 10 cases. Second, most datasets contain many more than two variables. For the gender-discrimination dataset, we might want to add information about the judges in the cases: whether they are males or females, for example. And for the plaintiffs, we might want to know whether they alleged race or age discrimination, in addition to claims of gender-based discrimination; we also might add whether the case required the court to interpret the Constitution or a statute. It just depends on the questions we want to answer from the dataset.⁶

2. Two (General) Types of Datasets

Now that you understand what a dataset is, let's consider the types of datasets that you might come across. In general, they come in two flavors. Many, perhaps most, are designed to answer specific research questions. To return to our running example, to find out whether U.S. appellate judges are more likely to rule for female plaintiffs in cases of gender discrimination, we could create a dataset geared toward that question. The resulting dataset might consist of many more variables than the two in Figure 2 but it would likely contain only cases of gender-based discrimination. Why would we add, say, disputes involving free speech if our only concern was with gender discrimination? We probably wouldn't.

Were you to search the web, you'd find many of these individualized datasets—perhaps even your authors'. For every empirical article we publish, we post the accompanying dataset on various websites.⁷ This reflects a norm in the social sciences, as well as a National Science

⁵ A random probability sample is one in which each element—here, cases—in the target population—which, say, is all U.S. Court of Appeals cases involving gender-based discrimination—has a known probability of being selected. Random selection is the only selection mechanism in large-*n* studies that automatically guarantees the absence of selection bias. For more details, see Epstein & Martin 2014, 88-90.

⁶ Almost all empirical legal research starts with a basic question or set of questions that the author wants to answer. Once analysts have settled on a research question, they usually begin theorizing about possible answers they can use to develop observable implications (sometimes called hypotheses or expectations). "Theorizing" entails the development of "a reasoned and precise speculation about the answer to a research question" (King et al. 1994, 19). By "observable implications," we mean things that we would expect to observe in the real world—that we expect our data to unearth—if our theory is right. See Epstein & Martin 2014, 31-34.

⁷ *E.g.*, Epstein links her datasets to the articles in which she used them, at: http://epstein.wustl.edu/cv.php; Martin, on his Replication Materials page, at: http://sites.lsa.umich.edu/admart/replication/

Foundation requirement, that datasets should be publicly available upon publication of papers

Some of you might find these particularized datasets relevant for your own projects. But more useful for your work, we suspect, is the second type of dataset: public multi-user datasets. Rather than collect data to answer specific research questions—for example, do judges favor female plaintiffs in gender discrimination cases—the idea is to amass a dataset so rich in content that multiple users, even those with distinct projects, can draw on it. Scholars can also build on these datasets, adding new variables to suit their interests (more on this later).

Fortunately, researchers have created many multi-user databases related to law and legal institutions worldwide. To provide but two examples: the Comparative Constitutions Project houses information on 1,258 characteristics of constitutions written since 1789 in 214 independent countries; and the U.S. Supreme Court Database (sometimes called the "Spaeth" Database after its originator, Harold J. Spaeth) consists of over 200 attributes of Court decisions handed down since 1791, including information on the lower court's decision, the parties to the suit, and how the justices voted. The researchers who developed these databases have made extensive use of them, but so too have countless other scholars.

Because of the many advantages of multi-user databases, 11 we focus on them in the remainder of this chapter. Of course, space limits prevent us from describing each and every one, 12 and so we steer you toward those that meet the standards of good science. These standards are several in number but a threshold consideration is that the dataset adheres to the replication rule: anyone should be able to understand, evaluate, build on, or reproduce it without any additional information from the dataset's creators (Epstein & King 2002; see also note 8). This rule does not actually require anyone to rebuild the dataset from scratch; it only requires that the researchers provide information—whether in the dataset itself, on the internet, or in some other publicly available or accessible form—sufficient to replicate the dataset in principle (King 1995, Epstein & Clarke 2010; Hazelton et al. 2010).

Why is such documentation necessary? There are two reasons, with the first centering on the ability of outsiders to assess the dataset and any research generated from it. In a broad sense, the point of the replication rule is to ensure that datasets and studies held out as authoritative stand alone so that we readers can consume their contents without any necessary connection with, further information from, or beliefs about the status or reputation of the authors. The replication standard keeps datasets and data-based work above the level of ad hominem attacks or unquestioning acceptance of arguments by authority figures.

The second reason why scholars must record and make their coding and other procedures public is that decisions over these matters may, and in most instances do, influence the outcomes reported in research. Suppose we decided to create a dataset of a sample of gender discrimination

¹¹ In addition to their flexibility, they also have what is known as a combinatoric advantage. See Epstein & Martin (2014, 16-18).

⁸ Of course, it should go without saying but we'll say it anyway: simply because a dataset (or data) exists doesn't mean you should rely on it; you should first learn how the data came to be observed. Reproducing the data isn't necessary. But, as we mention later in the text, you must understand how you could reproduce the data or dataset—that is, adhere to the replication rule—if you so desired. This requires treating each piece of information in the dataset as if it were part of a chain of evidence, asking how the variables were generated, and ultimately whether they are reliable and valid.

⁹ http://comparativeconstitutionsproject.org

¹⁰ http://supremecourtdatabase.org.

¹² Good places to check for existing datasets (whether multi-user or not) are repositories or archives, such as Harvard Dataverse https://dataverse.harvard.edu, Inter-University Consortium for Political and Social Research the Council ,, of European Social Science Data Archives http://www.nsd.uib.no/cessda/index.html, and the **Judicial** Research Initiative.

cases from courts in the relatively liberal states of New York, California, and Illinois and exclude all other states. If other researchers (unknowingly) based their conclusions only on the cases in the states we included, a dataset that excluded these states and included, say, the more conservative states of Mississippi, Alabama, and North Dakota might produce different findings.

3. Datasets on Cases, Judges, & Courts

With that (long!) wind-up, let's turn to multi-user datasets in the three areas beginning here with Cases, Judges, & Courts. (The next sections take up Constitutions and People's Opinions and Attitudes. Feel free to skip ahead if one or both are of greater interest.)

In multi-user datasets falling into the category of Cases, Judges, & Courts, the unit of analysis is the case, the judge (or court), or both. The dataset in Figure 2 is an example of a case-based dataset: the case is on the row, with attributes of (variables) the case in the columns. Case datasets—and very good ones at that—have multiplied in recent years. In the interest of space, we'll focus on the three listed in Table 1.

	Brief Description	Examples of Variables					
Cases, Judges & Courts: Cases							
U.S. Supreme Court ("Spaeth") Database: Case Centered ¹³	Consists of over 200 pieces of information on each orally argued case decided by the Court since 1791; updated annually	Dates of argument and decision; identity of petitioner, respondent; origin/source of the case; issue; legal provisions; disposition; ideological direction of the decision					
U.S. Courts of Appeals ("Songer") Database ¹⁴	Covers case characteristics, participants, issues, and judges' votes from a random sample of cases from each circuit for each year, 1925-2002	Court of origin; identity of petitioner, respondent; amicus; issue; legal provisions; identity of the judges and their votes.					
National High Courts Database ¹⁵	Includes information on the decisions of apex courts in eleven countries. The courts (years covered) are: High Court of Australia (1969-2003); Supreme Court of Canada (1969-2003); Supreme Court of India (1970-2000); Supreme Court of Namibia (1990-1998); Supreme Court of the Philippines (1970-2003); Supreme Court of Appeal (1970-2000) and Constitutional Court (1995-2000) both of South Africa; Court of Appeal Tanzania (1983-1998); Judicial Committee of the House of Lords (Law Lords) of the United Kingdom (1970-2002); Supreme Court of the United States (1953-2005); Supreme Court of Zambia (1973-1997); Supreme Court of Zimbabwe (1989-2000).	Year of decision, court or agency of origin, basis for constitutional review, issue, who won, votes in the majority, number of dissents, attorneys					
Cases, Judges & Courts:							
U.S. Supreme Court Database: Justice- Centered ¹⁶	See above. In this version, the justice is the unit of analysis.	Justice's vote, opinion, ideological direction, agreement with other justices					
U.S. Supreme Court Justices Database ¹⁷	Contains 263 variable on individuals nominated (whether confirmed or not) to the U.S. Supreme Court; updated with each new nomination.	Variables fall into five categories: identifiers, background characteristics and personal attributes, nomination and confirmation, service on the Court, and departures from the bench.					

^{13 &}lt;a href="http://supremecourtdatabase.org">http://supremecourtdatabase.org.
14 http://artsandsciences.sc.edu/poli/juri/highcts.htm.
15 http://supremecourtdatabase.org.
17 http://epstein.wustl.edu/research/justicesdata.html.

Biographical Directory of Federal Judges ¹⁸	Has biographical data on all judges appointed since 1789 to the Supreme Court of the United States, the U.S. courts of appeals, the U.S. district courts, the former U.S. circuit courts, and courts of special jurisdiction.	Background characteristics (including gender and race) but most variables pertain to the judge's confirmation and professional background.				
(Zuk et al.) Appeals Court Attribute Dataset; District Court Attribute Dataset ¹⁹	Houses variables on the "personal, social, economic, career and political attributes of judges who served on the United States Courts of Appeals from 1801-2004." (District Court Dataset covers U.S. District Court judges.)	Appointing president, religion, political party affiliation, education and prior experience, the timing of and reason for leaving the bench, gender, race and ethnicity,				
Constitutions						
NBER/Maryland State Constitutions Project ²⁰	Is an on-line tool to search U.S. State Constitutions (including amendments). Coverage ends in 2000.					
Comparative Constitution Project ²¹	Consists of information derived from the Constitutions of all 214 independent countries from 1789-present.	Numerous characteristics of the constitutions including procedures for amending the Constitution, structure of the institutions of government, types of rights and duties, features of the electoral process				
	People's Opinions and Attitudes					
General Social Survey ²²	Collects data on attitudes, behaviors, and attributes of U.S. Americans since 1972.	"Demographic, behavioral, and attitudinal questions, plus topics of special interest." These have civil liberties, crime and violence, intergroup tolerance, and morality.				
American National Election Study ²³	Fields surveys on voting, public opinion, and political participation.	Social and religious characteristics of the electorate, evaluations of political parties and candidates, opinion on policy issues.				
Eurobarometer ²⁴	Since 1974, taps concerns, opinions, attitudes of Europeans (<i>e.g.</i> , 2016 standard survey covered 28 EU member states + 6 other countries/communities in Europe).	In the Standard Eurobarometer, main concerns, trust in the EU, views on the economy and European citizenship.				

Table 1. A (non-random) sample of public, multi-user databases that scholars of constitutional law might find

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 $^{^{18}}$ <http://www.fjc.gov/history/home.nsf/page/judges.html>. Click the download link.

¹⁹ http://artsandsciences.sc.edu/poli/juri/attributes.htm.

 $^{^{20} &}lt; \!\! \text{http://www.state} constitutions.umd.edu/Search/Search.aspx} \!\! > \!\! .$

²¹ http://comparativeconstitutionsproject.org.

²² <http://gss.norc.org>.

²³ http://www.electionstudies.org/index.html.

 $^{^{24} &}lt; http://ec.europa.eu/COMMFrontOffice/publicopinion/index.cfm/General/index>.$

useful.

As you can tell from the descriptions in Table 1, all three follow the same format: in the rows are court cases and in the columns, information (again, variables) about those decisions. The U.S. Supreme Court Database site has an added feature that may be especially appealing to con law specialists who don't want to work with the datasets themselves: the ability to examine subsets of the cases directly on line. Suppose you're interested in all Supreme Court cases involving the free exercise of religion during the 1986-2016 terms. You can plug those parameters into the analysis tool—and out will pop the cases and detailed information about them, including the year of decision, the parties, the votes, and on and on.

But why would con law scholars want this sort of information about the population of free exercise, or for that matter, any subset of cases? Because much work in this field involves examining case law to detect trends, to analyze those trends, and critique them against various metrics or theories. And papers that don't proceed this way, tend to work in the reverse: Offer a theory or hypotheses and then find cases to support or illustrate the informed speculation. Either way, the first three databases listed in Table 1 enable researchers to identify the universe of relevant cases and explore features of those cases without having to code them. (To us, these are big advantages over common Westlaw or Lexis searches, which inevitably generate a lot of false positives, make it difficult to detect false negatives, and require extra steps to produce a dataset.)

Using the public databases in this way have led to important breakthroughs related to con law. We think, for example, of Segal's path-marking work on the U.S. Constitution's Fourth Amendment:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

In 1984, when Segal published his first paper, the "overwhelming consensus among Fourth Amendment scholars [was] that the Supreme Court's search and seizure cases [were] a mess" (Segal 1984, 891). The scholars thought that the Court's decision to find a search reasonable or not seemed random; and even some justices agreed. In a separate opinion in *Coolidge v. New Hampshire* (1971, 521), Justice White implied that his Court had "cease[d] to strive for clarity and consistency of analysis." Using the population of search and seizure cases developed from a preliminary version of the Supreme Court Database, Segal showed otherwise. His "legal model" of the Court's decisions (which consisted of relevant case facts), along with a variable capturing changes in the Court's membership, explained 76% of the outcomes in Fourth Amendment cases. Many of the individual legal facts mattered too. For example, the Court was highly likely to uphold a "stop and frisk" (70% chance) versus a full search (only 40% chance).

Segal's model of search and seizure litigation has withstood the test of time, with many follow-up studies extending and updating his work (see, *e.g.*, Songer et al. 1994, Cameron et al. 2000, Kastellec 2010, Kritzer & Richards 2005). But Segal's is hardly the only research in the constitutional context that public databases have aided. More recently, Richards and Kritzer (2002, 308) used the U.S. Supreme Court Database to explore the idea that certain precedents establish "jurisprudential regimes"— "a key precedent, or a set of related precedents, that structures the way in which the Supreme Court justices evaluate key elements of cases in arriving at decisions in a particular legal area." In their first study, Richards and Kritzer turned to

the Supreme Court Database to identify cases involving freedom of expression,²⁵ and ultimately demonstrated that the regime of content-neutrality helps explain why the Court upholds or invalidates regulations of expression. (Unlike the Segal model, Richards & Kritzer's findings and methods—but not their underlying data—have come under criticism. See Lax & Rader 2010.)

Although these studies make great use of the Database to identify the cases of interest and key variables (e.g., the outcome of the case), their authors needed to collect additional information—chiefly, information about the cases' underlying facts. For Fourth Amendment decisions, the Database doesn't identify whether the search was a frisk— a crucial fact, as it turns out. And in free expression cases, whether the regulation was content based or content neutral isn't identified either. Likewise, if we were studying the effect of the plaintiff's sex in gender-based decisions of the U.S. Supreme Court, we would need to add this variable; again the Database doesn't code it.

Building on the Database as these authors did isn't just perfectly acceptable; it's the norm. Rarely will the Supreme Court Database (or any of the others listed Table 1) contain all the variables of interest; rather we should think it as a foundation on which researchers can build. And build they have. There is now almost no systematic empirical study of the Court's constitutional law decisions that relies on a source other than the Database.

The same may soon be true of other apex courts, as scholars both in the United States and throughout the world are busy creating new databases. Publicly available now is the National High Courts Judicial Database, which supplies basic data on cases decided in eleven high courts (see Table 1). This is an ambitious project but the data are now almost a decade old; and the courts represented all write their opinions in English and are mostly embedded in common law systems. For these reasons, we are quite optimistic about the development of country-based databases by teams of scholars in Brazil (see, *e.g.*, Arguelhes & Hartmann 2017) and Israel (Weinshall-Margel 2011, 2016), among others. Gunnar Grendstad and his colleagues already have produced an outstanding database on the Norwegian Supreme Court, which has led to the production of a wonderful book, *Policy Making in an Independent Judiciary* (Grendstad, Shaffer, & Waltenburg 2015) and many fine papers. Our understanding is that Grendstad, et al. will soon make their database publicly available. In the meantime, scholars can request access to it by emailing Grendstad at the University of Bergen.

Grendstadt's database and the others we just mentioned focus on peak courts. For studies on intermediate federal appellate courts in the United States many scholars deploy the U.S. Court of Appeals Database. Developed by Donald Songer in the 1990s, it contains very detailed information about a random sample of cases (including the judges' votes) from each circuit for each year between 1925-2002. For many studies, the samples are sufficient. Epstein, Landes, & Posner (2013), for example, used Songer's data to study the extent to which circuit judges vote on the basis of their ideology in *all* cases. Epstein et al. were also able to collapse the data on votes to the judge level for 156 judges to test for group effects—again in all cases (pp. 183-188). For studies focusing on specific areas of the law, though, sampling might not work well. An example would be our hypothetical study on the effect of the plaintiffs' gender on the judges' votes. Because of sampling, the Court of Appeals Database contains only 162 sex discrimination

²⁵ Later articles analyzed the Establishment Clause (Kritzer & Richards 2003), search-and-seizure (Kritzer & Richards 2005), and administrative law (Richards et al. 2006).

²⁶ More specifically: 15 cases per circuit per year for the period between 1925-1960; 30 cases per circuit per year from 1961 forward.

cases; and the data end in 2002.²⁷ These problems have led to some one-off efforts designed to capture all the cases in particular areas of the law (notably Sunstein, et al. 2006). Although scholars have made great use of these individualized datasets for specific projects, they are not ideal in part because the developers rarely update them. Perhaps in this era of automated data scraping we will see new efforts at creating multi-user public databases covering the circuits.

In addition to the case-based datasets, con law scholars should check out databases where the units of analysis (again the rows) are judges or justices. Note that another version of the U.S. Supreme Court Database, the Justice-Centered version, falls into this category. In this version, each Supreme Court justice participating in each case has his or her own row. The variables contain information about the justices' behavior (in addition to data about the Court); for example, whether they were in the majority or dissented (see Table 1 for other variables). Likewise, it is possible to convert the U.S. Court of Appeals Database from case-based to judge-centered dataset, as Epstein, Landes, & Posner (2013) did, so that the judges are on the rows and information about their voting, in the columns.

Using judge/justice-centered versions of these databases is very useful for studies focused on judicial behavior within the context of cases. Sometimes, though, constitutional law specialists are interested in the attributes of judges—or would-be judges. Scholars of political institutions might want to know why some people nominated by the president to the U.S. Supreme Court never became justices, while the Senate easily confirmed others. For questions of this sort, and others related to the appointment of justices, the U.S. Supreme Court Justices Database is a comprehensive resource. It contains a wealth of data on each and every person nominated by the president to serve as a Supreme Court justice, including their perceived qualifications, the party affiliation of all the relevant actors, the political preferences of the median member of the Senate (and of the Court) at the time of nomination, the number of organized interests that participated in confirmation proceedings, and dates of Senate consideration and confirmation (or the lack thereof), and the vote over the candidate.

Because the Justices Database also houses over 260 variables on the nominees' backgrounds and personal characteristics, it useful too for studies seeking to make links between the attributes of justices and their behavior. Since the 1960s, these studies have proliferated. Many explore the relationships between an outcome variable (*e.g.*, the judges' support for plaintiffs alleging race or gender discrimination, their adherence to precedent, and their membership in voting blocs) and various inputs (*e.g.*, prior professional experience, gender, age, religion and partisanship) (*e.g.*, Schmidhauser 1962, Ulmer 1970, Tate 1981, Ashenfelter et al. 1995, Cox & Miles 2008, Boyd et al. 2010, George and Weaver 2017).

When the focus is on the U.S. Supreme Court, we recommend the Justice Database. For the analysis of lower courts, scholars could turn to the Biographical Directory of Federal Judges, a database created and maintained by the Federal Judicial Center. It comes in two versions. One is an on-line tool that allows the researcher to enter the name of any Article III federal judge (appointed since 1789) and retrieve a biography that lists the date of birth, judicial service, education, and professional jobs. This too is useful for locating information on a couple of judges but if your project is larger in scope, you will want to go the second route and download the biographical information as a dataset. (The dataset has another advantage: it contains more information than the short biographies—for example, the judges' gender, race, and ethnicity.)

There are also the U.S. Appeals Court and District Court Attributes Datasets.²⁸ The good

 $^{^{27}}$ Casetype l = 231-235.

²⁸ Both at http://artsandsciences.sc.edu/poli/juri/attributes.htm.

news is that the coverage in these datasets is deeper than the Federal Judicial Center's directory, containing many more variables about the judge's nomination and confirmation (such as the number of Republicans and Democrats in the Senate) and more detailed background information (including religion). The bad news is that these datasets end with judges commissioned in 2004, although they would be easy enough to update by following the databases' protocols.

We do not know of any parallel datasets for other countries but for projects seeking to explore associations between the judges' attributes and their votes it would be possible to add information to the National High Courts Judicial Database. Suppose you were interested in studying the Supreme Court of India. The National High Courts Judicial Database contains a good deal of information on the Indian Court's decisions between 1970 and 2000. And it also provides (coded) data on how the justices voted and whether they wrote an opinion (and so is both a case- and justice-based dataset), but it does not include data on the justices' background characteristics (*e.g.*, age, gender, previous positions). Because this information is available on the Indian Supreme Court's website²⁹ (and perhaps from other sources), you could add it to the dataset.

4. Datasets on Constitutions

The University of Chicago Law School operates a Constitutions Lab, which introduces "students to real-world projects related to constitutional design."³⁰ The idea is to provide support to countries undergoing constitutional transitions by understanding the features of existing constitutions that make them effective.

To fulfill its mission the Lab requires data on constitutions, whether over time within countries, cross-nationally, or both (see, *e.g.*, Elkins et al. 2009, Versteeg & Zackin 2014). The same holds for many other projects undertaken by constitutional law scholars in their research, consulting, and teaching. For example, there's a large literature on whether a formal guarantee of rights—*e.g.*, to unionize, to form parties, to speak, and on and on—actually matters (see, *e.g.*, Davenport 1996, Cross 1999, Keith 2002, Fox & Flores 2009, Law & Versteeg 2013, Chilton & Versteeg 2016)? In other words, do rights *de jure* lead to the effective exercise of the rights in practice? To greater economic prosperity? More robust human rights? Or are they merely "parchment barriers," as Madison famously suggested. To begin to answer these questions we need to know what the Constitutions formally guarantee.

Many websites provide the text of Constitutions but these texts amount to raw data that the researcher must translate into a dataset susceptible to analysis. Somewhat better is the NBER/Maryland State Constitutions Project's website.³¹ The researcher can enter a U.S. state or all states (and the version(s) of the state constitution(s) of interest) and a search term, say "religion," to bring up the provisions in all the relevant constitutions that use the term "religion." This approach has its benefits—try it yourself and you'll see—but it also has the usual downside: researchers still must code the information and enter it into software if they want to analyze the data in a systematic way.

That's why the Comparative Constitution Project's Constitute website³² and accompanying database is the best of both worlds.³³ If you want to examine the texts of constitutions across

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²⁹ http://supremecourtofindia.nic.in/judges/judges.htm.

³⁰ http://www.law.uchicago.edu/internationallaw/constitutionslab.

³¹ http://www.stateconstitutions.umd.edu/Search/Search.aspx>.

³² https://www.constituteproject.org.

time and place (not U.S. state constitutions but countries' constitutions) on a specific topic, simply go to Constitute and select a topic (e.g., freedom of religion). A list of the relevant portions of the constitutions will appear and you can compare them, as Figure 3 illustrates.



Figure 3. Example from the Constitute website, comparing freedom of religion in the Afghanistan Constitution of 2004 and the Hungarian Constitution of 2011 (revised in 2013).

This is a nifty tool but it has the same drawback as the State Constitution's website: the researcher still must code the information. To eliminate that step, we recommend using the Comparative Constitution Project's (CCP) Database. Here the unit of analysis is country-year. For example, the first row for the U.S. Constitution is "United States 1789". Following "United States 1789" are rows for other changes to the Constitution; for example, "United States 1971" represents ratification of the 26th Amendment (prohibiting states and the federal government from denying the right to vote to anyone 18 years of age or older because age).

All told, the CCP Database contains 15,600 country-years (rows). Within each row, you'll find scores of variables related to the constitution it describes. For example, using the Database it's a rather trivial matter to learn whether the constitution contains an explicit declaration of judicial independence (the answer is yes for 31.5% of the coded constitutions³⁴); if it refers to political parties (30% do³⁵); what religion, if any, the constitution names as national or official (Catholic and Islam are the most frequent, though most constitutions don't name an official religion³⁶). In short, it's hard to imagine a better resource for scholars of comparative constitutionalism or even of the evolution of the constitution in a specific country.

5. Datasets on People's Opinion and Attitudes

Public opinion figures into constitutional law in at least three ways. First, the U.S. Supreme Court (and courts elsewhere too) occasionally builds public sentiment into its doctrine. To assess whether a work is obscene the Court developed a three-prong standard, with one of the prongs asking "whether 'the average person, *applying contemporary community standards*' would find that the work, taken as a whole, appeals to the prurient interest" (*Miller v. California* 1973, 24; our emphasis). When interpreting the Constitution's 8th Amendment (banning the infliction of

³³ http://comparativeconstitutionsproject.org.

³⁴ The variable is *judind*.

³⁵ The variable is part.

³⁶ The variable is offrelw.

"cruel and unusual punishments"), the Court has said, "the words of the Amendment are not precise, and that their scope is not static. The Amendment must draw its meaning from the *evolving standards of decency* that mark the progress of a maturing society" (*Trop v. Dulles* 1958, 100-101; our emphasis). The application of both standards requires some assessment of public thinking.

Second, we note the age-old positive and normative debates over (1) whether courts should/do follow public opinion, tallying up support and waiting until a majority sentiment emerges or (2) whether courts should/do lead the public, teaching us about the meaning of the Constitution (for various perspectives, see Tocqueville 1969, Cardozo 1921, Friedman 2009, Dahl 1957, Franklin & Kosaki 1989, Epstein & Martin 2010). Empirical evidence about the opinions and attitudes of the public would not only inform these debates; it may be essential.

Finally, judicial decisions in the constitutional law context are full of (mostly untested) empirical assumptions—at least some of which center on the people's attitudes, opinions, behavior, motivations, and emotions. Providing a recent example is Justice Kennedy's assumption in *Citizens United v. FEC* (2010, 360) that "[t]he appearance of influence or access . . . will not cause the electorate to lose faith in our democracy." Experimental evidence, collected by Brown & Martin 2015, suggests Kennedy got it wrong. And Gibson's survey data demonstrates much the same about empirical claims in *Republican Party of Minnesota v. White* (2002). There, the majority held that the First Amendment protects the right of candidates for judicial office to announce their views on legal and political issues even if those issues may come before the court to which they are seeking election. The dissenters rang all sorts of alarm bells: Wouldn't the public think that such candidates, as judges, would be unable to reach fair and impartial decisions because they had prejudged the issues in the cases? Answering the question in the affirmative, the dissenters went even further and contended that negative public perceptions would ultimately threaten the legitimacy of courts.

Because the dissenters provided not a scintilla of empirical support for their assumptions, Gibson (2012) set out to test them. Based on a three-wave panel survey in Kentucky—consisting of interviews with a representative sample of residents of the state prior to the election, during the election, and after the election —he produced definitive evidence that policy talk does not undermine judicial legitimacy. It turns out that people in Kentucky (and, via a separate survey, people throughout the United States) understand that judges make public policy and therefore prefer that judicial candidates announce their positions on important legal issue during the campaigns. The *White* minority assumed that people oppose candidates making known their legal policy positions but, in fact, the empirical evidence indicates exactly the opposite: policy talk does not threaten judicial legitimacy.

Gibson, as well as Brown & Martin, developed their own data to assess whether public sentiment matches up with the claims judges make about it. Without training (or finding a collaborator), we do not recommend following their lead and building datasets from scratch. And more to the point you may not need to; there are many other ways to tap public sentiment. We list three possibilities in Table 1, and others include the Roper Center for Public Opinion Research, which houses data from surveys dating back to the 1930s;³⁷ the European Social Survey, which fields surveys in 34 (mostly) European countries, including non-EU states;³⁸ and the World Values Survey, which operates in 100 countries and says it is the "largest non-

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³⁷ http://www.ropercenter.uconn.edu/about_roper.html.

³⁸ http://www.europeansocialsurvey.org.

commercial, cross-national, time series investigation of human beliefs and values ever executed.

Note too that we list only the Eurobarometer in Table 1 but social scientists have created many "barometer surveys." These continuously monitor public opinion on a wide range of issues on several of the world's continents. Covering 35 countries in Africa, the Afro-Barometer focuses on governance and economic conditions. Since 1995, the Latinobarómetro regularly interviews representative samples of people in 18 Latin American countries. Questions of interest to con law scholars include the extent to which respondents think the government guarantees freedom of expression, their level of trust in the judiciary, and even how they use social networks to participate in politics. Then there's the Asian Barometer, operated out of National Taiwan University, which runs surveys throughout the region—including in Taiwan, Singapore, Mainland China, Hong Kong, and Japan, among others. Recent questions have focused on corruption in government, trust in officials, and the impact of China on their country.

To work with these datasets, researchers can download them from the websites we list in the footnotes and import them into Excel (or SPSS, Stata, and so on). More useful for many con law scholars may be the on-line analysis tools that some survey centers and universities have developed. For example, suppose you're interested in the percentage of Americans who approve of bible prayer in public schools. Instead of downloading the General Social Survey (GSS) (see Table 1), which has asked about approval of prayer in schools since 1974, you could go to a website at Berkeley⁴³ and select the variable of interest (here, *PRAYER*) and perhaps *YEAR* (the year GSS fielded the survey). The software will produce a nice table showing the percentage approving/disapproving each year. (BTW: Though the Supreme Court disapproved of bible prayer in public schools in 1963,⁴⁴ the percentage of Americans approving has increased from 31.7% in 1974 to 41.5% in 2014—a statistically significant increase.)

Because the GSS and the others listed in Table 1 are very reputable polling operations, researchers need not worry about some of the very tricky aspects of designing and fielding a survey (identifying the target population, selecting the sample, determining the weights, ordering the questions, and on and on). But you still must be aware of the wording of the questions you use. On the one hand, it is up to the survey center to ensure that respondents interpret questions the same way. This is not always easy to do because even seemingly clear questions can admit multiple interpretations. Fowler (1992, 222, 225) gives the following example:⁴⁵ "What is the average number of days each week you have butter?" This may seem plain enough but, apparently, some of the respondents didn't know whether margarine counted as butter. When the researcher revised the question—"Not including margarine, what is the average number of days each week you have butter"—there was a decrease in the number of respondents who said they used butter.

On the other hand, it is *not* up to the survey center to ensure that you, as a con law scholar, understand how question wording might affect responses and so any conclusions you might reach. To see why, suppose we want to learn whether U.S. Americans support the death penalty

³⁹ http://www.worldvaluessurvey.org/">.

⁴⁰ < http://www.afrobarometer.org>

⁴¹ < http://www.latinobarometro.org/lat.jsp>

⁴² < http://www.asianbarometer.org>

⁴³ < http://sda.berkeley.edu/sdaweb/analysis/?dataset=gss14>.

⁴⁴ Abington School District v. Schempp (1963).

⁴⁵ Example also cited in Diamond 2011, 387.

for murder—an important opinion to capture considering the Court's emphasis on "evolving standards of decency." This question would seem to be exactly on point:

Are you in favor of the death penalty for a person convicted of murder?

When a polling company recently asked Americans this question, 64% of the respondents answered yes.⁴⁶

This result would a would seem to suggest that death penalty comports with Americans' standards of decency. But suppose we phrased the question this way:

If you could choose between the following two approaches, which do you think is the better penalty for murder: the death penalty or life imprisonment, with absolutely no possibility of parole?

Well, in fact the same survey company, in the same year and month, did phrase the question this way, and support for the death penalty fell to 49%.⁴⁷ From this it might be tempting to conclude that many Americans no longer think the death penalty is a civilized form of punishment.

The larger lesson is that scholars must take care when they use questions from surveys—or, really, variables from any of the datasets listed in Table 1. Although these datasets meet the standards of good social science, the developers bear no responsibility for how subsequent scholars will use them. We urge vigilance whenever you adopt or adapt from these datasets; be sure to understand whether the variables mean what you think they mean; and be sure to consider all the various options.

These cautionary notes aside, we urge you to explore. Even a dash of data has the potential to improve our understanding of constitutional law in all its dimensions and forms.

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⁴⁶ Gallup, October 7-10, 2010, http://www.gallup.com/poll/1606/death-penalty.aspx. 29% said no and 6% had no opinion.

⁴⁷ Gallup, October 7-10, 2010, http://www.gallup.com/poll/1606/death-penalty.aspx. 46% said life imprison and 6% had no opinion.

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