
Quantitative methods for comparative constitutional law

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1. Introduction

More than ten years ago, Bruce Ackerman considered, but dismissed, the possibility of quantitative analysis of constitutional law:

Looking broadly over this half-century, are there patterns that repeat themselves in the successful establishment of written constitutions? If so, do different founding patterns shape the subsequent style and substance of judicial review? At this stage, there can be no hope of rigorously quantitative answers to such questions. The number of success stories is much too small for statistical analysis; the number of variables much too large. There is no way out but an appeal to old-fashioned insight.¹

Since then, the field of comparative constitutional law has changed. In recent years, a number of scholars have begun to explore the applicability of quantitative – or, ‘large-N’ – research methods to questions of comparative constitutional law. As part of this enterprise, these scholars are turning constitutional documents into quantitative data and using them as objects of statistical analysis. They are performing what we shall refer to as ‘quantitative constitutional comparison’, the systematic comparison of a large number of constitutional materials through the use of statistical methods.² This emerging sub-field³ is the main focus of this chapter.

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- 1 See B. Ackerman, ‘The Rise of World Constitutionalism’, *Virginia Law Review*, 83 (1997), 771–802, 773.
- 2 Cf. D. Law and M. Versteeg, ‘The Evolution and Ideology of Global Constitutionalism’, *California Law Review*, 99 (2011), 1163–1259, also available through <http://papers.ssrn.com>, p. 180 (referring to this approach as ‘empirical constitutional studies’).
- 3 See, e.g., Z. Elkins *et al.*, *The Endurance of National Constitutions* (Cambridge University Press 2009); Z. Elkins *et al.*, ‘Baghdad, Tokyo, Kabul . . . : Constitution Making in Occupied

We shall discuss, drawing partly on our own experiences, the potential gains and drawbacks of quantitative methods for comparative constitutional law. Our central claim is that, despite some distinct challenges, quantitative methodology has much to offer to the comparative study of constitutional law. Quantitative methodology allows comparativists to address a series of new questions as well as to generate new insights into existing debates.

Our contribution is also intended to be practical. We discuss some of the methodological choices involved in compiling and preparing quantitative constitutional data as well as some of the technicalities of quantitative data analysis. Along the way, we introduce a number of examples of what quantitative constitutional comparison may look like in practice. Most of these illustrations derive from one of the authors' experience with coding and analyzing the written constitutions of 188 countries over a 61-year time period.⁴ Other illustrations come from scholarly projects in comparative politics and related fields that routinely employ quantitative methodology.

In our discussion, we recognize that most comparative lawyers lack the required methodological toolkit to perform causal inference. In response

States', *William and Mary Law Review*, 49 (2008), 1139–78; T. Ginsburg *et al.*, 'Commitment and Diffusion: How and Why National Constitutions Incorporate International Law', *University of Illinois Law Review* (2008), 201–38; T. Ginsburg and Z. Elkins, 'Ancillary Powers of Constitutional Courts', *Texas Law Review*, 87 (2009), 1431; B. Goderis and M. Versteeg, 'The Transnational Origins of Constitutions: An Empirical Investigation' (2011), available through <http://papers.ssrn.com>; Law and Versteeg, 'The Evolution and Ideology of Global Constitutionalism'; D. Law and M. Versteeg, 'The Declining Influence of the US Constitution' (2011), available through <http://papers.ssrn.com>. While our discussion in this paper focuses on the constitutional realm, we emphasize that the same quantitative approach is available to other areas of law. See, e.g., M. M. Siems, 'Numerical Comparative Law: Do We Need Statistical Evidence in Law in Order to Reduce Complexity?', *Cardozo Journal of International & Comparative Law*, 13 (2005), 521–40 (applying comparative methods to corporate law). There is also a vivid and specific debate on the legal origins thesis and on the 'Doing Business' reports produced by the World Bank. In 2009, the *American Journal of Comparative Law* hosted a Symposium on this debate. See, e.g., R. Michaels, 'Comparative Law by Numbers? Legal Origins Thesis, Doing Business Reports, and the Silence of Traditional Comparative Law', *American Journal of Comparative Law*, 57 (2009), 765–95; H. Spamann, 'Large-Sample, Quantitative Research Designs for Comparative Law?', *American Journal of Comparative Law*, 57 (2009), 797–810 (suggesting that the wider debate on the use of quantitative analysis in comparative law has been tainted by the controversy regarding the 'legal origins' debate). The World Bank also collects indicators on employment protection law, bankruptcy laws, access to credit, property registration, protection of investors, contract enforcement and good governance.

4 Goderis and Versteeg, 'The Transnational Origins of Constitutions: An Empirical Investigation' (introducing the dataset).

to this concern, we also offer suggestions for comparative legal scholars who want to avoid full-blown statistical methods. We will show that, even when used descriptively, quantitative data may have something to offer to those with a more anthropological interest in foreign legal systems. If nothing else, scholars might use quantitative data to map the constitutional universe and identify similarities and differences across different legal systems, by simply summarizing and counting quantitative data.

We organize the remainder of this chapter as follows. In the next section, we discuss how quantitative *comparative constitutional* analysis may differ from quantitative *comparative political* analysis, while utilizing the considerable advances made in the latter field. In sections 3 and 4, we set out the steps involved in building a dataset and analyzing the data, the two main phases of quantitative research. Section 5 takes stock and concludes.

2. Comparative law, not politics

The proposed large-N comparative constitutional law approach relates to an established tradition in comparative politics and political economy.⁵ In these fields, scholars have long used statistical methods to analyze quantitative data. Today, for almost every country, data exists on electoral systems and democratic performance,⁶ voting in the UN General Assembly,⁷ and human rights practices,⁸ among many other topics. This type of data is at the core of the comparative politics and political economy traditions. A seminal work in the comparative politics tradition that touches upon constitutional questions is Arend Lijphart's *Patterns of Democracy*, which analyzes the relative performance of different types of democratic institutions in thirty-six countries.⁹ A more recent example from the political economy literature is Thorsten Persson and Guido Tabellini's *Economic Effects of Constitutions*, which analyzes the economic effects of electoral rules.¹⁰

5 C. Whytock, 'Taking Causality Seriously in Comparative Constitutional Law: Insights from Comparative Politics and Comparative Political Economy', *Loyola of Los Angeles Law Review*, 41 (2008), 629–682, 636.

6 See section 3.1 *infra*.

7 See, e.g., E. Voeten, 'Clashes in the Assembly', *International Organization*, 54 (2000), 185–215.

8 See section 3.1 *infra*.

9 A. Lijphart, *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries* (Yale University Press, 1999).

10 T. Persson and G. Tabellini's *The Economic Effects of Constitutions* (MIT Press, 2003).

But most comparative lawyers are not political scientists. While there is much that comparative lawyers can learn from the quantitative comparative politics and political economy traditions, we do not propose that they should take exactly the same track. In particular, what distinguishes the emerging quantitative comparative law approach from comparative politics and political economy is its focus on *questions about law* and, in most cases, its use of *legal materials* as the object of analysis. The provocative title of their book notwithstanding, Persson and Tabellini's analysis of the economic effects of electoral rules does not actually concern the written legal document that most lawyers would take to be a country's constitution. With its focus on actual electoral practices, this work falls within the political economy tradition more than the comparative law tradition envisioned in this chapter.

At the same time, we *do* propose that legal scholars might consider using the methodological toolkit from comparative politics and political economy. This toolkit consists of the statistical rules of inference as developed in the social sciences, which allow the researcher to describe the law, engage in systematic comparisons of legal systems, and, if used properly, make causal claims about, for instance, the origins and effectiveness of legal rules.¹¹ However, conceding that causal inference may not always be feasible, we also propose a light version of quantitative constitutional comparison, which merely uses descriptive statistics.

We recognize that our proposal might be somewhat controversial. Many legal scholars believe that law has its own internal logic and legal scholarship has its own highly valued research activity, which usually has little to do with causal explanation. A large part of legal scholarship seeks to make valid legal claims, not valid causal claims.¹² Moreover, if anything, legal scholarship often follows the rules of persuasion and advocacy, not the rules of inference.¹³ Nonetheless, we contend that there are at least three reasons to stretch these disciplinary boundaries.

First, many legal scholars make causal claims anyway. For example, the field of comparative constitutional law is permeated with causal claims, including, *inter alia*, the following notions: constitutions constrain government; judicial review protects human rights; socio-economic rights are

11 See L. Epstein and G. King, 'The Rules of Inference', *University of Chicago Law Review*, 69 (2002), 1–209 (providing an introduction to the social science rules of inference tailored to a legal audience).

12 J. H. Merryman and R. Pérez-Perdomo, *The Civil Law Tradition: An Introduction to the Legal Systems of Europe and Latin America* (Stanford University Press, 2007), pp. 61–7 (describing 'legal science').

13 Epstein and King, 'The Rules of Inference', 9.

unenforceable; and constitutional law is converging upon a global paradigm. These claims, which often take the form of unarticulated assumptions, are essentially empirical claims that have largely gone untested. As one scholar puts it 'constitutional scholars are . . . better at generating hypotheses than at testing them'.¹⁴ This, however, does not always stop legal scholars from making important policy recommendations.¹⁵ While legal scholarship may have real world implications, it often ignores the available tools to test the empirical validity of its claims.¹⁶

Second, the field faces a new set of challenges to which traditional comparative law methodology might be unable to respond. One such challenge comes from 'globalization'.¹⁷ Globalization, the 'cluster of technological, economic, and political innovations that have drastically reduced the barriers to economic, political, and cultural exchange',¹⁸ may have affected constitutional law around the globe in a number of ways.¹⁹ Globalization's impact, moreover, is bound to be global in nature. Case studies, and smaller scale comparisons, therefore, are unlikely to fully capture the globalizing nature of constitutional systems around the world.²⁰ Documenting the impact of globalization on constitutional law, instead, requires

14 D. Law, 'Constitutions', in P. Cane and H. Kritzer (eds.), *The Oxford Handbook of Empirical Legal Research* (Oxford University Press, 2010), pp. 376–98, 390.

15 See M. Tushnet, 'The Possibilities of Comparative Constitutional Law', *Yale Law Journal*, 108 (1999), 1225–1310, 1269–74 (describing this as an implication of the functional approach to comparative law); M. Tushnet, 'Some Reflections on Method in Comparative Constitutional Law', in S. Choudhry, *The Migration of Constitutional Ideas* (Cambridge University Press 2007), pp. 67–83, 73–74 (noting that functionalists look at 'how constitutional provisions actually operate in real-world circumstances' and 'draw inferences about good constitutional design from the constitutional provisions that work best according to the functionalist's normative standards').

16 We recognize that other social science approaches, such as case studies, may also allow researchers to make causal claims under certain circumstances. There are various ways to establish causality. The original scientific method is to perform randomized experiments that allow for systematic control of alleged causal (independent) variables. However, social scientists rarely have the opportunity to perform experiments. Social scientists typically consider statistical control to be the substitute of choice. Qualitative methods such as 'process tracing' should not be discarded, certainly not in a supporting role. See Epstein and King, 'The Rules of Inference', for a discussion.

17 H. Muir Watt, 'Globalization and Comparative Law', in M. Reimann and R. Zimmermann (eds.), *The Oxford Handbook of Comparative Law* (Oxford University Press 2006), pp. 579–607.

18 D. W. Drezner, 'Globalization and Policy Convergence', *International Studies Review*, 3 (2001), 53–78, 53.

19 D. Law, 'Globalization and the Future of Constitutional Rights', *Northwestern University Law Review*, 102 (2008), 1277–1350, 1307–42; Law and Versteeg, 'The Evolution and Ideology of Global Constitutionalism'.

20 See Muir Watt, 'Globalization and Comparative Law', 589.

systematic empirical exploration, both over time and across a large number of countries. Another, and possibly even greater, challenge for the field is to assess the alleged successes and failures of the past decades of widespread constitutional reforms. Especially since the 1990s, after the end of the cold war, numerous countries around the world reformed their constitutions, often aided by constitutional experts from the West.²¹ It seems plausible that some constitutional design choices have yielded more success than others. But to date we have little empirical insight into what works and what does not, and whether constitutions matter in the first place.²² What is needed, therefore, is a systematic empirical exploration of whether constitutions matter, and how and when constitutional commitments affect government behavior.²³ While case studies might offer valuable first insights into these questions, quantitative tools from political economy and comparative politics have long been used to systematically investigate the effect of different policy choices, laws and institutions.²⁴ It is this approach, we contend, that might help shed light on the all-important questions of whether, how and when constitutions matter.²⁵

Third, the growing availability of quantitative legal datasets brings new research questions within reach. Of course, research should be question-driven rather than data-driven. However, for certain research questions,

- 21 See Z. Elkins *et al.*, *The Endurance of National Constitutions*, p. 113 fig. 5.2 (documenting a global surge in the number of new constitutions circa the early 1990s); P. Alston, 'A Framework for the Comparative Analysis of Bills of Rights', in P. Alston (ed.), *Promoting Human Rights Through Bills of Rights: Comparative Perspectives* (Oxford University Press, 1999) p. 1 (characterizing the 1990s as a period of 'prolonged constitutional fever' in which 'bills of rights have assumed particular and renewed importance in an extraordinary number of countries in all parts of the world'); M. Versteeg, 'Transnational Constitutionalism', in D. Galligan and M. Versteeg (eds.), *The Social and Political Foundations of Constitutions* (Cambridge University Press, forthcoming) (conceptualizing foreign influences in constitutional design).
- 22 For a pioneering work in that direction, see J. Gerring, *et al.*, 'Centripetal Democratic Governance: A Theory and Global Inquiry', *The American Political Science Review*, 99 (2005), 567–81.
- 23 Law, 'Constitutions', 384 (noting that 'the problem is . . . that we know little about the conditions under which large-c constitutionalism succeeds, in the sense of defining actual practice or improving social welfare' and that 'the most that can be said with confidence is that there is a continuing need for a complete evaluation of the relationship between formal constitutional provisions and constitutional practice').
- 24 See, e.g., B. Simmons, *Mobilizing for Human Rights: International Law in Domestic Politics* (Cambridge University Press, 2009); E. Hafner-Burton, 'Justice Lost! The Failure of International Human Rights Law to Matter Where Needed Most', *Journal of Peace Research*, 44(4) (2007), 407–25.
- 25 See *infra* section 4.2.

especially those involving a large number of legal systems, 'quantitative methods are the only way to process what would otherwise be overwhelming amounts of information from large samples'.²⁶ Quantitative datasets also offer important advantages in terms of efficiency and research cooperation.²⁷ Legal scholars typically tie their capacity for new research projects to their substantive expertise and familiarity with foreign legal systems. The free and public availability of quantitative datasets means that it is more feasible to venture into new areas and to work in teams, in part because replicability is an important quality control mechanism. Small research communities often emerge around major data collections.²⁸ Admittedly, the image of the 'number cruncher', who claims to be able to compute anything and everything, is a negative one. However, given the complexity of the subject matter and the constant need to adapt the methods to serve the aim of answering questions about law, we do not think there is much risk that researchers who ignore the substance will enter the field *en masse*.²⁹

These three reasons – the omnipresence of causal claims, new challenges and the availability of new data – are interconnected. To address new challenges we need new data and are often required to make causal claims. The two subsequent sections discuss the availability of quantitative constitutional data and the different ways in which it might be used in comparative analysis.

3. Preparatory steps: building a dataset

The use of quantitative constitutional methods requires a change of mindset: scholars must use legal materials as 'data' rather than as 'law.' While this is to some extent true for both qualitative methods³⁰ and quantitative methods, this section focuses on the latter. The first subsection defines the

26 Spamann, 'Large Sample, Quantitative Research Designs for Comparative Law?', 799.

27 See T. Ginsburg and T. J. Miles, 'Empiricism and the Rising Incidence of Coauthorship in Law', *University of Illinois Law Review*, 101 (2011), 1785 (documenting the association between empirical legal scholarship and the rise of coauthorship).

28 As an example, there is an emerging scholarly community around the 'Comparative Constitutions Project' that is directed by Zachary Elkins, Tom Ginsburg and James Melton. The Comparative Constitutions Project is currently coding all national constitutions that have ever been written. See www.comparativeconstitutionsproject.org. See section 3.1 *infra* for further discussion.

29 See Michaels, 'Comparative Law by Numbers?', 767.

30 See, e.g., M. L. Stearns, *Constitutional Process: A Social Choice Analysis of Supreme Court Decisions* (University of Michigan Press, 2000).

object of analysis and discusses what type of data to use, while the second subsection discusses how to go about 'coding' legal texts and preparing legal materials for statistical analysis. These steps are interrelated and the process is an iterative one. It is impossible to identify an appropriate object or unit of analysis without first knowing how to treat the data. Further, while the following sections omit discussions of how to formulate a research question, this does not mean that the use of quantitative methods allows us to disregard the issue. Datasets may merely inspire research questions, or can sometimes render feasible research questions previously deemed out of reach. Their availability does not imply that researchers can skip the phase of formulating a problem-driven and theoretically informed research question.

3.1 Identifying the object of analysis

Under our approach, the most likely objects of statistical analysis are legal texts. The use of legal texts may seem obvious to a legal readership, given that texts, such as case law, statutes, and commentaries are our default object of analysis. Moreover, such texts tend to be freely available in large quantities. For example, full translations of all of the world's written constitutions are available from Peaslee's *Constitutions of Nations*³¹ and Blaustein and Flanz's *Constitutions of the Countries of the World*.³² In addition, foreign judicial decisions are available on LexisNexis and a range of non-subscription databases such as WorldLii.³³

Some of these legal texts, moreover, have already been translated into quantitative data and are publicly available for use by comparative scholars. The most ambitious and comprehensive data effort is arguably the 'Comparative Constitutions Project'. Funded by the National Science Foundation, its lead researchers, Zachary Elkins, Tom Ginsburg and James

31 A. J. Peaslee, *Constitutions of Nations*, 1st edn, 3 vols. (The Hague: Martinus Nijhof, 1950); A. J. Peaslee, *Constitutions of Nations*, 2nd edn, 3 vols. (The Hague: Martinus Nijhof, 1956); A. J. Peaslee, *Constitutions of Nations*, 3rd edn, 4 vols. (The Hague: Martinus Nijhof, 1965).

32 A. P. Blaustein and G. H. Flanz (eds.), *Constitutions of The Countries of The World* (Dobbs Ferry, NY: Oceana Publications, 1971). This is a continuously updated loose-leaf collection that is also available in electronic format. A more specialized database is 'World Constitutions Illustrated'.

33 For an overview, see M. Versteeg, 'Access to Foreign and International Case Law: A Practical Guide', prepared for the West African Judicial Colloquium, Accra, Ghana, 8-10 October 2007, www.brandeis.edu/ethics/pdfs/internationaljustice/guidetoforeignjurisprudenceWeb.pdf.

Melton, are compiling a comprehensive database that includes quantitative information on every national constitution written since 1789.³⁴ For each constitution, they are coding no less than 600 variables, on both the 'structural' part of the constitution and the bill of rights. At the time of writing, this project has already released a first wave of data, which contains coding of all constitutions that are currently in force.³⁵ The constitutional coding carried out by one of the authors of this chapter is similar to the Comparative Constitutions Project. It contains 237 variables on constitutional rights and their enforcement, from 1946 to 2006. This data will also be publicly available in the near future.³⁶

Written national constitutions are not the only possible objects of quantitative constitutional inquiry.³⁷ Implementing legislation and semi-constitutional documents, or so-called 'super-statutes',³⁸ might also serve as objects of analysis. The same is true for judicial decisions. In the US, scholars are long familiar with the Speath database, which holds quantitative information on every decision the US Supreme Court has ever

34 See supra note 28.

35 At the time of writing, the Comparative Constitutions Project has not yet released the historical constitutional data. This data will be made available in the near future.

36 See supra note 4.

37 Over the past three decades, a number of scholars have made efforts to code written constitutions. Most of these projects, however, code only a limited number of variables and/or cover a limited time period. See, e.g., J. Boli-Bennet, 'The Expansion of Nation-States, 1870-1970', Ph.D. Dissertation, Stanford University (1976); H. van Maarsseveen and G. van der Tang, *Written Constitutions: A Computerized Comparative Study* (Dobbs Ferry, NY: Oceana Publishers, 1978); F. B. Cross, 'The Relevance of Law in Human Rights Protection', *International Review of Law and Economics*, 19 (1999), 87; C. Davenport, "'Constitutional Promises" and Repressive Reality: A Cross-Sectional Time Series Investigation of Why Political and Civil Liberties are Suppressed', *Journal of Politics*, 58 (1996), 627-54; J. Foweraker and T. Landman, *Citizenship Rights and Social Movements: A Comparative and Statistical Analysis* (Oxford University Press, 1997); L. Camp Keith, 'Constitutional Provisions for Individual Human Rights (1976-96): Are They More Than Mere "Window Dressing"?', *Political Research Quarterly*, 55 (1999), 111-43; A. Ben-Bassat and M. Dahan, 'Social Rights in the Constitution and in Practice', *Journal of Comparative Economics*, 36 (2008), 103-19. A 1978 study by two Dutch constitutional law professors, Henk van Maarsseveen and Ger van der Tang stands out for the comprehensive range of variables coded. It covers 233 variables, on a range of constitutional topics, including the Bill of Rights. However, this data is not time-varying. Rather, it is a cross-section of constitutions in 1978. By contrast, the 1976 study by John Boli stands out for its comprehensive time coverage, covering all constitutions from 1870-1970, although not moving beyond that period.

38 See W. N. Eskridge and J. Ferejohn, 'Super-Statutes', *Duke Law Journal*, 50 (2001), 1215-76, 1275-76.

made.³⁹ This data has provided the impetus for a whole literature on the determinants of judicial decision-making and the ideological positions of the Supreme Court judges.⁴⁰ Such analysis of judicial decisions could potentially be extended to the global plane. A recent and ongoing initiative is the Comparative Constitutional Court Project, which is currently assembling and quantifying the decisions of the highest constitutional courts of 99 countries.⁴¹ It is this type of data that is at the heart of the new comparative constitutional law tradition.

Those working in the socio-legal tradition may object to our focus on legal texts: one of the core insights from socio-legal studies, after all, is that law must be seen in its social context. Annelise Riles, for example, recently argued that comparative law scholarship in the socio-legal tradition has actually moved away from a comparison of different legal texts and embraced intensive dialogue with legal experts from different legal systems.⁴² Our focus on text inevitably means that we shall miss out on some of the intricacies of law's interaction with society. But at the same time, we are able to compare a larger number of countries, over an extended period of time. This trade-off between depth and breadth is at the core of the so-called 'quantitative-qualitative divide' in social scientific research.⁴³

At the same time, our focus on constitutional texts does not necessarily mean that we have to view law in isolation. In particular, there are many social science databases that allow us to study law's interaction with society, albeit through a quantitative lens. Data from central statistics

39 See Speath Database, <http://supremecourtdatabase.org/data.php>. See also M. Heise, 'The Past Present and Future of Empirical Legal Scholarship: Judicial Decision Making and the New Empiricism', *University of Illinois Law Review*, 4 (2002) 819–50; Spamann, 'Large Sample, Quantitative Research Designs for Comparative Law?', 799.

40 See, e.g., Heise, 'The Past, Present and Future'.

41 See A. Martin and M. Gabel, 'Collaborative Research: A Cross-National Study of Judicial Institutionalization and Influence'. See www.nsf.gov/awardsearch/showAward.do?AwardNumber=0751670.

42 See A. Riles, 'Comparative Law and Socio-Legal Studies', in M. Reimann and R. Zimmermann (eds.), *The Oxford Handbook of Comparative Law* (Oxford University Press, 2006), pp. 775–814 (describing the 'rapprochement' between socio-legal studies and comparative law).

43 See, e.g., J. A. Casporaso, 'Is there a Quantitative-Qualitative Divide in Comparative Politics? The Case of Process Tracing', in T. Landman and N. Robinson (eds.), *The Sage Handbook of Comparative Politics* (Thousand Oaks, CA: Sage, 2009), p. 67 (describing the quantitative-qualitative divide in comparative politics).

offices, surveys such as the popular 'Eurobarometer',⁴⁴ performance indicators such as 'the Worldwide Development Indicators'⁴⁵ collected by the World Bank, the 'Database on Political Institutions',⁴⁶ the 'Polity IV' democracy data,⁴⁷ the World Values Survey,⁴⁸ and some of the databases mentioned above can all be used to study law's interaction with society.⁴⁹

3.2 From text to data

The analysis of legal texts is at the core of any lawyer's activities. Yet, the quantitative analysis of legal data requires a mental switch as well as a change in working methods. Legal researchers will need to extract data from, rather than interpret, legal texts. Whereas creativity and expert judgement are key qualities when it comes to interpretation, the extraction of quantitative data from qualitative texts requires the researcher to

- 44 The Eurobarometer is a series of surveys regularly performed on behalf of the European Commission, which generates reports of public opinion of certain issues relating to the European Union across the member states. See www.gesis.org/eurobarometer (offering access to Eurobarometer primary data for statistical analysis).
- 45 The World Development Indicators are being collected by the World Bank. The database, which includes data from 209 countries and covers the period from 1960 to 2010, is accessible at <http://data.worldbank.org/indicator>.
- 46 T. Beck, *et al.*, 'New Tools in Comparative Political Economy: The Database of Political Institutions', *The World Bank Economic Review*, 15 (2001), 165–76. This database contains about 35 years of institutional data for over 200 countries.
- 47 See Polity IV Project: Political Regime Characteristics and Transitions: 1800–2009, www.systemicpeace.org/polity/polity4.htm. This database contains an impressive 200 years of data relating to democratization and electoral competition for over 200 countries.
- 48 The World Values Survey is a large-scale research project with an almost global reach (90 countries), carried out by a vast network of social scientists coordinated by a central body, the World Values Survey Association. The data, collected in waves since 1981, covers people's values and beliefs, how they change over time and what social and political impact they have. See www.worldvaluessurvey.org/. For an example of (secondary) use of these data in comparative constitutional law, see Law, 'Globalization and the Future of Constitutional Rights', 1335–7.
- 49 Also of possible interest to comparative lawyers is Mark Gibney *et al.*'s 'Political Terror Scale' that quantifies the human rights practices of 188 countries from 1976 onwards. In particular, it uses the annual Amnesty International and US State Department Country reports on human rights to quantify every country's human rights practices on a five-point scale. See www.politicalterrorsscale.com. See also B. Goderis and M. Versteeg, 'Human Rights Violations After 9/11 and the Role of Constitutional Constraints', *Journal of Legal Studies* (forthcoming, 2012).

minimize discretion, as text must be translated into numerical information that other researchers may use.⁵⁰

In the vast majority of quantitative research projects, including the emerging field of empirical constitutional law, researchers accomplish this through coding, or the translation of textual properties into numerical information. For example, when quantifying national constitutions, the researcher may decide to assign a value of 1 if the constitution contains a prohibition of arbitrary arrest and detention and a value of 0 if it does not. But coding is not always straightforward. For example, what if the constitution contains a right to freedom? Lawyers may want to argue that such a right to freedom includes a prohibition of arbitrary arrest and detention. This, undoubtedly, would make for a valid legal argument in court. But when quantifying constitutional texts, the right to freedom should probably simply be coded as a right to freedom, and not a prohibition of arbitrary arrest and detention. The example illustrates that coding always requires a range of decisions to be made. In order to guide such decisions, researchers must develop a coding scheme that accounts for different situations and that should be followed consistently throughout the data collection phase.⁵¹

The translation of text into data is the main object of a methodological subfield in the social sciences, called 'Quantitative Text Analysis' (QTA). QTA is a term covering a collection of research techniques 'for making inferences by systematically and objectively identifying specified characteristics within text'.⁵² Most existing QTA-based projects use texts that are peripheral to law, such as political party manifestos, policy position papers or newspaper articles.⁵³ Themes that have been tackled using QTA include assessment of the deliberative performance of parliaments,⁵⁴

50 See Epstein and King, 'The Rules of Inference', 38 ('Good empirical work adheres to the *replication standard*: another researcher should be able to understand, evaluate, build on, and reproduce the research without any additional information from the author.').

51 See, e.g., Z. Elkins, *et al.*, 'The Comparative Constitutions Project Codebook', <https://netfiles.uiuc.edu/zelkins/constitutions/files/surveyinstrument.pdf>.

52 K. A. Neuendorf, *The Content Analysis Guidebook* (Thousand Oaks, CA: Sage, 2002), p. 10. QTA is a large sub-field of 'content analysis', a field dedicated to the quantitative analysis of 'messages' more generally.

53 M. Evans, *et al.*, 'Recounting the Courts? Applying Automated Content Analysis to Enhance Empirical Legal Research', *Journal of Empirical Legal Studies*, 4 (2007), 1041–57.

54 J. Bara, *et al.*, 'Analysing Parliamentary Debate with Computer Assistance', *Swiss Political Science Review*, 13 (2007), 577–605.

position taking in European Parliament speeches⁵⁵ and 'constitutionality arguments' in congressional debates about abortion.⁵⁶ In the remainder of this section, we shall discuss some of the recent developments in this methodological subfield and the extent to which these might aid quantitative constitutional comparison.

Within QTA, the most important distinction is between automated and non-automated coding schemes. A famous example of a non-automated coding scheme is the Comparative Manifestos Project, which used a vast team of coders spread over different countries to hand-code manifestos issued by political parties, over more than half a century.⁵⁷ Also the Comparative Constitutions Project relied on hand-coding of all of the world's written constitutions by a team of researchers. In all these cases, coders carefully read the entire document before coding it in accordance with the common codebook. Versteeg's constitutions coding, too, relied on a non-automated coding scheme, although it differs from the aforementioned project in that all coding was done by one researcher only.

Coding by multiple researchers commonly leads to inter-coder reliability problems. Even when a strict coding scheme is in place, different researchers may make different coding decisions, which may lead to unreliability of the data.⁵⁸ One common solution to this problem is to have more multiple coders code the same text and check their coding against each other. The Comparative Constitutions Project, for example, has all constitutional texts coded by two coders, while disagreements are adjudicated by the principal investigators. But in part because of inter-coder reliability concerns, QTA researchers have started to develop automated

55 S. Proksch and J. Slapin, 'Position Taking in European Parliament Speeches', *British Journal of Political Science*, 40 (2009), 587-611.

56 C. Schonhardt-Bailey, 'The Congressional Debate on Partial-Birth Abortion: Constitutional Gravitas and Moral Passion', *British Journal of Political Science*, 38 (2008), 383-410.

57 The Comparative Manifestos Project has collected data from political parties' election programmes from more than 50 countries covering all free, democratic elections since 1945. The data and codebooks are available through <http://manifestoproject.wzb.eu/>.

58 The Comparative Constitutions Project relies on multiple coders, though its inter-coder reliability measures seem impressively high. See, www.comparativeconstitutionsproject.org/reliability.htm. The Comparative Manifestos Project, on the other hand, has received some criticism in this respect. See, S. Mikhaylov, M. Laver and K. Benoit, 'Coder Reliability and Misclassification in Comparative Manifesto Project Codings', Paper presented at the 66th MPSA Annual National Conference, Palmer House Hilton Hotel and Towers, 3-6 April 2008.

coding procedures that minimize coder discretion even further. The key feature of automated coding is that texts are not quantified by a team of researchers but by search engines that rely on some predetermined algorithm. Automated coding schemes, allegedly, score much better on core methodological concerns, such as inter-coder agreement, reliability, validation, accuracy and precision.⁵⁹

But limiting coder discretion may come at a price. Legal scholars undoubtedly wonder whether search engines will be able to detect relevant textual nuances. For example, if a computer is instructed to detect a 'prohibition of arbitrary arrest and detention' and the constitution states that the 'government *shall regulate* arrest and detention', its search engine has to be able to recognize that these may not be the same thing. Yet, some of the automated coding procedures allow for more discretion and flexibility than others.⁶⁰ Some of these procedures are dictionary-based, which means the software uses a list of words or terms compiled especially for the project by the researcher or tried and tested by a research team.⁶¹ Other approaches, by contrast, are non-dictionary based and almost exclusively rely on statistics, using properties – such as word frequency distributions – of 'reference texts' that have been verified by experts to come up with estimations on the basis of so-called 'virgin texts' that are being 'read' by the computer only.⁶² Put differently, the words *are* the data.

This development illustrates how researchers can take 'text as data' to the extreme. For most legal researchers, the reductionist effects of non-dictionary approaches will probably outweigh its advantages in minimizing discretion. Adapting methods so that meaningful legal differences are taken into account may take a lot of additional investment

59 S. Mikhaylov, *et al.*, 'Coder Reliability and Misclassification in Comparative Manifesto Project Codings', Paper presented at the National Conference of the Midwest Political Science Association, Chicago, 3–6 April 2008, http://citation.allacademic.com/meta/p_mla_apa_research_citation/2/6/5/7/1/pages265710/p265710-1.php.

60 See, www.content-analysis.de/software/quantitative-analysis (providing links to many automated coding schemes). Researchers who emphasize the practical aid that computers can offer in processing large amounts of text, rather than the additional statistical power, often call the approach Computer-Aided Text Analysis (CATA).

61 A further distinction can be made between methods and programmes relying on an internal dictionary (e.g. Alceste) or an external dictionary compiled by the researchers (e.g. Hamlet).

62 See, e.g., K. Benoit, S. Mikhaylov and M. Laver, 'Treating Words as Data with Error: Uncertainty in Text Statements of Policy Positions', *American Journal of Political Science*, 53 (2009), 495–513.

in each research phase. In its current state of development, not all QTA methods seem suitable for large-scale use in quantitative constitutional comparison. However, there are reasons why QTA may nonetheless be of interest. First, QTA may be part of a 'mixed methods' design in which it may serve, for instance, to confirm trends that were discovered through qualitative research.⁶³ Second, there are some interesting recent developments that combine the strengths of different QTA approaches to produce techniques that may be of interest to the comparative lawyer. In particular, new software is being developed that is capable of 'reading' large amounts of text in any language. Such software could pioneer work on legal systems where English translations of legal documents are scarce.⁶⁴ Third, automated QTA may bring important benefits in terms of the time and resources required to collect one's data. While coding constitutions for 188 countries over a 60-year time period took about 12 months of full-time work to complete, a computer might be able to do this in less than a day. At the same time, the amount of time saved may be somewhat deceptive, since automated coding approaches require the texts to be prepared and presented in a certain encoding format. Moreover, a certain level of technological insight and training is needed to use most of the software required for automated coding.⁶⁵

63 For an introduction to 'mixed methods' research designs see, e.g., R. B. Johnson and A. J. Onwuegbuzie, 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*, 33 (2004), 14–26. An example of an application of QTA as part of a 'mixed methods' design outside of the field of comparative law is J. Scourfield McLauchlan, *Congressional Participation as Amicus Curiae before the US Supreme Court* (New York: LFB Scholarly Publishing, 2005). This work is also an example of how quantitative text analysis can pave the way for the analysis of new document categories (amicus curiae briefs in this case). See *infra* section 4.2 for a further discussion.

64 See, e.g., CATPAC, www.galileoco.com/N_catpac.asp. This software can be used to summarize texts but also produces a variety of outputs such as word and alphabetical frequencies. It also uncovers patterns of word use and performs cluster analysis. An example of an application is J. W. Pennebaker and C. K. Chung, 'Computerized Text Analysis of al-Qaeda Transcripts', in K. Krippendorf and M. A. Bock (eds.), *The Content Analysis Reader* (Sage, 2008) where properties – as opposed to meaning – of texts are used to determine safety perceptions of terrorist organizations. For simpler but 'open licence' software, see www.yoshikoder.org/ (allowing for multilingual analysis, albeit with many limitations).

65 The annual summer school of the European Consortium for Political Research (ECPR) in Ljubljana has been offering courses on Quantitative Text Analysis in the past few years. See www.ecprnet.eu/methods_schools/summerschools/Ljubljana/.

4. What next? Quantitative comparisons using statistics

Having discussed the different approaches to collecting quantitative legal materials, we shall next discuss the uses for such data. We will be brief, as this chapter is not the right forum for an introduction in statistical methods. While we think that any lawyer contemplating this type of quantitative comparison would be well advised to take a statistics course, we emphasize that abundant technical skills are not necessary to analyze quantitative data for the purpose of description in constitutional comparison. In particular, we envision two different ways in which comparativists may use quantitative data, one of which is more ambitious, and requires more statistical skills, than the other. First, comparative lawyers could use the quantitative data to simply describe and map legal similarities and differences across legal systems. They could use descriptive statistics to compare and map trends, without making any causal claims. Second, comparative lawyers could use statistical tools, in particular multivariate regression analysis, to test causal explanations. The first allows us to map some general trends in the global constitutional landscape, while the second allows us to, at least under some conditions, turn to more ambitious questions, such as whether constitutions matter.⁶⁶ The remainder of this section will discuss each of those approaches in turn.

4.1 Mapping constitutional trends

With new empirical data, showing trends and mapping similarities and dissimilarities might be of interest in itself. With simple descriptive tools, we can address what, according to David Kennedy, constitutes the first methodological step of any comparative law enquiry: 'identify[ing] interesting differences and similarities among legal phenomena in different legal regimes'.⁶⁷ But unlike the traditional comparative law enquiry, the new empirical data allows us to compare more countries in a more systematic manner.

After coding rights variables from constitutional texts, we can analyze the constitutional prevalence of civil and political rights, for example. An

66 See, e.g., F. Schauer, 'Comparative Constitutional Compliance: Notes towards a Research Agenda', chapter 10 in this volume.

67 D. Kennedy, 'The Politics and Methods of Comparative Law', in M. Bussani and U. Mattei (eds.), *The Common Core of European Private Law* (The Hague: Kluwer Law International, 2003), pp. 131-208, 140.

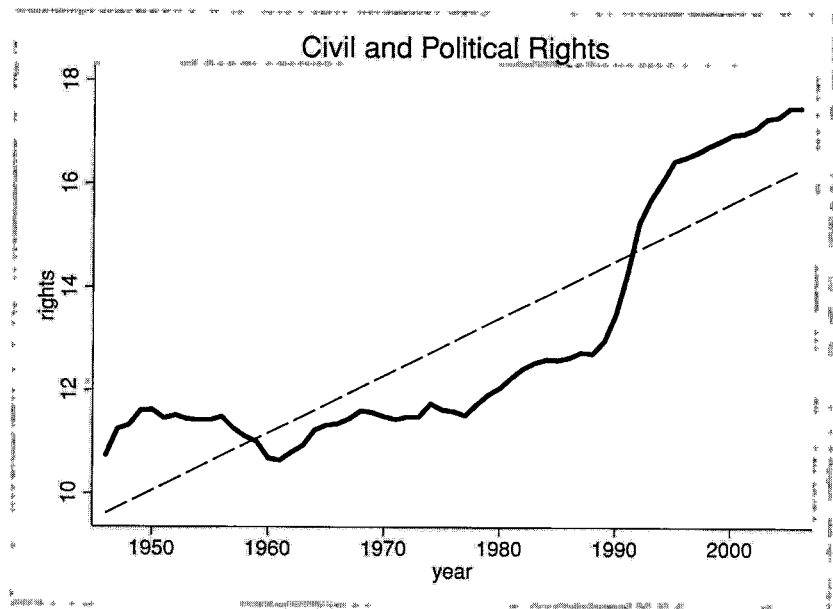


Figure 1.

intuitive way to do so is to draw a graph that plots the average number of rights per constitution over time. Figure 1 depicts the average number of civil and political rights per constitution over time, out of a total of 31 possible rights in this category.⁶⁸

However, overall averages may conceal different trends.⁶⁹ Therefore, to get a sense of the differences across different countries, we can draw a set of world maps that graphically display the number of rights in each of

68 This graph is based on the following rights: (1) the right to vote, (2) the right to assembly, (3) the right to association, (4) the right to form political parties, (5) the right to information about the government, (6) the right to petition, (7) the right to *amparo*, (8) the right to resist, (9) the right to a remedy, (10) the right to compensation, (11) the right to life, (12) the prohibition of the death penalty, (13) the right to life for the unborn, (14) the prohibition of torture, (15) the prohibition of slavery, (16) the prohibition of arbitrary arrests and detention, (17) the freedom of movement, (18) the freedom to develop one's personality, (19) the right to bear arms, (20) the right not to be expelled from one's home territory, (21) the freedom of education, (22) the right to establish schools, (23) the right to artistic freedom, (24) the right to privacy of the person, (25) the right to privacy of the home, (26) the right to privacy of personal data, (27) the right to privacy of family life, (28) the right to privacy of communication, (29) the freedom of religion, (30) the freedom of expression and (31) the freedom of the press.

69 See T. Wonnacott and R. Wonnacott, *Introductory Statistics*, 5th edn (New York: Wiley, 1990), p. 1 (introducing the various types of available descriptive statistics).

Civil and Political Rights in 1946

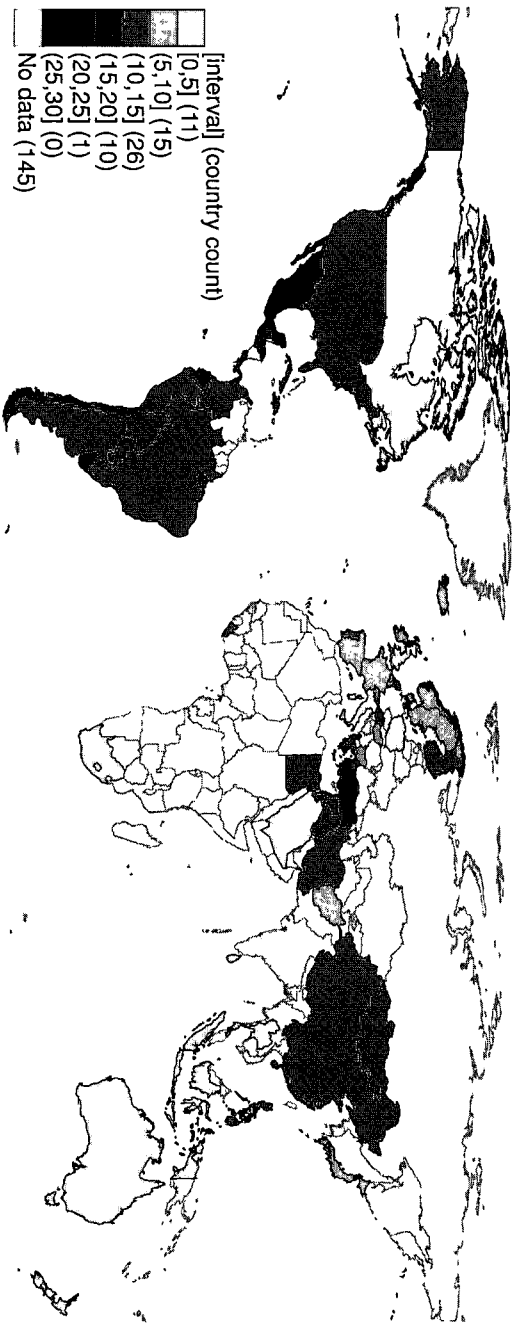


Figure 2a.

Civil and Political Rights in 1976



Figure 2b.

Civil and Political Rights in 2006



Figure 2c.

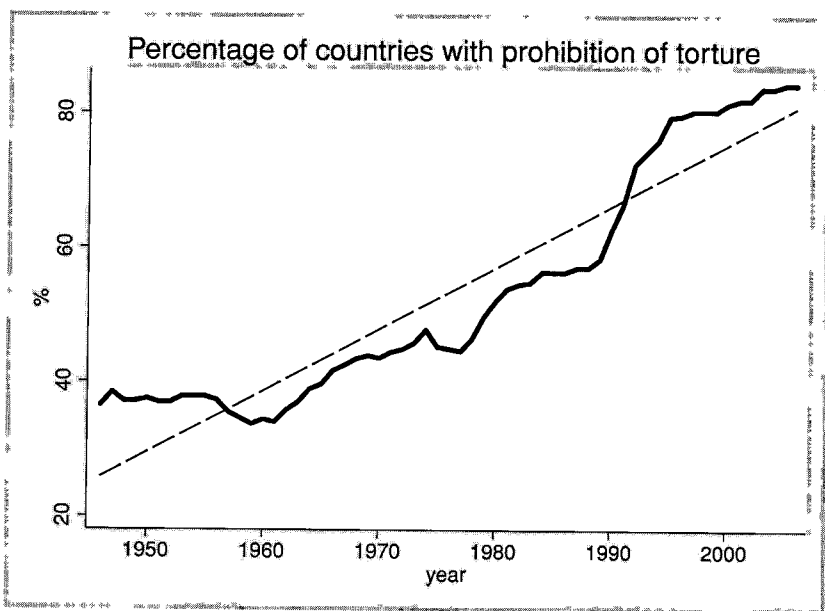


Figure 3.

the world's constitutions. With a simple mapping program, available in most standard statistics software packages, we can depict constitutional features on a world map.⁷⁰ Figures 2a–c depict the number of rights per constitution in 1946, 1976 and 2006, respectively. They can be viewed as global snapshots of the number of constitutional rights and provide the reader with an intuitive tool to systematically compare a large number of countries.

In the same vein, we can use descriptive tools to study the development of one particular right only. For example, Figure 3 depicts the percentage of constitutions that contain a prohibition of torture.⁷¹ Similar graphs could be drawn for other rights, or perhaps for groups of rights.

These graphs and maps may be insightful in their own right. Figure 1, for example, strongly suggests that constitutions have become more rights-inclusive over time. In 1946, the average constitution contained 10 out of the 31 civil and political rights provisions. By contrast, in 2006, the average constitution contained 17 out of the 31 rights provisions, an

70 These maps are easy to generate with the 'spmap' programme in Stata. See F. Huebler, 'Guide to Creating Maps with Stata', <http://huebler.blogspot.com/2005/11/creating-maps-with-stata.html>.

71 Law and Versteeg, 'The Declining Influence of the US Constitution' (2011).

increase of more than 70 percent. The same trend is apparent from the changing color scheme on the world maps. Based on this kind of descriptive tools, the researcher might conclude that some trends may or may not be *consistent with* a particular hypothesis. For example, the growing popularity of civil and political rights is consistent with the hypothesis that democratization and civil and political rights develop hand in hand. After all, the past decades not only witnessed a growing popularity of constitutional rights, but also different 'waves' of democratization.⁷² Similarly, the same trend is consistent with the hypothesis that constitutional rights developed in symbiosis with the international human rights regime, as international human rights treaties proliferated in the same period.⁷³ But, importantly, from these trends, we *cannot* infer that *because* of the international human rights regime, or *because* of democratization, constitutional rights gained in popularity. These are causal claims, and descriptive statistics alone do not support such claims. Description can merely be used to show legal developments across time and space, not to make any claims as to the causes of these developments.⁷⁴

Even with these limitations in mind, descriptive tools may be of value, as the development of maps and taxonomies has long been a core activity of comparative lawyers. They might, moreover, be used to complement more ethnographic comparative law scholarship, in a 'mixed methods' approach.⁷⁵ Today, comparative constitutional law is mainly the field of the country-study, where scholars perform a small number of in-depth case studies and set forth hypotheses and theories based on these case studies.⁷⁶ Quantitative data can complement these studies. In particular, the comparative researcher may want to map some general trends before moving to a smaller number of case studies. For example, a researcher writing on socio-economic rights may download the socio-economic rights data from the Comparative Constitutions Project to show some general trends in the development of socio-economic rights. After such an introduction, he or she may zoom in on one or more case studies, like

72 S. Huntington, *The Third Wave: Democratization in the Late 20th Century* (University of Oklahoma Press, 1991).

73 See, e.g., B. Simmons, *Mobilizing for Human Rights* (showing the strong proliferation of human rights treaties in the post-WWII period).

74 Epstein and King, 'The Rules of Inference', 9 (noting, after reviewing all the empirical papers in the major law reviews, that '[t]oo much legal scholarship ignores the rules of inference and applies instead the "rules" of persuasion and advocacy').

75 See supra note 63.

76 M. Tushnet, 'The Continuing Significance of "Country Studies" in Comparative Constitutional Law' (Manuscript 2011).

South Africa and India. Some of the leading works in the comparative constitutional law literature already follow this approach. For example, the introductory chapter of Tom Ginsburg's *Constitutional Courts in New Democracies* shows some general trends on constitutional courts and judicial review, before moving to a small number of case studies in East Asia.⁷⁷ David Erdos follows a similar strategy in his *Delegating Bills of Rights*.⁷⁸ Simple descriptive statistics would aid such analyses.

Quantitative data could, moreover, aid the selection of cases. After looking at global trends, the researcher may want to pick a constitution that is in line with global trends, for example.⁷⁹ It is with this kind of applications that the new quantitative data, combined with simple descriptive tools, may be valuable for comparativists without an appetite for statistical work.

4.2 Causal inference

In the previous subsection, we illustrated how descriptive statistics may be used to analyze quantitative legal data. Some comparative lawyers may want to stop there, either because they are unfamiliar with the more sophisticated statistical methods or because they are uninterested in asking causal questions. For those who want to move beyond description and illustration, this subsection discusses the possibility of using quantitative constitutional data for the purpose of causal inference. To return to the example from the previous subsection: on the basis of the data underlying the graphics presented in the previous subsection the researcher may merely conclude that the proliferation of civil and political rights *is consistent with* the hypothesis that democratization produces more rights. In order to make the claim that these rights become more popular *because of* democratization, he or she would need to use multivariate regression analysis. With regression analysis, the researcher can isolate the effect of democracy on constitutional rights from other possible explanations for constitutional rights adoption. Thus, regression analysis allows us to examine the effect of democracy on constitutional rights, while holding constant other factors that may affect constitutional rights adoption,

77 T. Ginsburg, *Judicial Review in New Democracies: Constitutional Courts in East Asia* (Cambridge University Press, 2003).

78 D. Erdos, *Delegating Rights* (Oxford University Press, 2010).

79 See R. Hirschl, 'The Question of Case Selection in Comparative Constitutional Law', *American Journal of Comparative Law*, 53 (2005), 125–55 (providing a discussion of different methods of case selection).

such as a country's actual human rights record or its level of economic development.

This is not the right place to offer an introduction to regression analysis. We refer to the basic textbooks in statistics for that.⁸⁰ But we want to emphasize the wide range of possibilities that are offered by regression analysis. Not only can we study the determinants of constitutional rights, such as democracy or economic development, but we can also assess the impact of constitutional design choices on different outcome variables. For example, we could examine whether the adoption of a constitutional prohibition of torture reduces incidents of torture, or whether the adoption of a constitutional right to education increases government spending on education. Or, in more technical language, we can use constitutional data both as a *dependent* (or outcome) variable and as the *independent* (or explanatory) variable.

But some cautionary remarks are in order. Even where regression analysis reveals statistically significant relationships, it does not automatically mean that these are also causal relationships. In this respect, it is important to distinguish between the concepts of *correlation* and *causation*. If two variables are correlated, this simply means that they are related. For example, the regression model may reveal a statistically significant relationship between democracy and constitutional rights adoption, even after controlling for actual human rights practices and economic development. In this case, democracy and constitutional rights are correlated: when there is more democracy, there are also more rights. But in order to make the causal claim that *because* of democracy countries adopt more rights, we would have to carefully consider a number of additional factors.

First, we would have to consider the possibility that more democracy does not lead to constitutional rights, but that more constitutional rights lead to more democracy instead. In econometrics, this is called the 'reversed causality problem'. One famous example of the reversed causality problem is the relationship between police presence and violent crimes.⁸¹ These factors are correlated, such that when there are more police, there is more crime. But should we conclude that *because of the*

80 See M. Verbeek, *A Guide to Modern Econometrics* (Chichester, UK: Wiley, 2000); J. Wooldridge, *Introductory Econometrics: A Modern Approach* (Mason, OH: South Western College Publications, 2007). For more advanced treatments, see also W. Greene (ed.), *Econometric Analysis*, 6th edn (Upper Saddle River, NJ: Pearson Prentice Hall, 2007); J. Wooldridge, *Econometric Analysis of Cross-Section and Panel Data* (MIT Press, 2010).

81 S. Levitt, 'Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime', *American Economic Review*, 87 (1997), 270–90.

police, crime increases? Or should we instead conclude that *because of high crime rates*, police presence increases? Common sense tells us that the latter is more likely to be true. At the minimum, researchers should address and conceptualize the causality question and explain why they think that causality runs one way and not the other. The social sciences have also developed more sophisticated methods to address the reversed causality problem, the most common of which is the use of 'instrumental variables'. 'Instrumental variables' exploit an exogenous source of variation in the independent variable that does not affect the dependent variable, other than through the independent variable. For example, one well-known study in economics uses settler mortality as an 'instrument' to establish the causal effect of institutions on economic growth.⁸² Another study uses rainfall to establish the effect of economic growth on civil war.⁸³ We refer to other writers for a full treatment of the instrumental variables approach.⁸⁴

Second, we would have to consider whether there are other factors that are omitted from the regression model and that might affect both democracy and constitutional rights. GDP per capita, for example, might affect both democracy and rights: when countries become richer they become more democratic *and* adopt more rights. In this case, the correlation between rights and democracy is a spurious one: it is GDP per capita that is the real determinant of both democracy and rights. In econometrics, this is called the 'omitted variable bias problem'. This problem can be solved through inclusion of the possible competing explanations for rights adoption that are also correlated with democracy. If GDP constitutes such a competing explanation, the omitted variable bias problem is solved through the inclusion of a variable that captures GDP per capita. The main problem, however, is that not all possible competing explanations of rights adoption are observable and quantifiable. It may be the case, for example, that something like a 'rights culture', or 'rights consciousness', affects both democracy and constitutional rights adoption. In this case, it would be harder to solve the omitted variable problem, as quantitative information on different 'rights cultures' might not be

82 See, e.g., D. Acemoglu, *et al.*, 'The Colonial Origins of Comparative Development: An Empirical Investigation', *American Economic Review*, 91 (2001), 1369–1401 (using settler mortality as an instrument for institutional quality).

83 E. Miquel *et al.*, 'Economic Shocks and Civil Conflict: An Instrumental Variables Approach', *Journal of Political Economy*, 112 (2004), 725–53 (using rainfall as an instrument for economic growth).

84 See, e.g., J. D. Angrist and J. S. Pischke, *Mostly Harmless Econometrics: An Empiricists Companion* (Princeton University Press, 2009).

available. Again, there exist a number of more technical solutions to deal with omitted variable bias. 'Instrumental variable analysis', mentioned above, is one of them. Another commonly employed method is the use of 'fixed effects', which maximize the explanatory power of the regression model because they control for all things within a country that remain constant over time. Thus, to the extent a 'rights culture' does not change over time, it will be captured by the country's fixed effects.

Quantitative research does not always manage to solve the omitted variable bias problem. But at the minimum, researchers should think long and hard about alternative stories and try to control for them by adding important competing explanations to the regression model. In case it turns out to be impossible to account for a plausible alternative explanation, the researcher should probably be upfront about this. He or she may have to concede that democracy seems to affect constitutional rights, but that democracy might actually be a proxy for something more fundamental and far less tangible, like a rights culture.

We realize that we are now venturing into unknown territory for most legal researchers. Yet, we do think that it is important to emphasize that regression analysis, which is essential to make causal claims, comes with its own distinct set of methodological challenges. Although we believe that regression analysis might be a promising avenue for comparative law, a healthy dose of skepticism should always be applied to causal claims.

5. Conclusion

From our discussion, it has become apparent that quantitative comparative (constitutional) law is more or less diametrically opposed to the long-established comparative law tradition that views comparison as a 'way of life'.⁸⁵ According to this tradition, to know the laws of France, for example, the researcher must speak and read French, live in France for a while, and know the sentiments of Frenchmen. Only then can the researcher compare the laws of France with those of his or her own country. The sort of comparison we propose in this chapter is very different and constitutes a new methodological frontier for comparative (constitutional) law.⁸⁶

85 D. Kennedy, 'The Methods and the Politics in Comparative Legal Studies: Traditions and Transitions' in P. Legrand and R. Munday (eds.), *Comparative Legal Studies: Traditions and Transitions* (Cambridge University Press, 2003), pp. 345-436, 351 (quoting William Twining).

86 J. Gerring, *Social Science Methodology: A Criterial Framework* (Cambridge University Press, 2001), p. 157; Spamann, 'Large Sample, Quantitative Research Designs for Comparative Law?.'

At the same time, quantitative research designs fit remarkably well within the disciplinary mould of comparative law and could produce insights that are usable beyond the quantitative subfield. Each of the four steps that David Kennedy once identified as taking place in almost every comparative law enquiry can be tackled in quantitative projects as well. First, 'identify interesting differences and similarities among legal phenomena in different legal regimes'. Second, 'where there are similarities, deal with the "transplant" hypothesis'.⁸⁷ Third, 'allocate the similarities and differences which remain variously to cultural and technical factors'. Fourth, 'generate a plausible causal account of what you have mapped'.⁸⁸ We do not suggest that quantitative analysis is the *only way* to establish causality. In-depth case studies and process tracing also allow researchers to take up causal questions. However, *the way in which* quantitative analysis establishes causality may meet a pressing need in comparative constitutional scholarship. Since some of the most pressing questions in this field require us to look at global constitutional trends and involve highly irregular causal relationships, quantitative analysis has a significant contribution to make.⁸⁹

First, quantitative methods may help comparative constitutional law scholarship connect to large interdisciplinary projects in which, in the words of Ralf Michaels, comparative law has been largely 'silent'.⁹⁰ In order to ensure that comparative law as a field does not lose relevance to high-impact research, it needs to bring its expertise to bear on these projects. For example, the World Values Survey⁹¹ questionnaire does contain questions on people's perceptions of fundamental rights protection in their countries, but had comparative lawyers been part of the team drawing up the questionnaire these could have been more refined and better tailored to our research needs. For instance, questions on knowledge and perceptions of law and legal institutions could be highly relevant to comparative law research.

Second, our experiences provide *prima facie* evidence in support of 'mixed methods'. Quantitative constitutional comparison and empirical comparative law generally must 'ultimately be confined to what can

87 As an example of how quantitative research can be used to test the transplant hypothesis see Goderis and Versteeg, 'The Transnational Origins of Constitutions: An Empirical Investigation'.

88 Kennedy, 'The Methods and the Politics in Comparative Legal Studies', 356-69.

89 Gerring, *Social Science Methodology*, p. 169.

90 Michaels, 'Comparative Law by Numbers?', 767. 91 See *supra* note 48.

be measured' and, therefore, 'cannot capture the full richness of legal systems'.⁹² However, as Michaels suggests, the reductionist nature of these methods is no reason to discard them, only to ensure they are not applied in isolation.⁹³ Or, in the words of Reitz, '[c]omparative law needs all the help it can get'.⁹⁴ Well-executed research designs, relying on the quantitative analysis of legal or semi-legal texts or using survey- or indicator-based data, either as the lead method in large cooperative projects or in a clearly defined support role, are good candidates to offer such help to comparative law.

92 Michaels, 'Comparative Law by Numbers?', 778. 93 *Ibid.*

94 J. Reitz, 'Legal Origins, Comparative Law, and Political Economy', *American Journal of Comparative Law*, 57 (2009), 847–62, 851.