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Tom Ginsburg

Daniel Rockmore

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“WE THE PEOPLES”: THE GLOBAL ORIGINS OF CONSTITUTIONAL PREAMBLES

TOM GINSBURG,* NICK FOTI,** & DANIEL ROCKMORE***

I. INTRODUCTION

In 2011, South Sudan successfully broke away from its erstwhile northern neighbor and became the world’s newest country. South Sudan’s leaders had prepared for this moment by writing, with the help of international advisors, a Transitional Constitution.¹ Though international actors had significant influence on the text, the Constitution began, “We, the People of South Sudan,” and went on to elaborate on the basic goals, values, and history of the state.² The

* Leo Spitz Professor of International Law and the Ludwig and Hilde Wolf Research Scholar, University of Chicago, and Research Professor, American Bar Foundation. Ph.D. (Jurisprudence and Social Policy) 1999, University of California, Berkeley; J.D. 1997, University of California, Berkeley; B.A. 1989, University of California, Berkeley. Thanks to Zachary Elkins, Alison LaCroix, David Law, James Melton, and Mila Versteeg for helpful comments, and to Emily Heasley Eckert, Leah Fiddler, Sonali Maulik, and Albert Chang for research assistance. Athina Panatopoulou conducted the sentiment analysis described in the Appendix. Professor Ginsburg gratefully acknowledges the support of the National Science Foundation, Award No. SES-0648288 and the Russell Baker Scholars Fund of the University of Chicago Law School.

** Postdoctoral Fellow in the Department of Statistics, University of Washington. Ph.D. (Computer Science) 2013, Dartmouth College; B.S. (Computer Science) 2007, Tufts University.

*** William H. Neukom ‘64 Professor of Computational Science, Dartmouth College. Ph.D. (Mathematics) 1989, Harvard University; M.A. (Mathematics) 1986, Harvard University; B.A. (Mathematics) 1984, Princeton University.

1. Kevin Cope, *South Sudan’s Dualistic Constitution*, in *THE SOCIAL AND POLITICAL FOUNDATIONS OF CONSTITUTIONS* 295-321 (D. Galligan and M. Versteeg, eds., 2013) (describing interaction of local and national forces in constitution making).

2. The full text is as follows:

Grateful to the Almighty God for giving the people of South Sudan the wisdom and courage to determine their destiny and future through a free, transparent, and peaceful referendum in accordance with the provisions of the Comprehensive Peace Agreement, 2005; Recalling our long and heroic struggle for justice, freedom, equality and dignity in South Sudan; Remembering and inspired by the selfless sacrifices of our martyrs, heroes and heroines; Dedicated to a genuine national healing process and the building of trust and confidence in our society through dialogue; Determined to lay the foundation for a united, peaceful and prosperous society based on justice, equality, respect for human rights and the rule of law; Committed to establishing a decentralized democratic multi-party system of governance in which power shall be peacefully transferred and to upholding values of human dignity and equal rights and duties of men and women;

values include justice, human rights, the rule of law, and protection of natural resources, among many others.³

South Sudan's preamble seems typical.⁴ It is safe to say that most constitutional preambles are framed as the quintessential expression of *national* values.⁵ The preamble often speaks in the name of a distinct people, either real or fictional, who are both the creators and subjects of the constitutional order.⁶ Frequently, preambles recount key historical events such as the national struggle for independence.⁷ In this sense, they constitute autobiographical narratives, legitimating specific local actions, historical moments, and organizations.⁸ Call this the *national expression* thesis: constitutions, particularly preambles, reflect local needs, idioms, and aspirations.

We know, however, that drafters of constitutions borrow many other aspects from abroad. Scholars have demonstrated that many provisions in constitutions are similar to those of other countries. For example, David Law and Mila Versteeg have shown that rights provisions have spread around the globe.⁹ Zachary Elkins and his co-authors show that some rights, such as freedom of expression, have become nearly universal, while others have not.¹⁰ Some have argued that there is a kind of global script at work, whereby nation-states use constitutions to

Conscious of the need to manage our natural resources sustainably and efficiently for the benefit of the present and future generations and to eradicate poverty and attain the Millennium Development Goals; Do hereby, through this Southern Sudan Legislative Assembly, amend the Interim Constitution of Southern Sudan, 2005, which shall be adopted and hereafter referred to as the "Transitional Constitution of the Republic of South Sudan, 2011," and shall be the supreme law by which the independent and sovereign South Sudan shall be governed during the Transitional Period, and undertake to abide by, respect and defend it.

Const. South Sudan (2011) pmb1.

3. [Please add a citation for this assertion.]

4. *Id.*

5. See, e.g., Mark McKenna et al., *First Words: The Preamble to the Australian Constitution*, 24 U.N.S.W.L.J. 382, 382 (2001) (arguing that preambles are culturally specific); George Winterton, *The 1998 Convention: A Reprise of 1898*, 21 U.N.S.W.L.J. 856, 856 (1998) (positing that preambles represent the "people's vision of themselves").

6. *Id.*

7. See, e.g., Const. South Sudan, pmb1. *supra* n. 2.

8. Beau Breslin, FROM WORDS TO WORLDS: EXPLAINING CONSTITUTIONAL FUNCTIONALITY 54 (2009) (providing example from Mozambique).

9. David S. Law and Mila Versteeg, *The Evolution and Ideology of Global Constitutionalism*, 99 CAL. L. REV. 1163 (2011) (discussing systematic patterns of global constitutional evolution and trends in global constitutionalism, including the increasing number of rights per constitution).

10. Zachary Elkins, Tom Ginsburg and James Melton, THE ENDURANCE OF NATIONAL CONSTITUTIONS 27 (2009); Zachary Elkins, Tom Ginsburg, and Beth Simmons, *Getting to Rights: Constitutions and International Law*, 54 HARVARD INT'L L. J. 61 (013) (examining the adoption of rights in national constitutions in the post-World War II period).

participate in global discourses.¹¹ Scholars in the World Polity school of sociology, for example, emphasize the global interdependence of policy and institutional choices, so that constitutional texts respond to external forces as much as internal ones.¹²

If this is true of constitutions in general, might it also be true of preambles? The very concept of a preamble, of course, has been widely borrowed and influential since the early years of constitution-making.¹³ But we do not really know how much borrowed material preambles contain. Nor do we have a sense as to where the sources of innovation lie. These questions would benefit from further systematic study of preambles.

This Article seeks to tackle this challenge by examining the global influences on constitutional preambles. It does so using a new set of tools in linguistic and textual analysis, applied to a unique database of most constitutional preambles written since 1789.¹⁴ Recent advances in text processing allow us to identify, for example, which phrases have been repeated across multiple constitutional texts. We can also determine the extent to which any particular constitution is a source of innovation and influence on others. These tools allow us to trace, with much greater precision, patterns of borrowing across time and space. By introducing these tools to legal scholarship, this Article provides an example of how text analysis can help us understand the ways in which legal texts are interrelated across space and time. The interdependence of law across jurisdictions is a topic on which there has been much informal work, but relatively little work using modern statistical tools, and no work to date using text analysis.

11. Julian Go, *A Globalizing Constitutionalism? Views from the Postcolony*, 18 INT'L SOC. 71 (March 2003) (using primary data from the constitutional texts to question the effects of global political norms upon documentary constitutionalism); John Boli-Bennett, *Human Rights or State Expansion? Cross-National Definitions of Constitutional Rights, 1870-1970*, pp. 71-91 in *Institutional Structure* (G. Thomas, J. Meyer, F. Ramirez, and J. Boli, eds., 1997); John Boli-Bennett and John W. Meyer, *The Ideology of Childhood and the State: Rules Distinguishing Children in National Constitutions, 1870-1970*, 43 AM. SOC. REV. 797 (1998) (discussing how the ideological rules of differentiated and state-managed childhood spread to different nation-states regardless of their levels of organizational development); see also David Law, *Generic Constitutional Law*, 89 Minn. L. Rev. 652 (2005) (explaining the emergence of constitutional commonalities due to reciprocal influences and shared theoretical and practical challenges).

12. Law and Versteeg, *supra* n. 9.

13. The preamble of the U.S. Declaration of Independence served as an inspiration to subsequent European liberals. George Athan Billias, *American Constitutionalism and Europe, 1776-1848*, in AMERICAN CONSTITUTIONALISM ABROAD 13, 18 (1990) (explaining this history). See also David Armitage, *DECLARATIONS OF INDEPENDENCE* (2008) (on the borrowing of declarations of independence after the American innovation).

14. *Id.*

These methodological innovations also allow us to contribute to the relatively sparse literature on preambles. Preambles are an understudied topic in comparative constitutional law, perhaps because they are not typically part of the legally operative part of the constitutional text.¹⁵ In the case of the United States, the preamble is well known to most high school civics students, but rarely appears in court documents.¹⁶ Although there are exceptions—notably France, where the Conseil Constitutionnel has held that the preamble of the 1958 Constitution renders operative both the French Declaration of the Rights of Man and the preamble of the 1946 Constitution—most constitutional preambles do not have binding legal force.¹⁷

15. Cf. Sanford Levinson, *Do Constitutions Have a Point? Reflections on "Parchment Barriers" and Preambles*, in WHAT SHOULD CONSTITUTIONS DO? 150-178 (Fred Dycus Miller et al. eds., 2011) (arguing that constitutional preambles should receive greater attention); Justin Frosini, CONSTITUTIONAL PREAMBLES AT A CROSSROADS BETWEEN POLITICS AND LAW 64-65 (2012) (presenting a global study of preambles). In *District of Columbia v. Heller*, 554 U.S. 570, 578 (2008), Justice Scalia wrote the following:

Where the text of a clause indicates that it does not have operative effect, such as "whereas" clauses in federal legislation or the Constitution's preamble, a court has no license to make it do what it was not designed to do; operative provisions should be given effect as operative provisions, and prologues as prologues.

On this tradition in the common law, see J. Bishop, Commentaries on Written Laws and Their Interpretation § 51, p. 49 (1882) ("It is nothing unusual in acts . . . for the enacting part to go beyond the preamble; the remedy often extends beyond the particular act or mischief which first suggested the necessity of the law.") (quoting *Rex v. Marks*, 102 Eng. Rep. 557, 560, 3 East, 157, 165 (K.B.1802)). *But see D.C. v. Heller*, 554 U.S. at 643 (Stevens, J. dissenting) (arguing that preambular clauses should carry legal weight).

16. Levinson, *supra* n. 15, at 156-57 (rarely litigated). See Milton Handler, Brian Leiter, and Carole Handler, *A Reconsideration of the Relevance and Materiality of the Preamble in Constitutional Interpretation*, 12 CARDOZO L. REV. 117 (1990) (twenty-four total citations in court cases at that point); Daniel Himmelfarb, *The Preamble in Constitutional Interpretation*, 24 SETON HALL J. CONST. L. 127 (1991) (reviewing case law). Some of the cases are frivolous. In a recent case, *Jacobs v. Pataki*, 68 F. App. 222, 224 (2d Cir. 2003), the plaintiff relied on the preamble to argue that "the 'United States of America' that was granted Article III power in the Constitution is distinct from the 'United States' that currently exercises that power." The Court responded with a three-word dismissal citing the Preamble's mention of "the United States of America."

17. Decision of Conseil constitutionnel No. 71-44DC, July 16, 1971, Rec. 29 (incorporating Declaration of Rights of Man into operable part of French constitution). France's preamble has been likened to a Matrioska doll because of its incorporation of other fundamental French documents by reference. Justin O Frosini, *Changing Notions of Democracy: A Comparative Study of Constitutional Preambles in DEMOCRACY WITH(OUT) NATIONS? OLD AND NEW FOUNDATIONS FOR POLITICAL COMMUNITIES IN A CHANGING WORLD* 83, 101 (Igor Filibi, Noe Cornago and Justin O. Frosini eds., 2011) (developing Matrioska Doll metaphor); Justin Frosini, CONSTITUTIONAL PREAMBLES AT A CROSSROADS BETWEEN POLITICS AND LAW 64-65 (2012) (same). See generally Liav Orgad, *The Preamble in Constitutional Interpretation*, 8(4) INT'L J. CONSTITUTIONAL L. 737 (2010) (describing various approaches to using the preamble in constitutional adjudication); Anne Winckel, *The Constitutional Role of a Preamble in Statutory Interpretation*, 23 MELB. U. L. REV. 184-91(1999) (Australia); Kent Roach, *The Uses and*

But constitutions are about more than creating enforceable law: they are also supposed to express the fundamental values and aspirations of the people, and bind them together as a nation.¹⁸ They are, as one scholar has recently noted, “mission statements.”¹⁹ For these functions, the preamble may be as important as any more enforceable provision. Preambles articulate the ends of the constitutional project and can therefore be powerful motivators.²⁰ As Professor Levinson notes, preambles “make vivid the complex relationship between the presumptive ends underlying a given constitution and the particular means that it authorizes to achieve those ends,”²¹ or, as one delegate to the Australian Constitutional Convention said in 1998, “The preamble is effectively the lymph gland of the Constitution.”²² By inspiring and motivating the people, preambles may help to ensure that the rest of the constitutional text is more efficacious than it would otherwise be.

A note on definitions: for our purposes, we consider the preamble any statement that precedes the formal text of numbered articles. Although sometimes formally designated as a preamble, some constitutional texts use other terms or simply leave the introductory statement unnamed, and these are included in our analysis.²³ On the other hand, we exclude formal articles of the constitution, even if they might play a similar functional role to preambles. It is not uncommon, for example, for the first few articles of a constitution to define the fundamental attributes of the state.²⁴ Conversely, a few preambles include detailed statements of rights that are more typically found in the operative part of the

Audiences of Preambles in Legislation, 47 MCGILL L.J. 153 (2001) (Canada); Bereket Habte Selassie, *THE MAKING OF THE ERITREAN CONSTITUTION: THE DIALECTIC OF PROCESS AND SUBSTANCE* 32 (2003) (Eritrea).

18. See Gordon S. Wood, *THE CREATION OF THE AMERICAN REPUBLIC 1776-1787* (1969) (tracing history of popular sovereignty in early America); EDMUND MORGAN, *INVENTING THE PEOPLE: THE RISE OF POPULAR SOVEREIGNTY IN ENGLAND AND AMERICA* (1988) (discussing the concept of popular sovereignty as a fiction); Breslin, *supra* n. 8 (describing functions of constitutions).

19. Jeff King, *Constitutions as Mission Statements*, in Denis Galligan and Mila Versteeg, eds., *THE SOCIAL AND POLITICAL FOUNDATIONS OF CONSTITUTIONS* 73 (2013).

20. *Id.*; see generally Frosini, *CONSTITUTIONAL PREAMBLES*, *supra* n. 17.

21. Levinson, *supra* note 15, at 158-59.

22. Justin O. Frosini, *CONSTITUTIONAL PREAMBLES. AT A CROSSROADS BETWEEN POLITICS AND LAW* 19 (2012) (quoting Greg Craven).

23. See, e.g., Const. Japan (1946) (no formal designation as preamble).

24. See e.g., Const. Qatar (2003), art. 1 (“Qatar is an independent Arab state. Islam is the State’s religion and the Islamic Shariah is the main source of its legislations. It has a democratic political system. Its official language is Arabic. People of Qatar are part of the Arab nation (ummah).”)

constitution.²⁵ These latter provisions are included in our analysis because they are placed within the preamble.

We rely on a sample from the Comparative Constitutions Project, a large effort to document the contents of all the world's constitutions since 1789.²⁶ For the purposes of this Article, we focus on a set of 476 constitutions that have preambles available in English. This is part of a broader sample of 742 coded constitutions, of which 596 (or eighty percent) contain preambles.²⁷

The Article proceeds as follows. We first review, in Part II, some of the history of preambles and provide some illustrative examples of their contents. Preambles vary on a number of dimensions, including their length, tone, and contents. They surely reflect local conditions, but they also reflect forces that arise from outside the nations' borders. In Part III, we analyze "memes" that are found in a large number of preambles, demonstrating the origins and spread of popular phrases from one country to another. Analogizing language to genetic material, we show how writers of preambles borrow from the language of other preambles. Of course, not every phrase or word is borrowed, and sometimes constitution-makers will innovate. We explore this issue of linguistic innovation in Part IV, using multivariate regression techniques to isolate the factors that predict levels of innovation from one preamble to another. We examine innovation *within* a country's series of constitutions, as well as innovation *across* constitutions written at a particular time. A key finding is that innovation is correlated regionally and temporally: countries are more likely to innovate when their neighbors do so, and innovations tend to come in global waves.²⁸ Conversely, most of the time, "We" the proverbial "People" do not speak in novel terms, but instead use a global idiom.²⁹ Preambles, like other parts of the constitution, seem to borrow heavily from each other. Part V concludes with some thoughts on the implications of the method and analysis for other areas of law.

25. See, e.g., Const. Chad (1962), pmbl. (containing rights to association, petition, expression, and freedom of the press, and also protections for criminal arrestees and prohibitions on ethnic propaganda).

26. For more on the project, see www.comparativeconstitutionsproject.org (last checked Aug. 2, 2013).

27. Data on file with authors.

28. See text at n. , *infra*.

29. See Section IV, *infra*.

II. CONSTITUTIONAL PREAMBLES: ORIGIN AND VARIATION

A. *Origins*

Constitutional preambles originate in the ancient Greek world, and are discussed extensively in Plato's *Laws*.³⁰ The Athenian Stranger argues that legislators should do more than simply issue a set of commands in the form of law.³¹ Instead, he encourages legislators to add a persuasive element to the code.³² Just as an effective doctor helps explain to the patient the nature of the illness and proposes a remedy, so legislators should use persuasion and explanation to make their laws more acceptable and effective.³³ This suggests a link between the efficacy of a legal text and the presence or absence of a preamble.

Although the concept of preambles dates back to the ancient Greeks, the modern origins of constitutional preambles lie in the British practice of prefacing royal decrees and statutes with short statements describing their purpose.³⁴ For example, the Statute of Anne recites the ills of copyright violations in the publishing industry before launching into the law itself.³⁵ This general pattern of providing a justification for law seems rooted in the need to address the subjects of the law outside of the operative legal language.³⁶ It no doubt shares the same assumption that explanation will help make the law more legitimate and effective.

In the constitutional context, we observe the first preambles in American state constitutions that antedate the U.S. Federal Constitution. All of the thirteen states but Connecticut and Rhode Island (which continued to be governed by Royal Charters) had adopted constitutions before the Convention in Philadelphia, and all of these documents, save

30. Plato, *THE LAWS* 32 (Trevor J. Saunders ed.) (2005).

31. *Id.*

32. Christopher Bobonich, *Persuasion, Compulsion, and Freedom in Plato's Laws*, 41 *CLASSICAL Q.* (1991) (explaining Plato's proposal to attach preambles to particular laws and to the legal code as a whole in order to persuade citizens to act in compliance with the law).

33. Plato, *The Laws*, *supra* n. 30, at 32. Plato explains as follows:

Just as a "free" doctor explains the patient's illness to him, and tries to make him understand the reasons for the measures to be prescribed, in order to gain his cooperation, so the legislator must explain and justify his laws. Hence, every law must be headed by a preamble justifying its provisions; further, the preamble must be rhetorical in nature: it must not only instruct, but persuade.

34. Gary Slapper and David Kelly, *THE ENGLISH LEGAL SYSTEM* (11th ed. 2010) ("In older pieces of legislation, preambles provided a description of the purpose of the Act.")

35. L. Ray Patterson, *The Statute of Anne: Copyright Misconstrued*, 3 *HARV. J. LEGIS.* 223 (1965) (discussing the significance of the Statute of Anne, including the reasoning behind the statute as set out in the preamble).

36. *Id.*

that of Maryland, had included preambles.³⁷ The preambles often referred to Great Britain, and some (such as that of New York) referenced the Declaration of Independence.³⁸ There was a good deal of horizontal and vertical borrowing among and within the states: Vermont's preamble of July 1777 has sections nearly identical to parts of Pennsylvania's preamble in September 1776; the Vermont Constitution 1786 retains the same preamble.³⁹ Thus, we observe copying between states, as well as within the sequence of constitutions in a single jurisdiction.⁴⁰ This pattern foreshadows the national patterns we describe below.

The first national constitution is that of the United States, and the phrase "We the People" has become eponymous with its preamble.⁴¹ Had history been slightly different, it might have been almost the entire preamble. The first draft of the new constitution on August 6, 1787, read only, "We the People of the States of New Hampshire, Massachusetts, Rhode Island and Providence Plantations, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia, do ordain, declare and establish the following Constitution for the Government of Ourselves and our Posterity."⁴² Gouverneur Morris elaborated on this draft to produce the final text, adding a sense of purpose to the People's action: the ordaining of the constitution was "in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity."⁴³ Omitting the names of the individual states was also wise in that it was not a foregone conclusion that each state would actually ratify the Constitution.⁴⁴

37. Gordon S. Wood, *Foreword: State Constitution-Making in the American Revolution*, 24 RUTGERS L.J. 911, 913 (1992) (examining the formation of state constitutions and the creation of the primary conceptions of America's political and constitutional culture).

38. See, e.g., Const. New York (1777), pmb. (quoting the Declaration in its entirety).

39. Paul Gillies, *Not Quite a State of Nature: Derivations of Early Vermont Law*, 23 Vt. L. Rev. 99, 110 ("Whereas, all government ought to be instituted and supported, for the security and protection of the community, as such, and to enable the individuals who compose it, to enjoy their natural rights, and the other blessings.") 7 THE FEDERAL AND STATE CONSTITUTIONS, COLONIAL CHARTERS, AND OTHER ORGANIC LAWS OF THE STATES, TERRITORIES, AND COLONIES NOW OR HERETOFORE FORMING THE UNITED STATES OF AMERICA 3737 (Francis Newton Thorpe, ed., 1909).

40. *Id.*

41. U.S. Const. (1789), pmb.

42. Carol Berkin, *Introduction to "We, the People of the United States": The Birth of an American Identity September 1787*, OAH Magazine of History 53 (July 2006).

43. U.S. Const. pmb.

44. See *U.S. Term Limits v. Thornton*, 514 U.S. 779, 845 (Thomas, J. dissenting)

After the adoption of the U.S. Constitution, it became somewhat standard for constitutions to include preambles, and over eighty percent of all historical constitutions have one.⁴⁵ The first Constitution of Haiti produced after independence, adopted in 1805, used the preamble to invoke religion, freedom, and the general will of the people.⁴⁶ Early constitutional preambles tended to be fairly brief and to identify the entity in whose name the constitution was produced.⁴⁷ For example, the famous Constitution of Cadiz, adopted in Spain in 1812, spoke “[i]n the name of God Almighty, Father, Son, and Holy Ghost, Author and Supreme Legislator of society.”⁴⁸ In the modern era, preambles have become even more popular, and eighty-nine percent (125 out of 141) of constitutions produced after 1990 have a preamble.⁴⁹ Only one national constitution produced after 2003—that of the Maldives adopted in 2008—failed to include a preamble.⁵⁰

B. Dimensions of Variation

Preambles reflect different styles and have many dimensions of variation. One of them is length. In keeping with the idea that constitutions have an expressive character, constitutions produced by revolutionary regimes tend to devote the most energy to preambles, with relatively less attention to the promulgation of rights or the description of government organs. As Table 1 shows, of the ten constitutions in our sample that have preambles of more than one thousand words, five are socialist and another (Iran) is a highly ideological constitution.⁵¹ Almost all on the list are dictatorships.⁵² The Yugoslav Constitution of 1974 had a preamble of over six thousand words, longer than roughly one-fifth of all national constitutions in their entirety!⁵³ This pattern reflects the relative importance of the constitution as a symbol, as

(“Scholars have suggested that the Committee of Style adopted the current language because it was not clear that all the States would actually ratify the constitution.”); Max Farrand, *THE FRAMING OF THE CONSTITUTION OF THE UNITED STATES* 68 (1913); Pauline Maier, *RATIFICATION* (2012).

45. Our data show that eighty percent of all constitutions contain a preamble. Data on file with authors.

46. Const. Haiti (1805), pmb1.

47. .

48. Const. Spain (1812), pmb1.

49. Data on file with authors.

50. See Const. Maldives (2005).

51. See Table 1, *infra*.

52. *Id.*

53. Data from the Comparative Constitutions Project, available upon request.

opposed to a legally operative text, in socialist countries.⁵⁴ One might call these “pre-rambles.”⁵⁵

TABLE 1: LONGEST PREAMBLES

Country	Year	Words
Yugoslavia (Serbia)	1974	6164
Jamaica	1994	3603
Iran (Persia)	1979	3002
Papua New Guinea	1991	2093
Cuba	1952	1825
Liberia	1955	1293
Vietnam	1980	1284
China	1982	1071
Vietnam	1960	1052
Central African Republic	1962	1009
Ethiopia	1987	963
Japan	1889	934
Sierra Leone	1978	901
Madagascar (Malagasy)	1962	896
Syria	2000	894

At the other end of the spectrum, many constitutions have preambles that are under twenty words long.⁵⁶ The shortest in our database is that of Peru in 1826, which simply states, “In the name of God.”⁵⁷ Indeed, the accompanying constitution was not only short in text, but also in lifespan, lasting only two years.⁵⁸ The 1828 replacement expanded the list of invocations to be promulgated: “In the name of Almighty God, the Father, Son, and Holy Ghost, the Supreme Author and Legislator of Society.”⁵⁹ The U.S. preamble, at forty-five words, tends toward the shorter end of the spectrum. The mean length of a preamble is 175 words, and one recent report estimates that seventy-five percent of all preambles contain fewer than three hundred words.⁶⁰

54. Breslin, *supra* n.8.

55. Tom Ginsburg, *But What was the Turnout in Homs?*, CONSTITUTIONMAKING.ORG (Feb. 28, 2012), available at <http://www.comparativeconstitutions.org/2012/02/but-what-was-turnout-in-homs.html> (last accessed Aug. 1, 2013).

56. Data on file with authors.

57. Const. Peru 1826.

58. See Elkins et al., *supra* n. 10, at 219 (listing Peru’s constitutions).

59. Const. Peru 1828. Pmb1.

60. Leah Fiddler, *The Preamble in Constitutional Endurance: Preambular Content and Its*

Some preambles refer to specific historical or religious figures. Jesus Christ, for example, appears in the constitutional preambles of Greece,⁶¹ Ireland,⁶² and Fiji,⁶³ and those of Brunei and Iran mention the Prophet Muhammad.⁶⁴ The Buddha, however, never appears in a preamble.⁶⁵ Vietnam's 1960 preamble referred to Ho Chi Minh, and the 1975 preamble of China referred to Mao Tse-tung, while Cuba's 1976 preamble refers to Fidel Castro.⁶⁶ These are among very few constitutions that refer to contemporaneous living figures. More frequently, socialist constitutions praise historic thinkers such as Augusto Sandino (Nicaragua 1987), Jose Marti (Cuba 1976) and V.I. Lenin (Soviet Union 1977).⁶⁷

Other preambles frequently refer to national historical events and shared grievances, with the goal of marking out a distinct national identity.⁶⁸ Iraq's 2005 preamble, for example, has a long section recognizing specific groups that suffered under Saddam Hussein, along with several specific massacres.⁶⁹ In these instances, the preamble recounts the context in which the constitution was written, and speaks to

Effect on the Lifespan of National Constitutions, Master's Thesis, University of Chicago, 2013, at 16.

61. Const. Greece 1911 (referring to the trinity).

62. Const. Ireland 1937 ("acknowledging all our obligations to our Divine Lord, Jesus Christ, Who sustained our fathers through centuries . . .").

63. Const. Fiji 1997 ("recalling . . . the conversion of the indigenous inhabitants of these islands from heathenism to Christianity through the power of the name of Jesus Christ; the enduring influence of Christianity in these islands and its contribution, along with that of other faiths, to the spiritual life of Fiji . . .").

64. Const. Brunei (1959), pmbl.; Const. Iran (1979) pmbl.

65. In the entire corpus of constitutional texts, the Buddha is found only in references in the constitutions of Sri Lanka and Bhutan. See Const. Bhutan (2005), Second Schedule (mentioning Buddha in the national anthem); Const. Sri Lanka (1978) Art. 9 ("The Republic of Sri Lanka shall give to Buddhism the foremost place and accordingly it shall be the duty of the State to protect and foster the Buddha Sasana . . .").

66. Const. Vietnam 1960, Pmbl. (ho); Const. China 1975, Pmbl. (Mao); Const. Cuba 1976, Pmbl. (Castro)

67. Const. Nicaragua (1987), pmbl. Const. Cuba (1976), pmbl. Const. U.S.S.R (1977). Pmbl.

68. Gary Jacobsohn, *CONSTITUTIONAL IDENTITY* (2010) (discussing concept of identity); Mila Versteeg, *Global Constitutionalism and We the People*, manuscript at 15 (2013) (twenty-five percent of all constitutions now have a preamble expressing national identity, as opposed to five percent of constitutions at the end of World War II).

69. Const. Iraq (2005), pmbl. The following excerpt is an example:

recollecting the darkness of the ravage of the holy cities and the South in the Sha'abaniyya uprising and burnt by the flames of grief of the mass graves, the marshes, Al-Dujail and others and articulating the sufferings of racial oppression in the massacres of Halabcha, Barzan, Anfal and the Fayli Kurds and inspired by the ordeals of the Turkmen in Bashir and the sufferings of the people of the western region...

the citizens and subjects. It forms a kind of “autobiography” of the constitution. A nice example is the following from Bolivia in 2008:

In ancient times mountains arose, rivers moved, and lakes were formed. Our Amazonia, our swamps, our highlands, and our plains and valleys were covered with greenery and flowers. We populated this sacred Mother Earth with different faces, and since that time we have understood the plurality that exists in all things and in our diversity as human beings and cultures. Thus, our peoples were formed, and we never knew racism until we were subjected to it during the terrible times of colonialism. Honor and glory to the martyrs of the heroic constituent and liberating effort, who have made this new history possible.⁷⁰

Because they are communicative acts, we know that some expressions in preambles speak in particularly local idioms. For example, the Afghan inclusion of the King as “father of the nation” in 2004 reflected a particularly Afghan political metaphor: other Islamic political writings rarely make such references, instead drawing on traditions of the King as guardian of Islam.⁷¹ The origin is Abdur Rahman Khan, the great Afghan modernizer of the late nineteenth century.⁷²

In other cases, preambles include language that is directed externally, and may read like a foreign policy statement. Consider the 2012 amendments to the preamble to the North Korean Constitution, which declared that the country had become “an undefeated country with a strong ideology, a nuclear power state, and invincible military power.”⁷³ Adopted in the wake of a failed rocket launch, the statement seems partly designed to reassure locals of the regime’s self-confidence, but also to indicate that the controversial international nuclear stance is here to stay. Both North and South Korea contain references to reunification in their constitutions.⁷⁴ China’s preamble reiterates that Taiwan is part of Chinese territory.⁷⁵ Another example is the preamble to Syria’s

70. Const. Bolivia (2009), pmb.

71. David Edwards, *HEROES OF THE AGE: MORAL FAULT LINES ON THE AFGHAN FRONTIER* 98 (1996) (explaining the origins of the metaphor).

72. *Id.*

73. Jane Perlez, *North Korea Tests the Patience of Its Ally*, N.Y. Times, June 24, 2012 (reporting on North Korea’s actions and public statements under the new leadership of Kim Jong-un); Leon Watson, *We ARE a Nuclear Power: North Korea’s Chilling Claim in New Constitution*, Daily Mail, June 1, 2012 (reporting on the revised text of the North Korean Constitution that puts forth a claim of having nuclear arms).

74. Const. North Korea (2009), pmb. (Kim Il Sung the “lodestar of the fatherland’s reunification”); Const. South Korea (1987) (mission of “peaceful unification of our homeland”).

75. Const. China (1982), pmb. (“Taiwan is part of the sacred territory of the People’s Republic of China. It is the lofty duty of the entire Chinese people, including our compatriots in Taiwan, to accomplish the great task of reunifying the motherland.”).

Constitution of 1973, which speaks on pan-Arab nationalism and the need to fight Zionism.⁷⁶ The 2012 version reflects substantial continuity, self-consciously asserting, “Syria has occupied an important political position as it is the beating heart of Arabism, the forefront of confrontation with the Zionist enemy and the bedrock of resistance against colonial hegemony on the Arab world and its capabilities and wealth.”⁷⁷

As noted in the Introduction, countries differ on the question of whether preambles create enforceable law.⁷⁸ Sometimes countries will change their view in this regard. In the famous case of *Kesavananda v. State of Kerala*,⁷⁹ the Indian Supreme Court cited the preamble extensively in finding that certain constitutional amendments violated the “basic structure” of the Indian Constitution.⁸⁰ The whole structure of the Constitution, in the view of the Court, clearly included the preamble, and the preamble helped inform the deep constraints of the constitutional order, which could not be violated even by an amendment that had been adopted in a procedurally proper manner.⁸¹ The purported ends of the constitutional exercise then can constrain the means, and preambles may become resources that are useful in times of stress to constrain government actors.

C. Tone

One dimension on which preambles may vary is the extent to which they seek to motivate their subjects.⁸² Constitutional language is sometimes meant to inspire.⁸³ Modern computational linguistics has developed tools to analyze this feature systematically, using what is known as sentiment analysis.⁸⁴ Sentiment analysis is a technique that

76. Const. Syria (1973), pmb. (“[A]ny danger from colonialism and Zionism menacing any Arab country is a danger that threatens the entire Arab Nation.”)

77. Const. Syria (2012), pmb.

78. See Orgad, *supra* n.17; Justin Frosini, CONSTITUTIONAL PREAMBLES AT A CROSSROADS BETWEEN POLITICS AND LAW 49-77 (2012) (comparing the United States and France). *See also* 133-35 (South Africa) and 141-46 (Indonesia).

79. AIR (1973) SC 1461, 1503.

80. *Id.*

81. *Id.* at 1503 (“In order to appreciate the real content of the expression ‘amendment of the Constitution’ in Article 368 I must look at the whole structure of the Constitution. The Constitution opens with a preamble . . .”) cited in Frosini, *supra* note 78 at 138.

82. Breslin, *supra* n 8.

83. *Id.*

84. Peter S. Dodds, Kameron D. Harris, Isabel M. Kloumann, Catherine A. Bliss and Christopher M. Danforth, *Temporal Patterns of Happiness and Information in a Global Social Network: Hedonometrics and Twitter* 6 PLoS ONE __ (2011) available at

measures the tone of texts; it can be thought of as an indicator of how “happy” a text is.⁸⁵ To measure sentiment, scholars use a measure of valence, typically ranging in a scale from one to nine, with higher scores indicating “happier” texts.⁸⁶ Using these tools, we are able to rank the most positive and negative preambles. (The technical aspects of this exercise are described in the Appendix.) The rankings are sensitive to technical decisions in the analysis, but one of the most consistently “happy” preambles is that of Bhutan in 2005.⁸⁷ It reads as follows:

We, the people of Bhutan: Blessed with the luminous benedictions of the Triple Gem, the protection of our guardian deities, the wisdom of our leaders, the everlasting fortunes of the Pelden Drukpa and the command of His Majesty the Druk Gyalpo, Jigme Singye Wangchuck; Solemnly pledging ourselves to strengthen the sovereignty of Bhutan, to secure the blessings of liberty, to ensure justice and tranquility and to enhance the unity, happiness and well being of the people for all time; Do hereby ordain and adopt this Constitution for the Kingdom of Bhutan.⁸⁸

Like that of the United States, the preamble speaks of blessings of liberty, but it also adds a Buddhist overlay.⁸⁹ The presence of positive words such as wisdom, happiness, and luminous benedictions help to give this preamble a positive valence.⁹⁰ Whether it actually inspires citizens is beyond the scope of our inquiry, but as a matter of linguistic quality, this is clearly an optimistic document. One can imagine that the Bhutanese public would have positive feelings toward the government that drafted this text, as well as the government empowered by the constitution that follows.

In contrast, one of the most consistently negative preambles in terms of sentiment analysis is that of South Vietnam in 1965.⁹¹ This constitution was promulgated after a military coup, and reads as follows:

The Armed Forces of the Republic of Vietnam, at this time of

<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0026752> (last checked Aug. 1, 2013) (describing sentiment analysis).

85. Id.

86. Peter S. Dodds and Christopher Danforth, *Measuring the Happiness of Large-Scale Written Expression: Songs, Blogs, and Presidents*, 11 J. HAPPINESS STUD. 441 (2010), available at <http://link.springer.com/article/10.1007%2Fs10902-009-9150-9> (treating psychological valence scores as measures of average happiness).

87. Data on file with authors.

88. Const. Bhutan, pmbl.

89. Id.

90. Id.

91. Data on file with authors.

extreme danger for the defense of the right to existence of the people and for the prestige of the country, have undertaken their responsibilities before the people and before history.

In order to carry out their mission, the Armed Forces of the Republic of Vietnam do not seek demagoguery, but rather the realization of a policy of security for the population. After so many sacrifices, the people of Vietnam continue to desire a powerful, peaceful and free nation.

The mission of the Armed Forces of the Republic of Vietnam is to fulfill this strong desire at any cost. To this end, the entire people must unite its will and its action, must direct all its efforts to the front for the repulsion and destruction of the Communist aggressors. To this end, the rear must be stabilized in order to consolidate gradually the basic organs of government so that a tradition of democracy and liberty may have the conditions favorable to its development in revolution and struggle.

Drawing the unhappy lessons of the past, the provisional Constitutional Charter which follows defines the basic institutions of the State for the purpose of fulfilling the objectives set forth above.⁹²

However accurate this language may be as a descriptive matter—after all, it was produced at the height of the Vietnam War—it does not seem likely to inspire. It uses terms like danger, sacrifice, defense, struggle, and unhappy lessons of the past; these are phrases likely to leave the public more scared than excited about the incoming government. Rather than raising up the aspirations of the people, this preamble reflects an exercise in justification by a military reliant on fear to govern.⁹³

D. Preambles as Expressive Texts

In short, preambles are expressive texts that seek to lay out the context of the constitution-making exercise. They are sometimes enforceable, but in other countries not viewed as formally operative.⁹⁴ Preambles frequently invoke historical events and set out a purpose for the constitution.⁹⁵ And they will often seek to rouse and inspire the people with stirring language, though they are not always successful in doing so.⁹⁶

To try to integrate these various dimensions of difference, consider a simple two-dimensional typology of a preamble's language. First,

92. Const.Rep. Vietnam (1965), pmb1.

93. Id.

94. See text at *supra* n. 16-17.

95. See text at *supra* n. 61-70.

96. Id.

preambles differ in the degree to which they focus on particularistic, national elements or universal, international ones.⁹⁷ One might think of this distinction as identifying how “we the people” differ from other peoples, as opposed to explaining how “we the people” fit into the family of other peoples. This dimension tracks national versus international emphases. Second, preambles differ in their emphasis on defining the *subject* of the constitution as opposed to the *ends* of the constitutional project.⁹⁸ The subject of the constitution is the speaker, or the people on whose behalf a constitution is written. The ends are the programmatic goals that the subject pursues through the constitution. To some extent, preambles that focus on the subject of the constitution are driven by a concern for the past, whereas preambles that focus on the ends of the constitution are more focused on goals for the future. Table 2 below summarizes the two dimensions with illustrative examples.

TABLE 2: TYPOLOGY OF PREAMBULAR LANGUAGE

	National-particular	International-universal
Defining the Subject	Historical narratives; We the people	Invocation of God
Defining the Ends	Foreign policy goals (e.g., national reunification); development; provide for the common defense	Human rights treaties; peace; global justice

Obviously, any given preamble can incorporate elements of all four boxes in Table 2. Some, however, are likely to emphasize one or the other element over others. The American preamble speaks in the name of “We the People,” but also defines the ends of the constitutional project: the common defense, the general welfare, and the blessings of liberty.⁹⁹ It seems to fit squarely on the left hand side of the table as a nationalist document. Many other preambles speak in a more universalistic idiom.¹⁰⁰ Whether focused on the specificities of a nation

97. See Table 2 below.

98. Id.

99. U.S. Const. (1787), pmb.

100. See, e.g., Const. Afghanistan (2004), pmb. (“[o]bserving the United Nations Charter and

or its place in a broader international order, many of these examples involve references to, and potentially borrowing from, other countries and legal regimes.¹⁰¹ To explore the extent to which preambles borrow or innovate, we turn to the tools of text processing.

III. INNOVATION AND BORROWING: MEMES IN CONSTITUTIONS

One important dimension on which preambles differ is the extent to which they innovate, as opposed to borrow. To analyze innovation and borrowing, our approach is to begin with a corpus of 476 constitutional preambles drawn from a larger database of over 900 constitutions found in the Comparative Constitutions Project.¹⁰² The sample includes preambles from 171 different countries.¹⁰³ As mentioned in Part I, roughly twenty percent of all national constitutions do not have preambles, and so were excluded from the sample.¹⁰⁴ Our dataset thus includes over seventy percent of all preambles ever written, excluding mainly those that were unavailable in English.¹⁰⁵

One way to think about the inter-relationships among legal texts is to analogize to biology, and to treat legal language as a form of genetic material. This approach is less novel than it might sound. Comparative law scholars, for example, have long studied the borrowing and transplantation of legal concepts from one country to another, tracing them back to Roman law or even earlier.¹⁰⁶ They also refer to “families” of law.¹⁰⁷ These metaphors suggest this project is like tracing the genealogy of law, in which case two questions rise to the fore: first, what are the sources of innovation (or genetic mutation) in the pool of texts; and second, how does borrowing occur? In biology, genes can be transferred in different ways.¹⁰⁸ In most species, we can assume a good deal of genetic similarity between parents and children: genes are transferred “vertically” through a sequence of related individuals.¹⁰⁹ In a smaller number of species, genes are transferred

respecting the Universal Declaration of Human Rights”).

101. See, e.g., *infra* n. 138.

102. Zachary Elkins, Tom Ginsburg and James Melton, *The Comparative Constitutions Project*, available at www.comparativeconstitutionsproject.org [last checked October 27, 2012]

103. Data on file with authors.

104. *Id.*

105. *Id.*

106. Alan Watson, *LEGAL TRANSPLANTS* (1974) (arguing that all legal rules are borrowed).

107. Hein Kotz and Konrad Zweigert, *Introduction to Comparative Law* 66 (2nd ed. 2000) (legal families of the world).

108. Jeffrey C. Pomerville, *ALCAMO'S FUNDAMENTALS OF MICROBIOLOGY* 262 (2010) (describing vertical and horizontal gene transfer).

109. *Id.*

“horizontally” among contemporary individuals who are in close proximity.¹¹⁰ By analogy, constitution writing unfolds in a temporal sequence in which earlier documents can provide “genetic material” to later ones. Any given constitutional text will possess an array of “genetic” influences. Some of these will be “vertical,” in which a country borrows from its own previous constitution in writing a new one. Other influences will be horizontal, in which countries borrow from each other. If legal texts such as preambles are also, in some sense, a form of genetic material, do they tend to involve transfers across countries, within countries, or both? This Part conducts such an analysis.

To examine particular trajectories of language, we begin by identifying common phrases in constitutional preambles using N-gram analysis. N-grams are multiple word phrases of length N.¹¹¹ We compiled lists of the most common phrases of two, three, four and five words (2-, 3-, 4-, and 5-grams), and then culled the list for duplicates as well as phrases that lacked substantive meaning.¹¹² From this process, we generated a list of fifteen phrases most commonly found in constitutions.¹¹³ Several of the most common phrases are specifically socialist in nature; a few are the names of international treaties mentioned in the constitutional preambles; yet others are general phrases invoking the actors in whose name the constitution is produced (God, the People, and representatives) or values such as the rule of law.¹¹⁴

Table 3 provides descriptive frequencies of these phrases over time.¹¹⁵ “We the People” is the most common phrase overall; but interestingly, this is a relatively late development.¹¹⁶ It has become the most popular phrase only in the post-World War II era of

110. R. Jain, M. C., Rivera and J. A. Lake, *Horizontal Gene Transfer Among Genomes: The Complexity Hypothesis*, 96 PROC. NATL. ACAD. SCI. U.S.A. 3801 (1999) (providing a theory of horizontal gene transfers).

111. *Id.*

112. We decided not to “trim” the phrases of conjunctions or articles such as “the” or “a,” which may be part of certain common constitutional phrases (e.g., “we the people”). This left us with certain phrases, however, that were substantively meaningless. Thailand has eighteen constitutions, of which many include the phrase “the constitution of the kingdom of Thailand.” This phrase has six different 2-grams, so including it in the analysis would distort its presence in the corpus.

113. See Table 3.

114. *Id.*

115. *Id.*

116. *Cf.* Adam Liptak, ‘We the People’ Loses Followers, N.Y. TIMES, Feb. 7, 2012, at A1 (discussing David Law and Mila Versteeg article, *infra* note 118).

decolonization.¹¹⁷ This supplements recent research on the decline of U.S. constitutional influence abroad, based on a study of constitutional rights.¹¹⁸ In contrast with the finding that the American style of a Bill of Rights is less influential, we find that the paradigmatic phrase of the American preamble has increased in popularity over time.¹¹⁹

Before 1914, constitutions were likely to be concluded under the authority of “We the Representatives of the People” (nearly ten percent of preambles); and even more likely to be produced in the Name of God (twenty percent of preambles).¹²⁰ The “Representatives of the People” obviously implies a republican mode of producing constitutions; “We the People” makes much more explicit the notion that the sovereign power, the *pouvoir* constituent, is located in the people themselves.¹²¹ One might view this development as reflecting a trend toward more direct modes of democratic governance.¹²²

Interestingly, God suffered a loss in popularity for most of the twentieth century before staging a comeback after 1989.¹²³ God’s decline corresponded with a rise in socialist phraseology, as expressed in such phrases as “working people,” “dictatorship of the proletariat,” and “communist party.”¹²⁴ The fall of communism seems to have triggered God’s comeback. Again, we observe that global social and political changes have a distinct impact on the contents of national constitutional texts, including in preambles.

A good illustration of the externally directed nature of preambles is the degree to which they incorporate or reference international instruments. Frosini notes that twenty-two of the preambles of constitutions currently in force refer to the Universal Declaration of Human Rights.¹²⁵ Several African preambles mention the Charter of the

117. Id.

118. David S. Law & Mila Versteeg, *The Declining Influence of the United States Constitution*, 87 N.Y.U. L. REV. 762, 762 (2012) (arguing that “other countries have, in recent decades, become increasingly unlikely to model either the rights-related provisions or the basic structural provisions of their own constitutions upon those found in the U.S. Constitution”); *but see* Zachary Elkins, James Melton and Tom Ginsburg, *Comments on Law and Versteeg’s Declining Influence of the U.S. Constitution*, 87 N.Y.U. L. Rev. 2088 (2012) (arguing that there has been no decline in influence).

119. See Table 3.

120. Id.

121. See generally Larry Kramer, *THE PEOPLE THEMSELVES* (2003).

122. See generally Samuel Huntington, *THE THIRD WAVE* (1993) (discussing the spread of democracy over decades).

123. See Table 3.

124. Id.

125. Justin O Frosini, *supra* note 17 at 48.

Organization of African Unity.¹²⁶ The U.N. Charter, the International Covenant on Civil and Political Rights, International Covenant on Economic and Social Rights, the Convention on the Elimination of All Forms of Discrimination Against Women, the African Charter of the Rights of Man and Peoples, and the French Declaration of the Rights of Man also appear in various preambles.¹²⁷ One recent study suggests that twenty-six of all preambles refer to an external document of some kind or another.¹²⁸ This is surely remarkable for documents that are supposed to reflect putatively national values.

In our N-gram analysis, it is noteworthy that the regional African Charter on Rights and Freedoms (twenty-four preambles) is more likely to be invoked than the Universal Declaration of Human Rights (twenty-three).¹²⁹ It is also interesting that “Rule of Law” is a dominant phrase in the current era.¹³⁰ The “Rule of Law revival” is facilitated by the vagueness of the concept, making it attractive to both authoritarians and democrats alike.¹³¹ Perhaps this explains its expansion in popularity from four percent to twenty percent of constitutions between the early and current periods of constitution making.¹³² Remarkably, the overall frequency of these memes is increasing in time.¹³³ This suggests that constitutions are becoming more similar to each other in terms of certain idioms.

We should make clear that we are *not* equating the adoption of similar phrases as indicating that the *meaning* of these phrases is constant across countries. Indeed, it is likely that the particular nuances and meanings attached to language vary widely depending on the context.¹³⁴ Meanings of terms can also change within a particular legal system over time.¹³⁵ Global terms, in other words, can have local

126. Id.

127. Id.

128. Leah Fiddler, *The Preamble in Constitutional Endurance: Preambular Content and Its Effect on the Lifespan of National Constitutions*, Master's Thesis, University of Chicago, 2013, at 16.

129. See Table 3.

130. Id.

131. Thomas Carothers, *The Rule of Law Revival*, 77 *FOREIGN AFFAIRS* 95 (March/April 1998) (questioning the purported ability of rule of law initiatives quickly to cure the problems of countries in transition).

132. Id.

133. Id.

134. Kent Bach, *Context Dependence (Such as it is)*, in *THE CONTINUUM COMPANION TO THE PHILOSOPHY OF LANGUAGE*, M. GARCIA-CARPINTERO AND M. KÖLBEL, EDS., 2012)

135. See e.g., Cass R. Sunstein, *Why Does the American Constitution Lack Social and Economic Guarantees?*, 56 *SYRACUSE L. REV.* 1, 10-11 (2005) (meaning of constitutional text changes over time).

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implications, but the very use of the common terms suggests a certain amount of interdependence in drafting processes.¹³⁶ Drafters seem to be looking to models when they begin the process of producing a preamble.

136. See generally Vicki C. Jackson, *Constitutional Engagement in a Transnational Era* 255-80 (2010) (globalization can be expected to yield both convergences and divergences among constitutions).

TABLE 3: MOST POPULAR PHRASES IN CONSTITUTIONAL PREAMBLES

Phrase	First mention	Total No. (%) of preambles N=476	1789-1914 N=94	1915-1945 N=49	1946-89 N=215	1990- N=118
We the people	United States Of America 1789	70 (14.7%)	4 (4.3%)	3 (6.1%)	33 (15.4%)	30 (25.4%)
Rule of law	Bavaria 1818	52 (10.9%)	4 (4.3%)	2 (4.8%)	20 (9.3%)	26 (22%)
Rights of man	Haiti 1805	47 (10%)	1 (1%)	1 (2%)	32 (14.9%)	14 (11.9%)
Economic and Social	France 1949	43 (9%)	0	0	21 (9.8%)	16 (13.6%)
Name of god	Spain 1808	43 (9 %)	19(20.2%)	3 (6.1%)	10 (4.6%)	11 (9.3%)
We the representatives	Venezuela 1830	34 (7.1%)	9 (9.6%)	5 (10.2%)	15 (7%)	5 (4.2%)
African Charter	Guinea 1990; Benin 1990	24 (5%)	0	0	16 (7.4%)	8 (6.8%)
Exploitation of Man	Russia 1918	24 (5%)	0	5 (10.2%)	13 (6%)	6 (5.1%)
Universal Declaration of Human Rights	Rwanda 1962	23 (4.8%)	0	0	15 (7%)	7 (5.9%)
Give to ourselves	Iceland 1920	21 (4.4%)	0	2 (4.8%)	11 (5.1%)	8 (6.8%)
Principles of democracy	Portugal 1838	20 (4.2%)	1 (1%)	0	13 (6%)	6 (5.1%)
Working people	Mongolia 1924	19 (3.9%)	0	4 (8.2%)	13 (6%)	2 (1.7%)
Communist party	Romania 1938	17 (3.6%)	0	3 (6.1%)	13 (6%)	1 (0.9%)
Charter of the United Nations	South Korea 1948	15 (3.1%)	0	0	11 (5.1%)	3 (2.5%)
Dictatorship of the proletariat	Russia 1918	7 (1.4%)	0	3 (6.1%)	4 (1.9%)	0

The existence of certain common phrases in preambles implies that there is more interdependence among constitutions than the national expression thesis might suggest. If every nation is invoking the same values, then constitutions may be less local than otherwise assumed. Indeed, there is some evidence to suggest that preamble writing, for some countries at least, has always been an internationally oriented act. Chile's 1822 Constitution, for example, explicitly names the United States as a model in its preamble.¹³⁷ Socialist constitutions often had this feature, expressing thanks for the leadership of the Union of Soviet Socialist Republics, and solidarity with other socialist nations.¹³⁸

137. Const. Chile, introductory material from the president (referring to drafters having before them "the best models, especially the classic country of freedom, the United States").

138. Const. Poland, 1952 (referring to the leading role of the working class based on "the historic experience of victorious socialist building in the Union of Soviet Socialist Republics, the first State of workers and peasants"); Const. China, 1954 ("China has already built an

Constitution-makers thus use the preamble to communicate their attitudes toward particular foreign countries.

This reminds us that constitutions are statements not only on the national plane, but also on the international plane.¹³⁹ The contents of preambles in an era of global interdependence may be as likely to be addressed to outsiders as to locals.¹⁴⁰ For example, Beau Breslin notes that many Eastern European preambles seem to be directed not only to the local polity, but also to the place of the sovereign community in the broader international order.¹⁴¹ In turn, if constitutional texts are internationally directed statements, international actors may have something to say about the drafting choices.¹⁴²

One telling example here concerned the Constitution of Hungary that took effect in early 2012.¹⁴³ A nationalist party that sought to consolidate its power produced this document, and many criticized the Constitution as reflecting illiberal values.¹⁴⁴ The Constitution includes a nationalist preamble in the name of ethnic Hungarians everywhere (not simply citizens of the state, whether Hungarian or not.)¹⁴⁵ The Venice Commission of the Council of Europe, an international body that monitors the progress of democracy and law in the region, specifically objected to the preamble of the Hungarian Constitution.¹⁴⁶ The Commission acknowledged that preambles are political declarations and that the Hungarian text drew on aspects of Hungarian tradition and history.¹⁴⁷ The Commission also noted, however, that the evocation of

indestructible friendship with the great Union of Soviet Socialist Republics and the People's Democracies; and the friendship between our people and peace-loving people in all other countries is growing day by day. Such friendship will be constantly strengthened and broadened."); Const. Bulgaria 1971 (noting "cooperation and mutual assistance with the Union of Soviet Socialist Republics and the other countries of the socialist community"); Const. Czechoslovakia 1948 (referring to friendship with the Union of Soviet Socialist Republics); Const. Rumania 1952 (referring to alliance with the Union of Soviet Socialist Republics).

Jackson, *supra* n.136

140. Beau Breslin, FROM WORDS TO WORLDS 60 (2009) (examining the functions of constitutional texts, which includes the conveyance of aspirations).

141. *Id.*

142. [Please add a citation for this assertion.]

143. Const. Hungary (2012).

144. See, e.g., Paul Krugman, *1984—Hungarian Edition*, N.Y. Times, June 17, 2013, available at http://krugman.blogs.nytimes.com/2013/06/17/1984-hungarian-edition/?_r=0 (last checked Aug. 2, 2013).

145. Const. Hungary (2012), pmbl.

146. Venice Commission, *Opinion on the New Constitution of Hungary*, (June 2011) Paras. 31-40 (citing the preamble as a cause for questions and a reason for objection due to the "relevance of the Preamble for the Constitution's interpretation and some potentially problematic statements and terms contained therein").

147. *Id.*

the “Hungarian nation” as the sovereign authority was problematic, as it read this language in conjunction with other language to speak on behalf of Hungarians everywhere.¹⁴⁸ It suggested that such a broad reading might lead to problems with neighboring states with large populations of ethnic Hungarians.¹⁴⁹ The preamble, it seems, was *too* nationalistic for international tastes.¹⁵⁰

This incident suggests that the preambles are in fact internationally embedded documents. They are designed to express the values of the local people, but only within certain disciplined limits. Even the most quintessentially local parts of constitutions then speak in an international idiom, though they may do so to express highly nationalistic sentiments.¹⁵¹

IV. SOURCES OF INNOVATION

Having established the internationally embedded nature of preambles, we now wish to examine the circumstances under which countries choose to innovate in their preambles. We distinguish in this section between “vertical innovation,” referring to terms used for the first time in a country’s sequence of constitutions, and “horizontal innovation,” referring to terms used for the first time among the entire set of countries with constitutional preambles. To conduct the analysis, we use a method that compares the vocabularies of different preambles. We first calculated the Term Frequency Inverse Document Frequency (TFIDF) score of each term in the entire corpus of preambles. TFIDF is a standard statistic in computational linguistics that reflects the importance of any given word to a document in a larger set of documents.¹⁵² The TFIDF value increases with the number of times a word appears in the document, but is offset by the frequency of the word in the broader corpus, to control for the presence of commonly used words.¹⁵³ For example, if a word is frequently used in a particular preamble but not in other preambles (such as the name of the country), the term would have a high TFIDF score.¹⁵⁴ A term like “constitution,” which probably appears in most preambles, would have a lower

148. Id.

149. Id.

150. Id.

151. Supra sections III-IV.

152. See e.g., TEXT MINING: APPLICATIONS AND THEORY 11-12 (M.W. Berry and J. Kogan, eds., 2010) (describing term frequency).

153. Christopher D. Manning, Prabhakar Raghavan and Hinrich Schütze, INTRODUCTION TO INFORMATION RETRIEVAL 118 (2008).

154. Id.

score.¹⁵⁵ Once we calculated individual TFIDF scores for each term, we discarded terms that had less than the mean TFIDF value. This produced a “vocabulary” with 1,605 terms likely to be distinctive within the entire set of preambles.

A. Vertical Innovation

Next, for a given constitution, we computed the number of unique terms in the preamble that were also in the vocabulary.¹⁵⁶ We then produced two “vertical innovation scores”: one expressing the fraction of unique terms of a constitution that did not appear among the unique terms of the previous constitution in place in that country [innovation_last]; and another that expressed the same fraction that were new relative to all constitutions in a country’s history [innovation_all]. This technique provides us with an indicator of which preambles stand out as marking the sharpest breaks from previous ones in a country’s history. Using a biological metaphor, we might conceive of these innovations as influential mutations within a single species. Note again that this method examines what we might call “vertical innovation” in a country’s history rather than the “horizontal innovation,” which we discuss below, that occurs within the universe of preambles of *other countries*.

The TFIDF scores tell us that virtually all preambles in a sequence of a given country’s constitutions demonstrate *some* level of vertical innovation. We found only eight that did not introduce new terms from the immediately preceding preamble.¹⁵⁷ 178 preambles, on the other hand, did not share *any* unique words with the preceding preamble and so had an innovation score of 1. (The figures are comparable for innovation compared with the entire sequence in a country’s history.) In other words, preambles do tend to mark breaks with the past: they are loci of innovative expression by constitutional drafters. The mean innovation score for a preamble relative to its predecessor is .78; relative to all earlier preambles in the country’s history, the mean innovation score is .71.

But there is variation in the *degree* to which preambles innovate. To consider an example, China has had eleven operative constitutions since

155. Id.

156. Vocabulary is an analysis-specific set of terms found in a corpus. See, e.g., Berry and Kogan, *supra* n.152, at 4 (describing vocabulary).

157. These were Sierra Leone 1991; Vanuatu 1980; El Salvador 1886; Nigeria 1999; Greece 1944; Montenegro 2006; Greece 1935; and Nigeria 1989.

the Chinese revolution of 1911.¹⁵⁸ The establishment of the People's Republic in 1950, however, marked a sharp political break and led to more innovation relative to earlier constitutions. The preamble to the 1954 Constitution shared few unique words with that of the 1947 Constitution, which is hardly surprising given that it came after the conclusion of the country's civil war.¹⁵⁹ But the preambles of every Chinese Constitution from 1954 through 1982 (a total of four) have mentioned the terms proletariat, revolution, and socialism.¹⁶⁰ The 1954 Constitution mentioned the friendship of the Soviet Union, perhaps a necessary step in the early 1950s but anachronistic after the Sino-Soviet split of the early 1960s.¹⁶¹ The 1975 Constitution dropped this reference, but added specific mention of the Cultural Revolution.¹⁶² The 1978 Constitution retained that reference and added language about the liberation of Taiwan.¹⁶³ By 1982, the Cultural Revolution had come to be viewed as a major policy error, and so the reference was deleted, but the language about the liberation of Taiwan remained.¹⁶⁴ The 1982 Constitution also sought to emphasize China's multiethnic nature, and it criticized "Han chauvinism."¹⁶⁵ Each of the four constitutions of the People's Republic of China thus featured innovations in response to major domestic policy changes; each also retained some continuity with the past.

Are there particular factors that lead countries to make sharper breaks from earlier constitutional text? To explore this question, we produced a multivariate regression in which the dependent variable is the degree of innovation, as captured in our normalized TFIDF scores. We consider two different forms of innovation: innovation relative to the previous constitution in the country's sequence, and innovation relative to all the country's constitutions. To determine if innovations correlated with international factors, we included the average levels of innovation for all countries globally in the five years before the constitution's enactment.¹⁶⁶ In other words, we are testing whether the levels of

158. Andrew Nathan, CHINESE DEMOCRACY 107-110 (1994) (summarizing rights provisions in nine texts); *see also* Elkins et al., *supra* note 10, at 216 (listing dates).

159. It had an innovation score of .95. Data on file with authors.

160. Const. China (1975), pmb.; Const. China (1978), pmb.; Const. China (1981), pmb.

161. *See generally* Lorenz M. Lüthi, THE SINO-SOVIET SPLIT: COLD WAR IN THE COMMUNIST WORLD (2008).

162. Const. China (1975), pmb.

163. Const. China (1978), pmb.

164. Const. China (1982), pmb.

165. *Id.*

166. In a robustness check, we experimented with lags of two to five years as well, with substantively similar results.

innovation within nation-states are globally or regionally contingent. For independent variables, we examine factors that mark “shocks” in a country’s constitutional history.¹⁶⁷ These include external crises, such as defeat in war and financial crises.¹⁶⁸ As control factors, we included the level of democracy, the year, the age of the state, and level of wealth in some specifications.¹⁶⁹

The results, presented in Figure 1, suggest that the later the constitution is written, the less innovation, which is of course logical because there are more “available” words earlier in a country’s history of preambles, but the result does not approach statistical significance.¹⁷⁰ Older states also innovate less, perhaps because political idiom is already well established.¹⁷¹ Neither democracy nor wealth correlated with innovation.¹⁷² Only some crises predict statistically significant levels of innovation: defeat in war is less likely to prompt innovation, while economic crisis is associated with higher levels of innovation.¹⁷³

Notably, the largest predictors of innovation, both relative to the immediately previous constitution and to all previous constitutions, were the average levels of innovation found around the globe¹⁷⁴ and region¹⁷⁵ in the immediately prior year.¹⁷⁶

The story is a simple one: countries innovate when neighbors innovate, and innovations come in global waves. Again using a biological metaphor, this suggests that the local and global ecosystems are an important source of genetic mutation. Disruptions in the

167. For more on this framework, see Zachary Elkins, Tom Ginsburg and James Melton, *THE ENDURANCE OF NATIONAL CONSTITUTIONS* 104-19 (2009) (contrasting design and environmental factors in risks of constitutional demise).

168. These variables are drawn from Banks, Arthur S. 2001. *Cross National Time Series Data Archive*. Available at <http://www.databanks.sitehosting.net/Default.htm>.

169. State age is drawn from Paul R. Hensel, *International Correlates of War: Colonial History Data Set, Version 0.4*. Last Modified: June 13, 2006. Available at <http://garnet.acns.fsu.edu/~phensel/icow.html>. We experimented with various measures of democracy, including the POLITY database, Inter-University Consortium for Political and Social Research. *Polity II Data*; and the new Unified Democracy Score (UDS) measure, which aggregates other measures. See Daniel Parnstein, Steven Meserve, and James Melton, *Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type*, 18 *Political Analysis* (2010). Available at <http://www.unified-democracy-scores.org/>

170. See Figure 3.

171. Id.

172. Id.

173. Id.

174. The variable names are `innovation_last` and `innovation_all`.

175. The variable names are `innovation_last_region` and `innovation_all_region`.

176. When both global and regional effects are included, the regional effects are consistently the strongest, but the two variables are collinear, so we do not report the results here.

ecosystem tend to lead to efforts to try new things, use new language, and develop new political vocabularies.

The fact that innovations in other countries predict innovation in any particular nation suggests that innovation is temporally clustered, so that particular years may have been especially fruitful for constitutional innovation.¹⁷⁷ Table 4 below lists, for years in which more than three constitutions were promulgated, the top ten and bottom ten years for average levels of constitutional innovation.¹⁷⁸ Periods of great innovation seem to include the 1960s and 1821.¹⁷⁹ The 1990s and 2000s were not a period of great innovation despite the fact that many new constitutions were written in that period.¹⁸⁰ Experimenting with other lags suggests that the early 1940s were a period of low innovation, but the late 1940s were a period of high innovation, with 1948 being particularly important.¹⁸¹

This is consistent with the conventional wisdom that the period after World War II marked a sharp break in the structure of global and national governance.¹⁸² The 1960s, too, were an era of social ferment in which decolonization processes required new leaders to create constitutional structures that marked their independence.¹⁸³ The end of the Cold War, in contrast, was argued by some to mark the “end of history,” in which political models had settled into a single liberal democratic framework.¹⁸⁴ Perhaps the decline in innovation reflects this ideological consensus.

FIGURE 1: REGRESSION ANALYSIS PREDICTING VERTICAL INNOVATION

VARIABLES	(1) innovation_ last	(2) innovation_last_re gion	(3) innovation _all	(4) innovation_all_re gion
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177. See Table 4.

178. The orders change slightly depending on the length of the lag, which we varied from one to five years.

179. See Table 4

180. *Id.*

181. *Id.*

182. See, e.g., Louis Henkin, *THE AGE OF RIGHTS* (1990) (noting that World War II marks a sharp break).

183. Charles Parkinson, *BILLS OF RIGHTS AND DECOLONIZATION* (2009) (describing constitution-making processes).

184. Francis Fukuyama, *THE END OF HISTORY AND THE LAST MAN* (1992) (advancing the “end of history” argument).

201x]	<i>Preambles</i>				129
Year	-0.000518 (0.000623)	-0.000411 (0.000481)	-0.000379 (0.000715)	-0.000431 (0.000526)	
State age	-0.000168*	-9.51e-05	-	-6.67e-05	
			0.000347* **		
	(9.63e-05)	(7.83e-05)	(0.000110)	(8.98e-05)	
Economic crisis	0.109** (0.0511)	0.0324 (0.0416)	0.129** (0.0579)	0.0406 (0.0455)	
Defeat in war	-0.156* (0.0892)	-0.119* (0.0720)	-0.174* (0.101)	-0.151* (0.0789)	
avg_1yr_innovation_last	0.994*** (0.166)				
avg_1yr_innovation_last_region		0.972*** (0.0751)			
avg_1yr_innovation_all			0.923*** (0.148)		
avg_1yr_innovation_all_region				0.959*** (0.0679)	
Constant	1.024 (1.289)	0.840 (0.968)	0.816 (1.464)	0.885 (1.054)	
Observations	222	222	222	222	
R-squared	0.202	0.476	0.239	0.533	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

TABLE 4: YEARS OF GREATEST AND LEAST HORIZONTAL INNOVATION

Top Ten Years for Avg. Innovation [innovation_lag_inf]	Bottom Ten Years for Avg. Innovation [innovation_lag_inf]
1821 (.96)	1999 (.32)
1919 (.95)	2007 (.35)
1963 (.90)	1945 (.38)
1964 (.90)	1904 (.40)
1968 (.89)	1858 (.48)
1960 (.88)	2004 (.48)
1961 (.88)	2008 (.49)
1962 (.87)	1986 (.49)
1969 (.85)	1998 (.54)
1967 (.85)	2002 (.54)

B. Horizontal Innovation

Next, we examine if there is what we might call “horizontal” innovation. Returning to the biological analogy, is there horizontal gene transfer across constitutional texts? That is, do constitutions, in a particular time and place, borrow from those in other countries available

around the same time? To determine this, we examine the TFIDF scores for individual preambles relative to those of other constitutions in force in the year in which the preamble was adopted.¹⁸⁵ Table 5 below shows the most and least innovative constitutional preambles using this method.

TABLE 5: MOST AND LEAST HORIZONTALLY INNOVATIVE PREAMBLES

(scores in parentheses)

Rank	Most innovative	Least innovative
1	Soviet Union 1936 (7.14)	Greece 1975 (.01)
2	Poland 1921 (5.7)	Poland 1992 (.02)
3	Iran 1989 (4.97)	Sierra Leone 1991 (.02)
4	Colombia 1886 (4)	Trinidad & Tobago 1962 (.02)
5	Bavaria 1808 (3.78)	Greece 1952 (.02)
6	Philippines 1935 (3.71)	Kiribati 1979 (.03)
7	France 1848 (3.6)	Brunei 1959 (.03)
8	Egypt 1923 (3.58)	Mongolia 1992 (.03)
9	Lithuania 1938 (3.08)	Uganda 1971 (.03)
10	Soviet Union 1977 (2.63)	Guyana 1980 (.03)

We believe these patterns make intuitive sense and are consistent with our other findings.¹⁸⁶ Innovation in the preamble seems to be a feature of highly ideological constitutions: the Soviet documents of 1936 and 1977 and Iran's revolutionary constitution of 1989 score high in terms of innovation.¹⁸⁷ The countries that tend not to innovate relative to their contemporaries are either small (Guyana and the island nations) or new democracies like Greece in 1975, and Poland and Mongolia in 1992.¹⁸⁸ Sierra Leone's preamble of 1991 has low scores in terms of both horizontal and vertical innovation, that is, new words relative to other countries' constitutions and to the previous Sierra Leonean constitution.¹⁸⁹ Unreported regression analysis also suggests that older states have marginally higher propensities to introduce new

185. Again, we experiment with various lags, and find substantively similar results, with some exceptions.

186. See section III, *supra*.

187. See Table 5.

188. Greece is consistently at the top of the list of "least innovative" regardless of lags, but this is an artifact of its brevity: the preamble is only eleven words long. See Const. Greece (1975), preamble: "In the name of the Holy and Consubstantial and Indivisible Trinity."

189. Data on file with authors.

words into the global corpus.¹⁹⁰ New states, by implication, seem likelier to copy from existing models. This seems consistent with intuitions: new states are engaged in complex forms of signaling to the outside world, and hence seem likely to wish to conform to global norms.¹⁹¹

As with the question of vertical innovation, we can use regression analysis to identify the extent to which countries innovate “horizontally,” that is, relative to other countries in the system. We again conduct a multivariate regression in which the dependent variable is the degree of innovation, as captured in our normalized TFIDF scores, but this time focus on the degree of innovation relative to other constitutions in force at a given time.¹⁹² The variable cross-innovation captures the fraction of unique terms in a preamble that did not appear in any other preamble in force at the same time (or at various specified lags). Again, we control for time, age of the state, and external shocks of financial crisis and defeat in war.¹⁹³

We present the results in Figure 2.¹⁹⁴ The first column represents the level of cross-innovation in the same year the preamble is adopted; the other columns represent innovation relative to constitutions in force one, five, and ten years prior.¹⁹⁵ As with vertical innovation, we find that the later the constitution is written, the less innovation; in these models, the results are statistically significant.¹⁹⁶ The only other results that stand out demonstrate that average levels of cross-innovation are correlated with horizontal innovation in individual countries.¹⁹⁷ That is, the probability that a country will introduce new terms into the global discourse of preambles is correlated with the probability that other countries will do the same.¹⁹⁸ This result holds at various lags of average levels of cross-innovation: one-year, five-year, and ten-year averages.¹⁹⁹ We again observe that innovation is temporally clustered, with innovation being likely to appear in particular periods.²⁰⁰

190. Id.

191. Compare Tom Ginsburg, Zachary Elkins and Svitlana Chernykh, *Commitment and Diffusion: Why Constitutions Incorporate International Law*, 2008 U. ILL. L. REV. 201 (2008) (arguing that new democracies are more likely to incorporate international law).

192. See Section IV.A. (analyzing vertical innovation).

193. Id.

194. See Figure 2.

195. Id.

196. Id.

197. Id.

198. Id.

199. Id.

200. Id.

By implication, this suggests that there are long periods in which innovation is *unlikely* to occur. Preambular innovation is something like punctuated equilibrium within an ecosystem.²⁰¹ For long periods of stasis, countries borrow from one another and restrict their language to a set of common terms and phrases. Then, at particular junctures (likely associated with global conflicts), the equilibrium becomes disrupted and a period of innovation ensues. This eventually generates the “new normal” in terms of the set of language that constitutional drafters use.

Figure 3 illustrates the patterns by plotting average levels of innovation over time.²⁰² For vertical innovation, which captures the extent to which countries introduce new terms into their preambles, the high points seem to occur in the period after World War I and between 1948 and the mid-1960s.²⁰³ For horizontal innovation, which captures innovation relative to other countries, the mid-1960s are also a high point.²⁰⁴ Note that the overall levels of innovation are quite low—as a matter of logic, it is rarer for a country to introduce a new term globally than it is for a country to introduce a new term within its own legal system. Every global innovation is a local innovation, though the converse is not the case.

FIGURE 2: REGRESSION ANALYSIS PREDICTING HORIZONTAL INNOVATION

VARIABLES	(1) ci_lag0	(2) ci_lag1	(3) ci_lag5	(4) ci_lag10
Year	-0.00124 (0.000930)	-0.00537*** (0.00121)	-0.00397*** (0.00129)	-0.00371*** (0.00130)
State age	0.000176 (0.000140)	0.000128 (0.000189)	0.000119 (0.000186)	0.000177 (0.000186)
Economic crisis	0.0596	0.0298	0.0536	0.0761

201. Stephen Jay Gould & Niles Eldredge, *Punctuated Equilibria: The Tempo and Mode of Evolution Reconsidered*, 3 PALEOBIOLOGY 115 (1977) (advancing the developing model).

202. The figures begin in 1840 because there are very high levels of innovation in the earlier period, which biases the presentation.

203. See Figure 3.

204. Id.

201x]	<i>Preambles</i>				133
	(0.0749)	(0.102)	(0.0993)	(0.0988)	
Defeat in war	-0.0440	-0.170	-0.142	-0.155	
	(0.131)	(0.175)	(0.173)	(0.172)	
ci_lag0_avg	1.042***				
	(0.0751)				
ci_lag1_avg		0.244***			
		(0.0777)			
ci_lag5_avg			0.967***		
			(0.232)		
ci_lag10_avg				1.951***	
				(0.448)	
Constant	2.425	10.89***	8.104***	7.533***	
	(1.853)	(2.398)	(2.564)	(2.599)	
Observations	222	222	222	222	
R-squared	0.560	0.204	0.230	0.235	

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

FIGURE 3A: AVERAGE LEVELS OF VERTICAL INNOVATION OVER TIME

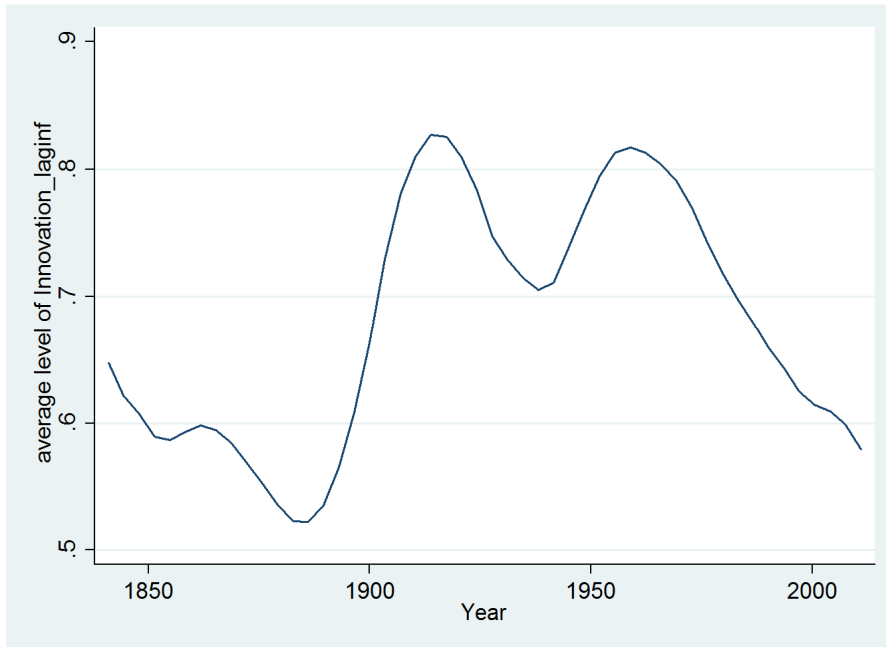
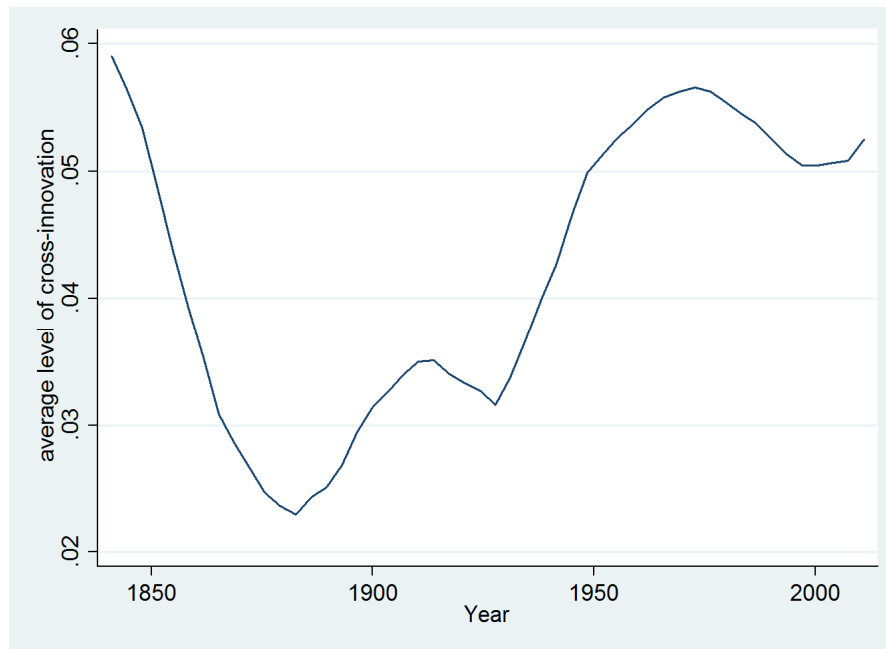


FIGURE 3B: AVERAGE LEVEL OF HORIZONTAL INNOVATION OVER TIME



V. CONCLUSION

The journalist Bill Moyers recently described “We the People” as the most powerful political statement in the history of the world.²⁰⁵ Preambles embody the constitutional project in which “we the people” articulate the fundamental principles under which we shall be governed.²⁰⁶ Some might view the preamble as the local part of the document: it is the place where drafters recount the country’s history, ideological dispositions, and most fundamental values.²⁰⁷ Yet, despite this widely understood function of constitutional preambles, they frequently seem to speak in an international idiom. They often adopt terms or memes from other constitutions, they frequently invoke international treaties, and they sometimes contain language that

205. Bill Moyers: *We Make Progress Through Collaboration, Not Competition*, available at <http://www.theuptake.org/2011/06/14/bill-moyers-we-make-progress-through-collaboration-not-competition/#sthash.zuoJPFx5.dpuf> (last checked October 2, 2013). See also http://www.ted.com/conversations/2960/what_does_the_american_phrase.html

206. Levinson, *supra* n. 15; see also Mark Tushnet, *The Possibilities of Comparative Constitutional Law*, 108 YALE L.J. 1225, 1269-85 (1999) (discussing expressivism).

207. Vicki C. Jackson, *Methodological Challenges in Comparative Constitutional Law*, 28 PENN ST. INT’L L. REV. 319, 325 (2010) (describing expressions of national identity in the preambles of several countries).

amounts to foreign policy statements.

To be sure, preambles often involve political innovation as well.²⁰⁸ More ideologically oriented constitutions will tend to use new language not found in other contemporary constitutional texts or other constitutions in a country's sequence. Older states tend to be less innovative relative to earlier constitutions. Yet, even the innovations that do occur are temporally clustered. The greatest predictor of innovation within a country's sequence of constitutions is the degree of innovation found in *other* constitutions drafted around the same time. The broad pattern we observe is one of stasis, followed by periods of change. These periods are determined globally, and not simply by domestic developments. Preambles then are internationally embedded texts, whose production is related to their peers in time and place.

Finally, we note that the new tools introduced in this Article might provide insights in other areas of law. One might examine, for example, a single area of legislation across jurisdictions to understand what phrases and terms are most common and how patterns change over time. International treaties, such as bilateral investment treaties, are also ripe for analytic methods such as those utilized here. Law is language, and the new tools of computational linguistics promise to unearth some surprising patterns that might not be visible to the naked eye.

APPENDIX: SENTIMENT ANALYSIS OF CONSTITUTIONS

The algorithm takes two inputs. The first is a set of words named labMT that is useful for the computation of the happiness of each word, and thus for the computation of the happiness score of the entire text.²⁰⁹ More precisely, the labMT 1:0 is a set of 10,222 ranked words based on the 5,000 most frequently used words from Twitter, Google Books, music lyrics, and the New York Times.²¹⁰ The valence or happiness ranking of these words was obtained from humans through the Amazon's Mechanical Turk.²¹¹ The ranking of each word is a number between 1 and 9, with 1 denoting extremely negative feeling, and 9 denoting extremely positive feeling. We note that we have no information about the number or nationality of the people that ranked

208. See Sec. IV, *supra*.

209.

www.plosone.org/article/fetchSingleRepresentation.action?uri=info:doi/10.1371/journal.pone.0026752.s001.

210. Dodds, et al, *supra* note 86.

211. [Please add a citation for this assertion.]

the words, which might be useful for our particular application.

We denote $h(w)$, the estimate of average happiness for each word w , in the set of labMT. We can use different subsets of labMT to conclude and highlight different aspects of the sentiment of a text. We define the exclusion parameter ΔH that can take values between 0 and 4 and identify the words used in computing the sentiment score of the texts. Specifically, we are going to exclude from the computation every word w with a ranking between $5 - \Delta H < h(w) < 5 + \Delta H$ under the labMT. Here, we used for the computations four different values of ΔH , $\Delta H = \{0; 1; 2; 3\}$. Using this approach reduces the size of the ranking of the labMT from 10,222 to 3,731, then to 1,008, and finally to 77. Also, instead of using the exclusion parameter, we could use a specific subset of the labMT to view the results from a different "aspect." For example, we could restrict the analysis to words that have a ranking between 7 and 9, and thereby highlight the positive "aspect" of that text.

We preprocessed the texts of our data set C , and we computed the happiness ranking of each constitutional preamble c in the set of C ($hf; avg(c)$) using the frequency of the words as follows:

1. Create the set of words $W(c)$ that are in the preamble c
2. Compute the frequency $fc(w)$ for each word w in c .
3. We define N as the set of words that are both in c and in labMT:
 $N(c) = W(c) \cap \text{labMT}$.
4. For each word w in $N(c)$ we have a rank $h(w)$.
5. The ranking of the constitutional preamble c can then be computed by:
 $hf; avg(c) = \frac{\sum_{w \in N(c)} h(w) fc(w)}{\sum_{z \in N(c)} fc(z)}$

Moreover, we used a different approach for ranking the average happiness ($hTf_Idf; avg(c)$) based on the TFIDF (instead of using the raw frequencies we used the Tf-idf for each word). Specifically, we let jCj be the size of our data set—the number of constitutional preambles. We also let $jCwj$ be the number of constitutional preambles that contain the word w . Moreover, let fmc denote the maximum frequency we have on constitutional preamble c over all words w that belong to $N(c)$ ($fmc = \max_{w \in N(c)} fc(w)$). The computation of the Tf-idf is then: $Tf_Idf(w) = fc(w) fmc _ \log jCj jCwj$. Finally, to compute the total average score of the text, we multiply each term $Tf_idf(w)$ with the corresponding $h(w)$, and we normalize through the summation of these values over all words.