Networking Customary Law

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I. INTRODUCTION

Customary international law (CIL), law said to form through widespread state practice that hardens into a sense of legal obligation (opinio juris), is the binding agent of the international legal system. While treaties create the structural form of international law, CIL norms operate to tighten the inevitable breaches left within and between the express terms of written law.

In many ways, CIL holds a privileged position in the international legal system. Customary law is universal. While treaties require explicit and affirmative approval, rules of customary law bind all states. Customary law is cheap. Customary law flows directly from the act of governance, thus resulting in minimal transaction costs. In contrast, treaties, if consummated at all, incur heavy transaction costs at the international level to achieve state accession and at the domestic level to accomplish ratification and incorporation. Customary law is organically produced. Customary practices become law while no one is watching. In contrast, the process of treaty ratification is fraught with political peril and thus subject to political assassination. Most importantly, customary law is dynamic. Once ratified, the subject matter governed by treaties is subjugated to the preeminence of text, thus impeding innovation and institutionalizing status quo biases.

Despite these advantages, CIL is under heavy attack. Scholars have characterized customary law as inefficient,¹ illegitimate,² and

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ineffective. The literature argues that contemporary claims regarding the content of CIL are often divorced from empirical claims of state practice and vary broadly depending on the entity asserting them. Failing to ground CIL content in externally provable claims renders such norms perpetually vague, which, in turn, creates uncertainty, unpredictability, and diminished legitimacy. In answering the assault, “most defenders of CIL have responded by simply ignoring the critiques.”

This Article does not seek to assuage critics as to the current state of CIL, but rather to persuade critics and advocates of customary law alike that a revitalized, more legitimate, and effective body of CIL is possible through a comprehensive, authoritative, and objective process of identifying state practice and opinio juris utilizing networked technology. Instead of scholarly or institutional edict, this proposal rests its case on recent developments in communication theory and the epistemic advantages offered through networked communications. The result is a truer, more dynamic, and thus more effective body of customary law that proves capable of responding to the fundamental challenges facing the current legal regime.

The Article proceeds in three parts. Part II briefly sets out the design impediments plaguing the efficient formation of international law and the consequences that flow from those flaws. Further, this Part rejects the notion that treaty proliferation can replace the value established through a functional body of CIL. Part III turns its attention to creating legal legitimacy through adoption of knowledge attained through networked aggregation. This Part first considers the legitimacy challenges facing CIL and then, in detail, describes and explains the value and animating features of collective intelligence and how it can be applied to customary law. Regarding current conceptions, this Part argues that both critics and proponents of CIL have failed to recognize that its primary legitimacy failure is epistemic in nature. In short, due to the failure of a robust knowledge of state practice and opinio juris, the inputs of CIL, such law has been victimized by diverse initiatives to manipulate its outcomes, thereby compromising its core legitimacy. Next, this Part describes the

5. See id.
6. Id. at 5.
animating principles of networked knowledge and their advantages in knowing and understanding the acts and beliefs of states. Finally, Part IV briefly sets out some potential indirect implications of networked knowledge within the international legal sphere beyond those directly related to the question of CIL formation.

II. International Law Formation and Responsive Law

On December 11, 2011, Christiana Figueres, the executive secretary for the United Nations Framework Convention on Climate Change, was absolutely ecstatic. The reason for Figueres’s excitement was the agreement of over 190 state parties to the “Durban Platform for Enhanced Action.”7 Invoking Nelson Mandela, Figueres wrote to her Twitter followers, “It always seems impossible until it is done. And it is done!”8 She was not alone in her excitement. Jo Leinen, the Chair of the European Union Parliament delegation to the conference declared, “The world has achieved a major breakthrough in the fight against climate change.”9

Based upon the excitement expressed by Figueres and Leinen, you would be forgiven for believing that the Durban Platform represented the consummation of a global treaty with binding force. In fact, the two-page agreement is much more modest, setting out a “road map” to guide states to the goal of actually consummating a treaty by 2015, which will take legal effect in 2020.10 In the interim, the vast majority of state parties will hold elections through which they may empower new heads of state, and, if the work of multiple scientists proves true, the world will miss the opportunity to head off the worst effects of climate change.11


11. See John M. Broder, U.S. Pushes to Cut Emissions of Some Pollutants That Hasten Climate Change, N.Y. TIMES, Feb. 16, 2012, at A12 (noting “many scientists say” that before a treaty would be in force “irreversible damage to the atmosphere will be done”). In fact, two months following the announcement of the Durban Platform, a group of countries announced unilateral measures due to their impatience with (and perhaps skepticism toward) “the slow pace of international climate change” negotiations. Id.
If the excitement of diplomats such as Figueres and Leinen is mystifying on the substance of the Durban Platform, it is much more understandable in the world of international diplomacy, where the formation of new (and widely recognized) substantive international law, whether through treaty or custom, has become extraordinarily difficult.

A. Explicit and Implicit Legal Rules

CIL and treaty law are complementary and interdependent. The increasing delegitimization of CIL and the tempting clarity of positivism have thrown the balance of the international legal system off kilter, threatening the viability of the robust system of norms that system has created. The inability of CIL to deliver the pliability and general legal rules upon which the substantive rule of law can attach and adapt threatens the effectiveness of treaty law as well. Treaties, always highly costly to complete, are even more difficult to finalize because overarching general customary rules are not present to provide points of general legal consensus. When the cost of treaties is too high to complete, the absence of CIL leaves the substantive area fallow. When consummated, treaties are expected to exhibit flexibility in application far beyond the anchor of their text, threatening the predictive clarity that is their defining value. As this progression intensifies, the substantive character of international law becomes increasingly locked in anachronism.

1. The Limits of Treaty Formation and Alteration

“[T]reaties form the core of modern international law.”12 Over the past several decades, there has been a natural progression of the international legal system, both in scholarship and practice, toward treaties and away from customary international law.13 The movement toward treaties is, in large part, a response to the assault on custom.14 Yet, the preference for treaties has not been accompanied by a corresponding increase in treaty formation, especially in relation to the

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most pressing international issues of the day.15

The rise of treaties, partially driven by positivistic trends and the written nature of treaties, emphasized treaties’ provision of greater specificity regarding substantive regulations and applicability.16 Treaties tend to possess clearer substantive rules and formal and identifiable mechanisms to gauge consent and breach.17 Broadly accepted multilateral treaties also assist in the movement toward legal uniformity among multiple nations in various circumstances.

The rise of treaties, especially in the immediate period following World War II, has been instrumental to the dramatic substantive expansion of international law. During the thirty years following the conclusion of that war, the world saw not only the introduction of several new treaties providing an expansion of substantive legal scope, but also a new degree of precision by which states were bound by international law. In contrast, the past thirty years has seen tremendous political, technological, and sociological changes without anything approaching the post-WWII treaty crescendo. The obstacles to new substantial treaty law are essentially twofold: prohibitively high costs associated with treaty formation and inertial commitment to treaties already made.

Prohibitively high transaction, uncertainty, and opportunity costs make treaty law formation difficult.18 Unfortunately, the treaty creation

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15. While it is not uncommon for authors to reference the “proliferation of treaties,” such authors are typically referring to the set of multilateral treaties emanating directly following the conclusion of World War II. See, e.g., David P. Stewart, Book Review, Recent Books on International Law, 104 AM. J. INT’L L. 688, 690 (2010) (reviewing JOHN F. MURPHY, THE EVOLVING DIMENSIONS OF INTERNATIONAL LAW: HARD CHOICES FOR THE WORLD COMMUNITY (2010)). This is not to say that there are not more treaties on highly particularized questions. See Ward Ferdinandusse, Out of the Black-Box? The International Obligation of State Organs, 29 BROOK. J. INT’L L. 45, 104 (2003). While the existence of these types of treaties in fact demonstrates where the strength of treaty law lies (precision), their necessity proves the weakening of custom.


17. Setear, supra note 16, at 722. “Treaty law features iterations with relatively distinct temporal boundaries; possesses clear, formal mechanisms for evaluating whether a nation has consented to certain rules; and boasts a prospective, written format, specifying rules that can serve as touchstones against which to assess the actual behavior of consenting nations.” Id.

process is extraordinary in the transaction costs required and uncertainty created. 19 At the front end, potential treaty parties vary greatly in their international power, history, underlying legal systems, languages, domestic politics, relevant interest groups, and economic framework, all of which may affect a treaty’s negotiation, drafting, and agreement. 20 While the accumulation of treaty partners expands the reach of a proposed treaty’s scope, it simultaneously makes consensus on drafted language more difficult. At the back end, once drafted, a state wishing to enter into the treaty has to undertake the incorporation and execution of the new treaty’s provisions within its own domestic system. In the United States, this means seeking a supermajority vote of U.S. Senators to accomplish ratification. 21 Following ratification, the state’s obligations must be made operable, usually through additional administrative and legislative action. Once successful on each of these fronts, there remains substantial uncertainty as to the potential impact of unintended consequences domestically and the execution of obligations by fellow treaty partners internationally. These costs preclude agreements even where multiple states possess aligned interests and recognize a clear benefit to treaty formation. 22

The impediments to new treaty formation apply with at least equal force to treaty alteration. Changes to treaties in most legal systems will require the exact same processes as those associated with entirely new

19. Some literature explore the proposition that completed treaties reduce transaction costs of state entities for subsequent activities. See, e.g., William J. Aceves, The Economic Analysis of International Law: Transaction Cost Economics and the Concept of State Practice, 17 U. Pa. J. INT’L ECON. L. 995, 1016–18 (1996). This is undoubtedly true to varying extents based upon the area of law being regulated. The reduction in transaction costs for state activities relative to the area regulated is relevant to this analysis only insofar as such benefits represent the path dependence discussed earlier. See, e.g., id. at 1062. As such, the reduction of transaction costs in regulated areas (to the extent it exists) only acts to raise the costs of states seeking to alter substantive norms of the governing treaty. Id. at 1060–65.

20. “Transaction cost economics refines price theory by including consideration of, for example, the cost of identifying potential transactors, negotiating agreement and enforcing agreement. For a variety of reasons, including the number of interested parties, these transaction costs are frequently high in the international context, and opportunities for joint gain through contracting may therefore not be realized.” Jeffrey L. Dunoff & Joel P. Trachtman, The Law and Economics of Humanitarian Law Violations in Internal Conflict, 93 AM. J. INT’L L. 394, 396 (1999).


22. See supra note 20.
international agreements. Further, collective action problems invoked by treaty alteration are severe because states uninvested in the substantive regulation possess little incentive to break ranks and states seeking treaty changes are likely already to be viewed skeptically as law breakers of the existing regime. These problems are exacerbated by the fact that the benefits associated with treaty alteration are likely to be lower at a rate corresponding to the variance in the amount of change sought.

2. The Power of Custom

CIL, an equal partner with treaty law, represents those norms rendered binding through the existence of state practice followed by a sense of legal obligation. Such law binds all states, regardless of explicit consent. As such, the recognition of such norms offers a universally binding alternative to the expensive treaty process.

No contemporary legal system is entirely reliant on explicit law instruments like legislation or treaties. The Anglo–American common law system defines itself by the power of judicial precedent as a source of binding law. While repudiating binding precedent, civil law systems

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27. As noted by William Aceves, the transaction cost obstacle to treaty formation may lead states to prefer customary law to treaties in order to avoid expensive negotiation, agreement, and maintenance costs. Aceves, supra note 19, at 1066.

28. See Richard B. Cappalli, At the Point of Decision: The Common Law’s Advantage over the Civil Law, 12 TEMP. Int’l & Comp. L.J. 87, 92 (1998) (“In the common law method we have seen that the development of legal norms by means of judicial precedents is an inter-temporal and inter-jurisdictional collaboration among the judges who decide cases and write justifying opinions.”).
favor custom as an independent source of law. In practice, both civil and common law systems have borrowed from the unwritten source of law of the other. Civilian legal systems are finding increasingly unified judicial decisions based, in part, on past precedent. Common law systems incorporate custom as context that influences the interpretation of law. Both practices serve the indispensable purpose of making law more functional by safeguarding reliance of societal practices while providing legal rules that can adapt to changing circumstances. Expunging precedent or custom, respectively, would collapse the basic architecture of both systems. The convergence of common law precedent and civilian custom only reinforces the crucial nature of each version of implicit law.

CIL plays a similarly crucial role in the international legal system. The crippling of CIL has not been accompanied by a correlating rise in a different, analogous contender. The international legal system, formed with the precepts of the civil law system at its core and lacking the judicial instruments required of an effective common law jurisprudence, embraced custom out of necessity.

29. Id. at 95 (“At the foundation of these codes rest monumental value judgments, evolved and transmitted down through the centuries, about the purposes of law.”).


32. See Aniceto Masferrer, Defense of the Common Law Against Postbellum American Codification: Reasonable and Fallacious Argumentation, 50 AM. J. LEGAL HIST. 355, 360 (2010) (“The Common Law is the mass of the undigested customs, not reduced to system . . . .” (quoting George Hoadly, Address Delivered Before the Graduating Classes at the Sixtieth Anniversary of the Yale Law School: Codification in the United States (June 24, 1884))).


34. Notably, despite substantial scholarship criticizing or promoting CIL, the question of an alternative, other than additional treaty reliance, never appears to be addressed.

35. See Colin B. Picker, International Law’s Mixed Heritage: A Common/Civil Law Jurisdiction, 41 VAND. J. TRANSNAT’L L. 1083, 1105 (“[F]rom its earliest stage, international law developed among civil law ideas, with the predictable result that it reflected those very ideas.”).
The “simultaneously stable and provisional” character of custom is also of particular value within the distinct attributes of international law. Scholars of international relations have long known that states are influenced tremendously by state interest. The stability and universal binding power of CIL encourages coordination around existing norms and avoids locking the law into an eternal doctrinal stance.

The current position of CIL belies its stable, but pliable branding. Critics rightfully note that our current conceptions of CIL formation, however, have failed to produce on the genre’s promise of “flexibility” and “suppleness.” The opaqueness of state practice and psychological dependency of opinio juris has resulted in the sourcing of the raw materials of CIL, and thus state practice and opinio juris are fraught with controversy. The fact that there is little agreement as to how to identify when CIL norms form or the substantive boundaries of such norms means that asserting any rule that strays from the textbook example is questioned.

CIL has been branded as the “weak” side of international law that is typically unenforceable and has jeopardized the viability of the international legal system as a whole. Specifically, commentators assert that CIL is unworkably ambiguous, manipulable, undemocratic, divorced from actual practice and state consent, and hortatory in

36. Catherine Kemp, Habermas Among the Americans: Some Reflections on the Common Law, 76 DENV. U. L. REV. 961, 967 (“The relevant aspects of customary law are its simultaneously stable and provisional or tentative character—common law rules can be ‘in play’ long after they are settled—and the fact that there is implied in practices or customs a kind of ‘emergent consensus’ about a particular kind of controversy.” (quoting Frederic R. Kellogg, Legal Scholarship in the Temple of Doom: Pragmatism’s Response to Critical Legal Studies, 65 TUL. L. REV. 15, 29 (1990))).

37. A common criticism of customary law is that the path to change often (not always) requires transgressing the law. In a way, this is similarly true within the common law. In common law, judges only receive the opportunity to opine on the content of law where the unlawfulness of action is in question. In any event, the critique is strong only if the aforementioned violations usurp the underlying stability of the legal system more than usual. This is far from obvious. There is little reason to believe that judicial actors distinguishing, surreptitiously overruling, or overtly overruling prior precedent are any less disruptive than customary change. See Benito Arruñada & Veneta Andonova, Common Law and Civil Law as Pro-Market Adaptations, 26 WASH. U. J.L. & POL’Y 81, 118–19 (2008) (asserting the equivalency of common law and civil law in stability and efficiency).


40. Id. at 57.

41. See Kelly, supra note 2, at 450–51.

42. See, e.g., Mark W. Janis, The Nature of Jus Cogens, 3 CONN. J. INT’L L. 359, 360 (1988) (comparing CIL unfavorably to treaties); see also Deak, supra note 26, at 44 (noting perception of customary international law as “a vague, unenforceable theory with no base upon which to stand”); Kelly, supra note 2, at 529 (“Judge-made CIL has engendered controversy, diminished respect for the [ICJ], and is ultimately unenforceable.”).
character. While the precise contour of each critique is unique, the unifying theme of CIL skeptics is that the lack of empirical knowledge has led to normative creativity. Because ascertaining an objectively provable “truth” to state practice and *opinio juris* has proven elusive, scholars have reacted by creating an objective body of law in favor of their own normative judgments.

**B. Usurping CIL Creates Anachronistic and Unresponsive Law**

The perceived illegitimacy of CIL incurs tremendous harm. Legal systems require flexibility to operate efficiently. The continuing divestment of CIL’s role as a pliable substrate of international law is causing an increasingly anachronistic and unresponsive body of law. To date, the response to the weakening of CIL has been greater reliance on treaties. Due to the high costs associated with treatymaking and treaty alteration, this treaty reliance manifests itself in reading existing treaties more broadly, insisting on their unwavering adaptation to changing circumstances, and attempting to transform their reach from those party to the agreement to the entire globe. Ironically, the further treaties are stretched, the more susceptible they are to sparking their own delegitimization. In the meantime, the more substance they are asked to cover, the more they become entrenched, further promoting anachronistic rules.

43. *See generally* Phillip R. Trimble, *A Revisionist View of Customary International Law*, 33 UCLA L. REV. 665 (1986) (discussing CIL’s weak political foundation, perceived ineffectiveness, and scant application by courts); *see also* Curtis A. Bradley & Jack L. Goldsmith, *The Current Illegitimacy of International Human Rights Litigation*, 66 FORDHAM L. REV. 319, 330 (1997) (stating that the CIL puts at stake the enforceability of international human rights law in U.S. federal courts); Janis, supra note 42, at 360–63 (positing that CIL is an inappropriate tool for establishing rights due to its “very nature”); Kelly, supra note 2, at 450–58 (asserting that the theory of CIL is “indeterminable” and “manipulable” and largely in “disarray”); Setear, supra note 16, at 719–20 (discussing CIL’s lack of “lucid temporal boundaries”). I will not directly address the assertion that CIL, independent of the flaws noted above, does not affect state behavior. *See, e.g.*, Jack L. Goldsmith & Eric A. Posner, *A Theory of Customary International Law*, 66 U. CHI. L. REV. 1113, 1114 (1999). To the extent such critiques are not reflective of the legitimacy flaws discussed herein, they will tend to be correct or incorrect regarding international law as a whole rather than CIL specifically.

44. *See* Bradley & Goldsmith, *supra* note 43, at 327 (“This new CIL does not reflect the actual practice of states.”).

45. *See* id.


Given the criticism of CIL and its increasingly fragile hold on legitimacy, one might believe that the destruction of CIL as a binding source of law would actually benefit the international legal system. In this view, the persistence of a weakened body of CIL acts to further obstruct treaty formation. Once definitively removed from the regime design of international law, states will not be tempted to rest on weak claims of custom and know that, should they desire new law, an explicit agreement establishing such law must be made. Thus, the adaptation to an exclusively explicit agreement-based legal system will encourage the creation of new law while strengthening the force of such law that accompanies the clarity of legal obligation treaties provide.

In fact, there is little reason to believe that either would occur. This analysis depends on the idea that, absent the ability to rely on CIL, states will possess increased interest in new treaty provisions. Even if true, there is little, if any, reason to believe that the costs associated with treaty formation would decrease. More likely, the continuing inability to easily and efficiently create new legal instruments or norms would accelerate the current trend of excessive dependence on existing treaty regimes. As demonstrated in correlation with the weakening of CIL, this reliance leads to stagnation of legal norms. Treaty reliance creates a path dependency in state action and promulgates a flow of inapposite or nonoperative legal rules. Ironically, with the passage of time, these inertial forces imbue longstanding treaties with a sacred aura of immutability.

The immutability of treaties would be a minor concern if CIL was better positioned to fulfill its traditional role as a legitimate route for filling the gaps within and between treaty law. In such circumstances,


48. See Theodore Meron, The Geneva Conventions as Customary Law, 81 AM. J. INT’L L. 348, 348–49 (1987) (discussing interpretive and law-changing defenses of states in the law of war). Given the absence of strong enforcement mechanisms, the framing effects of this analytic move are substantial. E.g., id. at 349.

49. See id. at 359 (discussing several cases that illustrate the relationship between custom and treaty).

50. Some have asserted that such changes require decades or even longer to occur. See, e.g., Paul R. Dubinsky, International Law in the Legal System of the United States, 58 AM. J. COMP. L. 455, 465 (2010) (“Traditionally a new norm acquired the status of customary international law only after two requirements had been satisfied, consistent state practice and opinio juris. Customary international law thus changed slowly, often over the course of a century or more.”).

51. See id.

legal provisions that might be considered anachronistic in isolation are enlivened through unwritten augmentation.

The Constitution of the United States provides an example of staid text operating alongside dynamic law. The text of the Constitution, while written broadly and contemplated generally, is unmistakably a product of its time. Despite its reputation as the emblem of freedom and democracy, the U.S. Constitution embeds some remarkably contradictory precepts (enshrining freedom while institutionalizing slavery) alongside decidedly antidemocratic processes of republican government. Despite these inadequacies, its overarching validity has endured. While the energy behind its longevity is multifaceted, part of its continuing relevance comes through its continuous refinement through the common law practice of judicial precedent. The practice of this repeated formal legal process interpreting the document’s text that provides lasting resolution to contemporary problems means that the “law” represented by the document extends far beyond the boundaries set out by its text.

International law lacks a judicial body with the authority and repeated opportunity of the U.S. Supreme Court to refine legal principles. True to the tradition of the civil law system, custom is the source of unwritten law favored within the international legal system.

The sanctification of the law is a byproduct of age, tradition, purpose, and path dependency. As legal instruments age, the substantive rules they encompass are no longer questioned. Instead, their dictates

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54. See Levinson, supra note 53, at 32–34; Larry D. Kramer, The Supreme Court 2000 Term—Foreword: We the Court, 115 HARV. L. REV. 5, 111–12 (2001). It is worth noting that the evidence also indicates the general public holds a view of constitutional interpretation. See Goldsmith & Levinson, supra note 53, at 1814–15, 1834 n.145.

55. See generally Levinson, supra note 53, at 124–25.

56. It should be noted that common law practices and judicial refinement would not be sufficient to rescue the U.S. Constitution from some of the anachronisms deeply embedded within it. This reality is precisely why the country has periodically traversed through the difficult amendment process, generally with tremendous success.

57. See Trimble, supra note 43 at 718 (noting that CIL is not analogous to law based on a constitution).

58. See Douglass C. North, Institutions, Institutional Change and Economic Performance 96–97 (1990) (“Past decisions become embedded in the structure of law, which changes marginally as new cases arise . . . .”); see also John Boli-Bennett & John W. Meyer, Constitutions As Ideology: Reply to Ratner-Burstein, 45 AM. SOC. REV. 525, 526 (1980) (arguing constitutions are depictions of state authority of engraved prevailing ideologies); Harold Honhju
are incorporated into the background of societal life, part of the set upon which life unfolds. 59  The longer such rules are incorporated in the society’s practices, the more they become cultural touchstones incorporated into the society’s tradition of law. 60  As the legal rules of a treaty fade into the background, the norms established by a treaty become incorporated in subsequent decisions of both individual nation-states as well as the international community at large. 61  The interconnected nature of these rules means that substantive changes to the foundational treaty cause a domino effect among other international and national legal rules made in reliance on the original instrument—a phenomenon more generally called path dependency. 62

Even irrational or obviously anachronistic constitutional provisions can soundly defeat deeply held societal principles. Prior to the 2000 presidential election, nearly all American citizens would have said that a crucial component of the “democratic” nature of the nation was fundamentally tied to the fact that the state engaged in free and fair elections in which the “will of the people” was followed by placing the candidate with the greatest number of votes in office. 63  In that year, however, the recipient of the greatest number of votes in the presidential competition, Al Gore, did not win the election. 64  Instead, George W. Bush became president due to an Electoral College system designed for

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60. See Ryan Goodman & Derek Jinks, Toward an Institutional Theory of Sovereignty, 55 STAN. L. REV. 1749, 1755–56 (2003) (arguing societal abstractions and conceptions change into rules embedded in institutions); Koh, Transnational Legal Process, supra note 59, at 202 ("[N]ational identities are not givens, but socially constructed products of learning, knowledge, cultural practices, and ideology.")


the eighteenth century. While Gore’s supporters were embittered, few insisted that a constitutional amendment was in order. Instead, the public reoriented its definition of democracy to remain consistent with the Constitution’s text.

The 2000 election is only one example of how constitutional sanctification has undermined contemporary preferences thus effectuating an objectively absurd, or at least normatively undesirable, result. The Constitution’s inaugural delay for newly elected presidents reflects the technical limitations of the eighteenth century and has no rational justification in contemporary America. Enabling a new president to be inaugurated immediately after his victory is certified would avoid the self-serving, and potentially dangerous, unaccountable lame-duck acts of an outgoing leader.

The characteristics of legal sanctification apparent in the U.S. Constitution have similarly resulted in the consecration of the cornerstone substantive treaties of modern international law. Just as in the constitutional example, the immutability of such instruments creates anachronisms through the substantive law such treaties represent. The anachronism problem of sanctification in the treaty context, however, is both qualitatively and quantitatively more severe than those that arise in the domestic context for two reasons. First, the international community does not possess a legal interpretation regime comparable to the U.S. federal judiciary that possesses both the opportunity and legitimacy to engage in flexible interpretation of treaty obligations to negate the effect of anachronistic tendencies present in the law. Second, the number of treaties, impossibility of amendment, and the high transaction costs required to create new treaty instruments means that the gross volume of such anachronisms is substantially higher than those manifested in domestic systems.

C. Reinvigorating Custom

The systemic character of anachronism within international law requires a systemic response. A different conceptualization of how

67. See Levinson, supra note 53, at 165.
customary international law is formed remains the greatest chance for a responsive body of law. The transaction costs of treaty consummation can be ameliorated but not eliminated. In contrast, the ambiguity, structural disarray, and illusory tie to state consent surrounding customary law invite reinvention. The roots of this reinvention lie in a reexamination of the justification for transforming practice into law outside the international context.

III. KNOWING CUSTOM THROUGH NETWORKS

In 2005, a New York doctor, Robert Greenwald, wrote a letter to the editor of The New England Journal of Medicine describing an incident where physicians and a medical fellow were presented with an infant suffering from diarrhea, an unusual rash, immune system failure, and a variety of other symptoms.68

The attending physicians and house staff discussed several diagnostic possibilities, but no consensus was reached. Finally, the visiting professor asked the fellow if she had made a diagnosis, and she reported that she had indeed and mentioned a rare syndrome known as IPEX . . . . It appeared to fit the case, and everyone seemed satisfied. (Several weeks later, genetic testing on the baby . . . confirm[ed] the diagnosis.)

“How did you make that diagnosis?” asked the professor. Came the reply, “Well . . . I entered the salient features into Google, and it popped right up.”69

The physician reporting the story was dismayed.70

Are we physicians no longer needed? Is an observer who can accurately select the findings to be entered in a Google search all we need for a diagnosis to appear, as if by magic? . . . Even worse, the Google diagnostician might be linked to an evidence-based medicine database, so a computer could e-mail the prescription to the e-druggist with no human involvement needed.71

The doctor’s reaction is driven by his training and society’s changing relationship with its caregivers. His medical education taught him a

69. Id. at 2089–90.
70. See id. at 2090.
71. Id.
diagnostic methodology. That methodology was reinforced over multiple years of practice. Understandably, he views with suspicion new intrusions that deviate from or (worse) question the validity of his understood methodology. Externally, society’s view of doctors has also changed dramatically. For much of history doctors were seen as the nearly exclusive purveyors of medical information. Patients, accepting that they lacked access to the knowledge held by the doctor, responded by adopting a highly deferential posture relative to a doctor’s conclusions. Over the past twenty years, empowered by the availability of medical information on the Internet, patients have taken an increasingly assertive role. Approximately 58% of patients use the Internet to research their health condition before a doctor’s visit—assessing whether one is necessary—or after the doctor’s visit—assessing the correctness of the doctor’s diagnosis.

Proponents of our current conception of CIL formation are much like the befuddled Dr. Greenwald. Over the past century, the methodology of CIL formation has only tangentially depended upon empirical proof. While it was expected that CIL rules would possess some empirical underpinning, the focus had shifted to normative argument. Recently, however, the divergence of actual practice and asserted norms has become acutely noticeable, compromising the empirical touchstone that undergirds the entire system.

Attempts to rehabilitate CIL possess value, but ultimately advocates cannot save CIL until they can offer a way to recreate trust in the law’s basic justifications for legitimacy: accuracy, consistency, and empirical observability. Fortunately, the forces of information thus far used to cripple CIL can be harnessed to revitalize it in this very way.

72. According to one study, doctors with poor technology skills are likely to feel threatened and “respond defensively” to patients offering information gleaned from the Internet while more savvy doctors view the patients’ research as an opportunity for collaboration. Miriam McMullan, Patients Using the Internet to Obtain Health Information: How This Affects the Patient-Health Professional Relationship, 63 PATIENT EDU. & COUNS. 24, 26–27 (2006).
73. Id. at 26.
74. Cf. id. (discussing patients’ increasing dissatisfaction with occupying a passive role in the doctor–patient relationship).
76. Id. at 701.
A. Legitimacy and Sourcing Law

The legitimacy and authority of CIL, like all bodies of law, depends on coherent regime design. Rule creation regimes need to fulfill basic fundamental values—accuracy, fairness, and efficiency—to achieve systemic legitimacy and, in turn, enhance authority. Accurate rules reflect provable inferences from relevant events. Rules that are created understandably, with participatory opportunities, and absent undue influence are generally considered fair. Finally, efficient rulemaking exists when rules reflecting the basic values can be made at relatively low costs. Some legitimacy derives from observable procedures of lawmaking that enable participation of those affected and produce rules with substantial clarity with authority exercised accordingly.

In contrast, modern CIL formation methodology is opaque and manipulable. The normative emphasis has created “unbridled proliferation of contradictory norms” that creates uncertainty and encourages states to engage in self-serving and opportunistic rule selection and interpretation. These inconsistencies and manipulations are exacerbated by the fact that CIL rules increasingly appear entirely divorced from practice in the real world.

Treaties are legitimized by explicit consent. As such, treaty law binds only those parties shown to have manifested explicit consent through the repeated acts that precede (i.e., negotiation, drafting, signing, and ratification) and postdate (e.g., invocation, acts of legal implementation) the consummation of the treaty in question.


78. “Costs” here means all types of costs (e.g., financial, opportunity, transaction).


80. Goldsmith & Levinson, supra note 53, at 1806.


83. See Oona A. Hathaway, Treaties’ End: The Past, Present, and Future of International
acts are further solidified by the fact that states unhappy with their treaty obligations have the opportunity to exit the treaty regime they do not like. Cumulatively, these expressions of consent insulate treaties from states that might assert that a treaty provision should not apply due to its normative undesirability or special circumstances.

Because CIL is universally binding and precludes exit, it cannot legitimize itself through consent. “Customary law is empirical law . . .” The values associated with empiricism, objectivity and democracy, legitimize customary law (international and domestic). The doctrine governing the creation of binding customary law turns on the fulfillment of a claim about both the existence of a consistent state practice as well as what motivates that state practice. CIL can only assert its authority insofar as the empirical fulfillment of the doctrine in question is observable. From their inception, both domestic and international customary law have rested upon the belief that, once identified, the customary practice of states exhibit a pattern of behavior that can be considered “best practices” and, once bound in law, can capture efficiencies by encouraging justifiable reliance. The jurisprudential roots of customary law reflect the belief that customs

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84. See Laurence R. Helfer, Exiting Treaties, 91 VA. L. REV. 1579, 1589 (2005) (describing treaty exit as an “internationally lawful act” and discussing the procedures a state must follow to exit a treaty).

85. This is not to say that states lack a variety of available interpretive measures to attempt to minimize the scope of treaty law or otherwise blunt its impact. Despite these, arguments that the treaty is simply not binding on the state are rare because of the expressions of consent (reinforced by exit mechanisms) that characterize that body of law.

86. See Bradley & Goldsmith, supra note 43, at 349 (explaining that formal endorsement is not required for CIL to be binding because a country may be bound by CIL when it does not take a position); Goldsmith & Posner, supra note 43, at 1116 (noting that over time nations have viewed CIL as “binding as a matter of law”). Some argue that state acquiescence to customary norms is appropriately viewed as consent that legitimizes the binding nature of CIL rules. Even if true, that legitimizing authority is far less probative than the multiple affirmative actions taken by states proactively engaged in consummating treaty law. See, e.g., Harlan Grant Cohen, Finding International Law: Rethinking the Doctrine of Sources, 93 IOWA L. REV. 65, 78 (2007) (“Treaties, having been negotiated, written, signed, and ratified, present the strongest evidence of consent.”).

87. Kelly, supra note 2, at 463.

88. See id. at 518–23.


90. See LAUTERPACHT, supra note 89, at 392–93.

reflect collective wisdom and tend toward normatively attractive ends. 92 The Romans considered custom as integrating the “general habits” of the Roman people as a matter of law and as an equal to other bodies of law applicable in the empire. 93 To Burkeans, customary law embodies the distillation of practices integrating the collective insight and wisdom of society’s members. 94 Those assertions however, by definition, hold no value if the “customary practice” in fact does not represent actual practice.

Much of the perceived illegitimacy of CIL flows from two hallmarks of modern CIL: (1) the law’s reliance on experts in identifying and presenting the evidence of practice and opinio juris and (2) the contemporary tendency to approach CIL rules as fundamentally normative rather than epistemic questions.

These two trends separate the basic justification of CIL—the desirability of recognizing and coordinating existing practice—and fail to provide a broadly applicable justification untainted by unmistakable policy preferences and goals.

1. CIL’s Shift from Empirical to Normative-Based Legitimacy

Theories of CIL formation can be roughly split into “traditional” and “modern” methodologies. The traditional formulation emphasizes the delineation of state practice as the cornerstone of CIL, while the modern methodology emphasizes opinio juris. 95 These two methodologies are united, however, in their reliance on experts as the progenitors of CIL norms. 96

The U.S. Supreme Court’s decision in The Paquete Habana 97 is largely considered “a ‘model’ of how CIL becomes established” and a model of “traditional” CIL formation methodology. 98 It is also emblematic of problems posed in relying on experts in identifying the necessary components of CIL. In The Paquete Habana, the Supreme

92. See D’AMATO, supra note 25, at 82–85.
95. See Roberts, supra note 81, at 758.
96. The relative weight among experts is a bit different between methodologies. Traditional methodology is more judge driven while modern methodological processes are more scholarly and NGO driven. See id.
97. 175 U.S. 677 (1900).
Court was asked to identify whether there was a customary international law rule prohibiting the seizure of civilian fishing vessels during time of war. In answering the question in the affirmative, Justice Gray relied on two veins of evidence of state practice: specific past examples and “the works of jurists and commentators who by years of labor, research, and experience have made themselves peculiarly well acquainted with the subjects of which they treat.” With these “text-writers of authority . . . it may be affirmed that they are generally impartial in their judgment.”

Mining the work of such experts, the Court affirmed the customary rule, invoking a mixture of specific past incidents and historical and contemporary scholarly commentary. At first blush, the temporal breadth of the Court’s research is impressive. The evidence Justice Gray cited in support of the rule begins in 1403 with an order from Henry IV of England to his naval officers informing them of a treaty between England and France enabling the citizen vessels flying under both states’ flags to be excluded from capture. The Court continued, citing several other historical examples, including a 1521 treaty between England and France, French and Dutch edicts in 1536, an agreement between France and Holland in the latter half of the seventeenth century, French and British orders, and an agreement between the United States and Prussia in the latter half of the eighteenth century.

The Paquete Habana is instructive in understanding the limitations of traditional methodologies in sourcing CIL formation by reciting particular incidents and invoking multiple scholars to establish the transformation of the practice into binding law.

The scope of vision of individuals and groups of experts is inherently limited and prone to bias. It is limited directly and indirectly. It is limited directly because the individuals engaged in the search are limited not only by the information to which they have access, but also their ability to process that information into a usable form. It is indirectly

100. Id. at 700.
101. Id. at 700–01 (citing HENRY WHEATON, ELEMENTS OF INTERNATIONAL LAW § 15 (Richard Henry Dana ed., 8th ed. 1866)) (internal quotation marks omitted).
102. Id. at 687.
103. Id. at 687–90.
104. In the “process” context, I am referring to the physical limitations of human interaction with information. There are only so many treatises Justice Gray could read (or have his clerks read), understand, and set out due to limitations of time and the requirements of humanity (again, both his own and his clerks’).
limited because it must infer firsthand information from secondhand sources. Justice Gray used a secondhand source, a report of French practices in vessel seizures, and presented it, much like hearsay, for the truth of the matter asserted, i.e., that the French viewed the seizure of fishing vessels as unlawful.

As work in social science has established, individuals tend to seek out information that confirms their preexisting views. Further, one is highly likely to ignore or distinguish evidence that is contrary to her predilections. Such tendencies mean that selection bias issues are even more problematic within groups of individuals than in individuals.

The opinion in *The Paquete Habana* invokes both concerns. While the Court covered a broad period of time, it did not discuss extended periods of time and discarded manifest contrary practices as proof of the rule “in the breach.” The historical examples the Court cited seem strikingly convenient for a determination that a prohibition against the seizure of fishing vessels existed in law. The incidents the Court described tended to occur during a time with only limited hostilities between states and often represented circumstances in which the seizure of such vessels would have been avoided due to limited naval resources or other instrumental concerns aligned with the state’s own self-interest. Moreover, the Court magnified isolated incidents supportive of the rule it concluded existed and ignored or discounted numerous other examples contradicting the existence of the rule. Similarly, the contribution of the scholars cited in the Court’s opinion was not through additional examples of state practice—most used the same examples as the Court—but in their conclusion of the meaning of that practice. In other words, instead of utilizing scholarly work demonstrating vast state practice or overwhelming *opinio juris*, the Court used evidence that scholars believed a CIL rule existed as proxy evidence that the doctrinal test had, in fact, been fulfilled.

The deceptively simple doctrine of CIL makes anything approaching

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106. *See id.*
107. *See id.* at 191.
110. *Id.*
111. *Id.* at 650.
112. Notably, while all the scholars cited agreed with historical examples present in the opinion, they diverged as to the existence of a CIL norm emanating from such practice. *See id.*
an objective and comprehensive treatment of state practice and *opinio juris* impossible. As discussed above, ambiguity is pervasive within the current methodologies of identifying established customary rules. Within the state-practice factor there is little agreement as to what type of state practice is relevant or the relevant weight of varying practices.¹¹³ Nor is there agreement on the quantitative threshold of how much, how consistent, and how many state acts are necessary to constitute sufficient practice.¹¹⁴ The “subjective” nature of *opinio juris* makes proof of its fulfillment similarly difficult.¹¹⁵ Each of these evidentiary difficulties are compounded when one seeks to find identifiable boundaries to the underlying norms and principles being explored.

Recognizing the empirical difficulties, contemporary theorists have foresworn attempting an objective and comprehensive empirical approach in favor of a “modern” approach that emphasizes *opinio juris*.¹¹⁶ Unlike the “traditional” CIL methodologies which, like Justice Gray in *The Paquete Habana*, emphasize state practice, the “modern” approach reflects a “deductive process” reliant on “statements rather than actions” that proponents assert fits more comfortably with the rights-oriented nature of contemporary international law.¹¹⁷ A natural result of

¹¹³. See H. LAUTERPACHT, THE FUNCTION OF LAW IN THE INTERNATIONAL COMMUNITY 76–77 (1933) (noting different legal views of international law based on conflicting interests and different legal views unrelated to conflicting interests). UN General Resolutions are sometimes counted despite their nonbinding nature. See Goldsmith & Posner, supra note 43, at 1169. The absence of certain practices sometimes matters despite the questionable nature of their relevance. See id. at 1134. Treaty provisions, both bilateral and multilateral, are sometimes counted, often inconsistently, as are the writings of scholars and jurists despite deep intractable contradictions among them. See id. at 1117 (“Those who study and use CIL—courts, arbitrators, diplomats, politicians, scholars—invoke these sources selectively.”); see also Andrew T. Guzman, Saving Customary International Law, 27 MICH. J. INT’L L. 115, 125 (2005) (“There is no agreement on the forms of evidence that may be used to demonstrate state practice.”).


¹¹⁵. If not more so. See BROWNLEE, supra note 89, at 8–9 (describing courts’ reluctance to find *opinio juris* without additional proof beyond the practice itself or “a consensus in the literature”); D’AMATO, supra note 25, at 52, 68, 82–84 (explaining various and failed applications of *opinio juris* as a legal standard); BRIAN D. LEPARD, CUSTOMARY INTERNATIONAL LAW: A NEW THEORY WITH PRACTICAL APPLICATIONS 20–22 (2010) (outlining the disagreement concerning *opinio juris*); H.W.A. THIRLWAY, INTERNATIONAL CUSTOMARY LAW AND CODIFICATION 47 (1972) (“The precise definition of the *opinio juris* . . . has probably caused more academic controversy than all the actual contested claims made by States on the basis of alleged custom, put together.”); Olufemi Elias, The Nature of the Subjective Element in Customary International Law, 44 INT’L & COMP. L.Q. 501, 502–08 (1995) (describing various shortcomings of the *opinio juris* requirement).

¹¹⁶. See, e.g., LAUTERPACHT, supra note 89, at 379–80 (emphasizing state practice); Roberts, supra note 81, at 758 (emphasizing *opinio juris*).

¹¹⁷. Roberts, supra note 81, at 758. Other scholars have tweaked the modern approach. Andrew Guzman has suggested an approach to *opinio juris* that emphasizes the “sense of legal obligation” of third-party states rather than the actor in question, a move that resolves a fundamental circularity paradox often levied at CIL formation. Guzman, supra note 113, at 146–49.
modern CIL formulation is the transference of treaty rules into CIL norms. Because modern CIL formulation emphasizes opinio juris, it looks to assess the requisite “sense of legal obligation” that accrues through other instruments of law such as treaties. As the number of state parties to any treaty regime grows, one can say that more states view themselves bound by the rules set out in the treaty in question. One could also deduce that states are, in practice, following the rule set out in the treaty, thus fulfilling the state-practice prong of CIL formation through the assumption that states carry out their legal obligation in practice.

When proposed CIL norms cannot be grounded directly in treaty law, modern CIL looks to the domestic law of the state or statements by leaders within the state regarding their position on the norm. Domestic regulations regarding employment and labor standards are useful in creating international labor standards. Presidential statements chastising a foreign state for alleged acts of detainee abuse are similarly useful.

Put simply, the modern approach resolves the sourcing problem by altering what needs to be sourced. Instead of cataloging actual practice, modern CIL catalogs the commitments made by the state through binding and nonbinding international agreements, domestic law instruments, and, as a last resort, public statements of high-level officials.

The modern approach has meaningful advantages relative to its...
traditional analog and appears to reflect a conception of customary international law consistent with how it is perceived by international institutions.\textsuperscript{128} The emphasis on \textit{opinio juris} is superior to traditional CIL formation in creating a framework of greater comprehensiveness by cataloging existing treaty obligations and public statements.

The perceived illegitimacy of modern CIL, however, indicates that its new focus may invite more problems than it solves. While it is easier to source treaties and statements, the cataloging of such evidence is only as strong as it is indicative that such sources serve as correct indicia of the “sense of legal obligation” that \textit{opinio juris} requires. Evidence indicates that discerning the “psychological” element of customary international law is no easier than the quandaries faced by the state-practice orientation of traditional customary international law.\textsuperscript{129} Worse, institutions like the International Law Commission, a UN entity comprised of experts in the field of international law and charged with the codification and development of CIL, are perceived as engaged in adopting legal rules that—consistent with modern CIL—reside exclusively in the normative realm.\textsuperscript{130} Specifically, as stated by David Bederman, the “key defect of modern custom is that in lauding ideal standards of state conduct, it has become detached from actual state practice.”\textsuperscript{131}

Perhaps most disconcerting is that, in the words of one commentator, modern CIL introduces a circularity to the doctrine of CIL formation where “opinio juris is necessary for there to be a rule of law, and a rule of law is necessary for there to be opinio juris.”\textsuperscript{132}

2. The Failure of Consent

The binding nature of international legal rules, both treaty and custom, is said to flow from state consent, regardless of the source of the

\textsuperscript{128} This appears especially true in the context of human rights where “the identification of CIL consent has become so hard to square with the facts that courts and scholars have dropped any pretense that CIL is grounded in actual state practice.” Goldsmith & Levinson, supra note 53, at 1848.

\textsuperscript{129} See, \textit{e.g.}, Guzman, supra note 113, at 141 (stating that the “precise contours” of the subjective element of CIL—or \textit{opinio juris}—are uncertain).

\textsuperscript{130} See \textsc{INT’L LAW COMM’N}, Introduction, http://www.un.org/law/ilc/ (last visited Mar. 28, 2013); see also Guzman, supra note 113, at 126 (noting the practical problem with observing every relevant state action).

\textsuperscript{131} \textsc{Bederman}, supra note 93, at 145.

\textsuperscript{132} Guzman, supra note 113, at 124.
obligation in question. The consent doctrine "gives international law its validity" and legitimizes the expectation of the international community that legal obligations will be followed. While explicit consent is expected within treaty law, customary international law has long relied on an assertion of implied consent. The implied consent notion asserts that states failing to object during the formation of customary international law norms have consented to those norms as binding rules.

The implied consent doctrine is a fiction. Given the ambiguity and uncertainty of norms and practices, especially before they are established as law, it is more likely that most states did not even contemplate the norm, much less consent to it. Further, a state's implied consent under CIL is functionally irrevocable, an odd result given that the explicit consent model of treaties is almost always revocable. The resulting fictional consent model undercuts the legitimacy, and thus the potential, of customary law without providing any conceptual or practical benefit. Under modern customary law, there is no belief that for a state to be bound consent must be proven independently of the substantive requirements for customary international law formation. It is

133. See Bедерман, supra note 93, at 140 (noting that according to positivists, "rules of international law become positive law when the will of the state consents to being bound by them"); D’Амато, supra note 25, at 68; see also L. Oppenheim, The Science of International Law: Its Task and Method, 2 AM. J. INT’L L. 313, 331–33 (1908) (arguing international law becomes binding on a state through active consent by a state).


sufficient for consent to be circumstantially proven through the practice and *opinio juris* of other states.\(^{139}\)

3. The Flaws of Nonempirically Grounded Custom

There is consensus that the most pressing criticism of modern CIL is its reflection of “ideal, rather than actual, standards of conduct.”\(^{140}\) One commentator recently referred to the content of modern CIL as a “matter of taste.”\(^{141}\) This perspective flows from the reality that modern CIL formation is based on normative sources and justified on normative propositions.\(^{142}\) Public declarations by states indicate a normative position of those officials regarding either how they would like to see the content of international custom or how they would like to be seen as acting.\(^{143}\)

Perhaps best illustrating the aspirational nature of modern CIL is its relationship with state practice. State practice is not eliminated in modern CIL, but its relevance “diminishes as the normativity of the obligation increases, such that customs on highly normative issues like human rights” are considered binding even when actual state practice bears little resemblance to the rule articulated.\(^{144}\) As such, state practice is considered an important component in assessing traditional areas of international regulations, such as the seizure of fishing vessels in time of war considered in *The Paquete Habana*.\(^{145}\) This disparity demonstrates two interrelated points. First, the sliding scale recognizes that empirical grounding in state practice strengthens the validity of a CIL norm.

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139. See, e.g., Roper v. Simmons, 543 U.S. 551, 575–78 (2005); id. at 622–23 (Scalia, J., dissenting); Continental Shelf (Libya/Malta), 1985 I.C.J. 13, ¶¶ 27–34 (June 3); Delimitation of Maritime Boundary in Gulf of Maine Area (Can./U.S.), 1984 I.C.J. 246, 294–95 (Oct. 12); North Sea Continental Shelf (Ger./Den.; Ger./Neth.), 1969 I.C.J. 3, ¶ 43 (Feb. 20).

140. See Roberts, supra note 81, at 769.

141. Kelly, supra note 2, at 451.

142. The normative emphasis of modern CIL is further complicated by the western ideological predispositions that, as a practical matter, carry tremendous influence in norm generation. It has long been recognized that economically and militarily powerful states and cultures, residing predominantly in the Western Hemisphere, leave modern CIL norms susceptible to charges of “normative chauvinism.” Bruno Simma & Philip Alston, *The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles*, 12 AUSTL. Y.B. INT’L L. 82, 94 (1988–1989).


145. See *supra* notes 97–103 and accompanying text.
Second, where empirical grounding is difficult to identify, or where empirical data might suggest the invalidity of the rule, they are discarded in favor of the moral imperative underlying the promulgation of the rule. While the theory of modern CIL differentiates itself from the traditional conception in hopes of foregoing difficult state-practice questions, its continuing reliance on isolated experts, coupled with its moralistic bent, exacerbates the legitimacy questions posed under the original formulation.

B. Finding Custom Through Networked Knowledge

A year after Dr. Greenwald’s letter to The New England Journal of Medicine, Doctors Hangwi Tang and Jennifer Ng examined the efficacy of Google search in independently identifying diagnoses. Doctors Tang and Ng took all of the diagnostic cases presented in the New England Journal of Medicine during the 2005 calendar year and selected three to five search terms from each case to submit to the search engine. They found that Google correctly identified the diagnosis in 58% of the cases, startlingly close to the accuracy rate in a similar study testing the accuracy of emergency room physicians.

Over the past six years, the Internet has sharpened its diagnostic skills. In 2006, when Tang and Ng performed their study, one had to divine a “diagnosis” through an Internet search based on the uniformity of one’s search results. On February 13, 2012, Google announced it would more explicitly offer its diagnostic opinion. Now “when you

146. See supra notes 68–71 and accompanying text.
148. Id. at 1143.
149. Id.
150. Richard Krause et al., Can Emergency Medicine Residents Reliably Use the Internet to Answer Clinical Questions?, 12 WEST. J. EMERG. MED. 442, 442 (2011) (finding that 59% of medical residents answered patient-care questions correctly using Google). Interestingly, other studies have indicated that specially designed medical study search engines (such as PubMed) are no more effective than general search engines like Google, and that, in fact, Google is used more frequently by medical professionals. See, e.g., Robert H. Thiele et al., Speed, Accuracy, and Confidence in Google, Ovid, PubMed, and UpToDate: Results of a Randomised Trial, 86 POSTGRAD MED. J. 459, 464 (2010) (finding that users of Google and UpToDate search engines were more likely to correctly answer questions and were faster in finding answers).
search for a symptom or set of symptoms” you are provided with a list of health conditions that may be causing those symptoms. The site creates its suggestions of possible illness by cross-referencing the search data typically used by individuals researching a symptom and the conditions those billions of users tied to those symptoms. The medical profession is in little danger of extinction, but in the seven years since Dr. Greenwald’s letter, his fear of an autonomous “Google diagnostician” has become much closer to reality.

The Google diagnosis phenomenon is only one example of the transformation of data into operational knowledge being utilized by corporations, nongovernmental organizations, individuals, and states. Business entities, early adopters in the area, use “predictive analytics” to determine whether a person is pregnant and thus amenable to a discount on diapers. Public service organizations like the Harvard Humanitarian Initiative’s “Program on Crisis Mapping and Early Warning” work to predict human rights violations by identifying the precursors to such actions, like unusual governmental activity in certain areas of unstable states, through the use of imaging and crowdsourcing technologies. In government, the Central Intelligence Agency, Federal Bureau of Investigation, and the U.S. Department of Homeland Security have engaged in dramatic investments to mine “open source information,” including social networking sites, to “quickly vet, identify, and geo-locate breaking events, incidents, and emerging threats.”

These examples, spanning multiple industries, methodologies, and aims, are unified by transforming isolated pieces of information created passively and produced openly online into knowledge that enables subsequent action by its users, whether they be businesses, states, or individuals seeking medical treatment.

The goals of such projects are not new. Human rights advocates

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152. Zeiger, supra note 151.

153. Id.


have always sought to uncover government action and human rights abuses to predict or combat them as much as corporations have pursued demographic research to engage in price discrimination. In the past, however, such human rights groups simply lacked the resources to achieve these goals (assuming the information was available at all).

Below, I discuss the crucial features of successfully determining a networked knowledge applicable to CIL formation. Awareness and understanding of these features can assist future scholarship in assessing the accuracy of specific applied methodologies. Such methodologies, emphasizing networked knowledge, should enable CIL to recapture responsivity and enable future scholarship to reach the luxury exercised by scholars in economics—debating the scope and nature of exceptions rather than very existence of the rule. The principles below do not embrace a specific methodology but are intended as a platform by which future scholars may consider specific methodologies of CIL formation through mining networked information.

1. Social Epistemology and Networked Knowledge

Both the traditional and modern conceptions of CIL rely on the knowledge ascertained by individual experts, principally scholars and jurists, or small, institutional groups of experts, such as the International Law Commission (ILC). This reliance mirrors the historical reality that the epistemic process of acquiring knowledge is best accomplished through individual expert works.157

The traditional methodology of CIL formation dissipated because of experts’ inability to convincingly capture the truth of the empirical proposition set before them. Over time, the proliferation of information on the practices of states made a “full” examination of state practice highly burdensome. The increased skepticism of the public and experts over the course of history, due in part to the greater access to information, made empirical treatments of state practice increasingly vulnerable to criticism of malfeasance when some material would, inevitably, be excluded or missed.158

In contrast, under modern CIL formation, the normative framework is, by design, relativistic. Specifically, the judgments justifying favoring opinio juris over actual practice are based on contextual precepts

157. See David Weinberger, Too Big to Know 47–49 (2011) (describing cultural reliance on experts throughout the twentieth century).
158. See generally Bederman, supra note 93, at 145.
regarding rights, sovereignty, culture, and law that are fundamentally postmodern. Such judgments are not only likely to vary dramatically between nations, economic classes, and political persuasions, but they are also highly informed by the institutions and company that formed them. As a result, the legal judgments that birth modern CIL are highly insulated from external forces and influenced by the acculturative forces of internal relationships.

The relativistic and empirical shortcomings of modern and traditional conceptions of CIL formation can be overcome only by ensuring, through showing the justifiability of inferences from observable facts, that assertions of CIL formation are known, not simply desired. One step removed from that which is empirically proven, knowledge requires the creation of justifiable true belief. Thus, the conversion of information into knowledge requires the capability to possess sufficient information to justify one’s belief in the underlying proposition. For purposes of CIL, “knowing” customary law requires the information to justify one’s belief that the rule fulfills the doctrinal requirements of state practice and opinio juris.

Social epistemology examines the epistemic properties of discerning the ways of knowing societal truths that may not be observable. Traditional epistemology has long focused on the question of the individual processes of the rational mind to reach true, justified, belief. In contrast, social epistemology goes beyond the heuristics of the individual to examine the best processes and the advantages of networks. While traditional epistemic questions examine the individual search for knowledge for those intending to have an effect within society, social epistemic work goes in reverse asking how a socially networked society can bring knowledge about individual facts.

Within social epistemology there exists a further refinement in converting information to knowledge through networked interaction: network epistemology. General social epistemology remains tied to preconceived notions that do not translate easily within cultures. Network epistemology eschews anthropocentric notions in favor of a

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159. Id. at 142.
160. See generally Goodman & Jinks, supra note 77, at 697 (discussing acculturative forces in international law compliance).
163. See, e.g., Adrian Vermeule, Many-Minds Arguments in Legal Theory, 1 J. Legal Analysis 1, 2–4 (2009).
neutral empirical grounding that justifies broader knowledge. A simple example of this phenomenon is illustrated by knowledge ascertained through belief. When an Internet search engine is used to search for information online, the result, processed through the engine’s algorithmic code, can reasonably lead to the conclusion that the results represent several of the most relevant websites for each search made.

Tied to the principles animating and justifying CIL, knowledge regarding the fulfillment (or nonfulfillment) of CIL formation doctrine can be ascertained if the information produced by networked societies provides strongly probative justification that states are, in fact, engaged in state practice and possess opinio juris sufficient to trigger the universally binding nature inherent in CIL. Similarly, the empirically grounded and observable nature of the inferences providing justification subsequently revitalizes CIL by reinstating its authority to possess its universally binding character.

Even in a world of identifiable, perfectly objective experts, those experts’ knowledge is a faint shadow of the knowledge dispersed in society at large. At the time he wrote the opinion in *The Paquete Habana* over a century ago, Justice Gray had only the ability to access a tiny fraction of the information available to any Internet user today. The amount of information created, consumed, and accessible online today is staggering. Each day, more than 294 billion emails are sent, 864,000 hours of video (98.6 years’ worth) is uploaded to YouTube, and users consume enough information to fill 168,000,000 DVDs. The amount of user-created content is just as mind-boggling. According to Eric Schmidt, Chief Executive Officer of Google, Internet users create as much information in two days online as was generated in all other forms from the beginning of the world to 2003.

The quantity is staggering. But the quantity of information produced is simply a byproduct of the technological architecture of networked technology, which has had revolutionary effects. The “series of changes in the technologies, economic organization, and social practices of production,” writes Professor Yochai Benkler, is affecting “how we

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164. 175 U.S. 677 (1900); see text accompanying notes 97–112 (discussing Justice Gray’s opinion).
make and exchange information, knowledge, and culture.”167 The networking of content production provides tremendous pieces of information with various curatorial processes integrated within the very context through which content is produced.

The recent rise of the “wealth of networks” has created a multitude of methods for producing knowledge. Examples abound. In 2009, search aggregation—the practice of aggregating and comparing the use of search words across the world—saved lives by tracking the spread of the H1N1 flu pandemic faster and more accurately than the Center for Disease Control.168 Encyclopedia publishers have long stressed the accuracy of their material, but mass independent collaboration devices like Wikipedia have been empirically shown to possess equivalent accuracy while possessing much more material.169 Prediction markets are markets in which prices are set relative to betting activity regarding the occurrence of an event in the future.170 In 2008, prediction markets outperformed major polls and mechanisms averaging such polls, missing Barack Obama’s margin of victory in the Electoral College by a single point.171

While the volume of information available is a necessary precursor to networked knowledge, the conversion from information to knowledge would remain impossible without a way to identify the indicia of the fact sought and the ability to aggregate that indicia from the information dispersed throughout the network.172 Collectively, the endeavor of using technology to cull knowledge from networked information is properly classified as network epistemology.173

168. Jeremy Ginsberg et al., Detecting Influenza Epidemics Using Search Engine Query Data, 457 NATURE 1012, 1012 (Feb. 19, 2009); see also Andrea Freyer Dugas et al., Google Flu Trends: Correlation with Emergency Department Influenza Rates and Crowding Metrics, 10 CLIN. INFECT. DIS. 1093 (2012) (confirming accuracy and speed).
172. The specific examples outlined above should not be read to the exclusion of other similarly positioned mechanisms such as crowdsourcing and open-source production.
173. See WEINBERGER, supra note 157, at 245–49.
2. Knowledge, Numbers, and Diversity

The unifying feature of collective intelligence theory is that groups of decision-makers make better, more accurate judgments than individuals, even when the individuals in question are experts. Aggregated digital data is not only likely to provide new information for customary international law formation, but more accurate information. The origin of customary law, in both the domestic and international sphere, owes much to the notion that practices are likely to reflect the reasoned judgments of community members.

Modern economics is an instructive example. A basic premise of economics is that the information relevant to individual economic decisions exists only in dispersed, incomplete, and often contrary fragments scattered across, and residing within, a society. Even the most dedicated central planners could not gather all of the information that make up the market pricing system. When government misjudges a fixed price too low (a ceiling price), the goods affected disappear from public vendors, are sold selectively to preferred customers, and a black market appears where the desired goods are sold at above-ceiling (and sometimes above-market) prices. When the government’s price is too high (a floor price) there is excess supply, retailers are uninterested in purchasing from suppliers, the government is often forced to purchase the excess supply, and producers sell for a loss in parallel markets.

Market pricing represents creating an independent mechanism consolidating this fragmented information to create an optimal distribution of goods that reflects the collective intelligence of the market. In short, the sampling of large numbers of participants creates an empirically observable and normatively desirable result. It is empirically observable as you track the aggregation of the numbers. It is normatively desirable because the final result “tracks the truth” better than any materially smaller group attempting the same task.

Democratic theory reflects a similar wisdom. Democracy is desirable not only because it provides procedural fairness, but also because, based on substantial evidence, it tracks the truth, leading to not

177. The prevalence of illegal markets and surplus products evidence such failures.
178. Picketty, supra note 176, at 792–94.
only a fair outcome, but a correct one. The epistemic value of democracy is embodied in the Condorcet Jury Theorem.179 The “Law of Large Numbers” posits the simple rule that as the size of a sample group grows, expectations and actual occurrences tend to converge.181

The Condorcet Jury Theorem is the sociological extension of the Law of Large Numbers relative to group knowledge.182 The Jury Theorem asserts that when members of a group choose between two alternatives, as the size of the group increases, “the probability that a majority vote of the group is correct tends towards certainty” so long as systemic bias does not compromise the result.183 In other words, larger groups perform better than smaller groups, while smaller groups perform better than individuals.

The superior accuracy of group judgments over individual ones asserted by the Jury Theorem is based on the individual strands of knowledge held by individuals that come into sharper focus when individual biases are cancelled in group decisions. Individuals never have perfect information when making judgments or speaking on facts. The experience gathered by individuals over time is further nuanced by context.

The corresponding nature of the size of the group and validity of the judgment flows from the fact that larger groups are more likely to represent a more heterogeneous sample. As the heterogeneity of the group increases, the more likely it is that the individuals will be negatively correlated, thus reducing the error value of the group’s final determination.

In other words, the size of the group is, in a way, a proxy for the existence of epistemic diversity. The accuracy of the group is directly related to the correlation of biases throughout the group. In small groups, strong biases of individuals can strongly skew the accuracy of the group’s collective judgment. As the group grows, strong biases in any direction are offset by equally strong biases in different directions.

180. See Picketty, supra note 176, at 793.
Together, the noise of false bias is cancelled out.

Absent the normative methodology of modern CIL, the original conception of customary law is not only amenable but classically designed to incorporate the democratic gains of large, diverse numbers. The “antidemocratic” character of CIL is a concern repeatedly expressed by skeptics of customary law. 184 Modern CIL’s reliance on unelected scholars, the focus on official statements, and the demise of the persistent objector doctrine reinforce this critique. 185

However, the antidemocratic elements of modern CIL are not endemic to custom, but are tethered to its normative formulation and sourcing. 186 The development of customary law is quite populist in nature. In European civil law systems, the model for CIL, customary law was an unmistakably democratic form of lawmaking in a world otherwise dominated by the monarch. For these systems, custom was “unofficial” law, in which the practices of people were transformed and ultimately enforced by the judge, even though he had no role in creating it. 187

3. Adaptable Aggregation

The accessibility of information itself does not necessarily create the reasonable belief of truth necessary to create knowledge. An information pool used to distill reliable networked knowledge must be able to isolate and aggregate the expressions relevant to the knowledge sought and be continuously refreshed. A vast Internet of websites is worth little absent an ability to efficiently search that information to cull the material sought. 188 Similarly, once organized, the value of information online

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186. It is true that, at the domestic level, a networked CIL could be antidemocratic in the strict sense. Where domestic populations are opposed to a networked CIL norm, they could remain bound against their democratic wishes. This, of course, would only be antidemocratic assuming that there did not exist an overarching democratic commitment to international law. Even in this circumstance, the flexibility provided by the general maneuverability within international law generally, and CIL particularly, indicates that the depth of this problem would not be substantial.


188. Even with all of the information present on the Internet, the Harvard Humanitarian Initiative project crowdsourcing satellite imagery would be useless if it was unable to access such
would grow stale quickly without the ability to quickly incorporate and utilize newly created information. The ability to gather relevant information on a continuously renewed basis represents adaptable aggregation.

The civil law origin of customary law represents a foundation in “evolutionary aggregation.” At the inception of custom as a source of law, converting longstanding practice into law was justified because such practices have “passed the test of time” and thus are properly considered a reflection of the collective wisdom of multiple generations. Customary practices provide guidance for the agnostic or clueless. For example, if you become lost in a forest, discovering a trail of any significance provides solace because the path represents that many have gone before you down that path. The simple fact of the past presence of such travelers is, in and of itself, meaningless. The relief is the product of the highly reasonable belief that those travelers were making their journey for the purpose of getting to a destination. Through another reasonable inference, one can conclude that people who can assist you in a time of need will be present at the destination.

At its inception, customary law’s dependence on unwritten rules engendered legal change through an organic, decentralized communication of content that favors overarching rules. As circumstances change, customs shift in corresponding measure. As circumstances change, making an original practice impossible or excessively impractical, community members communicate as to the best available alternative, typically hewing closely to the preceding customary norm. Custom’s reliance on communication and the fact that uncomplicated material is communicated (and understood) more readily facilitate its adaptability and enable experimentation at levels

imagery or if it had no understanding by which to analyze the images it possessed.

189. See Kyung-Joong Kim & Sung Bae Cho, Evolutionary Aggregation and Refinement of Bayesian Networks, 2006 IEEE CONGRESS ON EVOLUTIONARY COMPUTATION 1513–20 (July 16–21, 2006) (describing application of evolutionary algorithms and use of Bayesian Networks). While I prefer the “evolutionary aggregation” terminology, the concept it encompasses is designed to include a host of similar arguments, most prominently, the Burkan perspective regarding the value of tradition.


where greater detail may be required. The recognition of customary law was a highly significant advancement in law and cutting edge in its day. The value of “tradition” as a proxy of judgment, however, provides only a very rough notion of societal knowledge and is prone to inertia. Once established, a variety of conformity-driving mechanisms, such as path dependency, erode custom’s reflection of judgment.

IV. IMPLEMENTATION AND IMPACT

The final aspect examined relates to the impact of a “networked knowledge” approach to CIL formation within the larger international system. To be sure, the final impact can only be discerned relative to innumerable other legal regime questions. However, there are three distinct and direct consequences.

A. International Personality

Under traditional notions of international law, only states were governed by international law and the regulatory subject matter of the field was correspondingly limited. Only quintessential transnational activity (i.e., armed conflict and trade) and sovereignless areas (i.e., the high seas) were regulated.

Since World War II, the jurisdictional scope of international law has expanded dramatically. International human rights moved international law past the sovereign boundary by governing purely domestic action. The imposition of international criminal liability

193. See, e.g., id. (describing how the communication of dynamic treaty obligations allow customs to evolve).

194. See, e.g., BEDERMAN, supra note 93, at 27.


196. See John P. Humphrey, The Revolution in the International Law of Human Rights, 4 HUM. RTS. 205, 208 (1975); see also Ochoa, supra note 94, at 158 (describing how international law is shifting away from viewing individuals as having no legal personality).

197. See, e.g., id. at 153 (describing the law’s expansion to individuals).

198. Humphrey, supra note 196, at 208 (giving examples of human rights law regulating government actions against its subjects); Ochoa, supra note 94, at 158 (stating that human rights
decisively declared individuals subject to international legal punishment, but did so without a role in the formation of such rules. The undesirable asymmetry of imposing liability on individuals without providing a corresponding role in the law formation process has sparked a search for “bottom-up lawmaking” through the inclusion of intergovernmental organizations, NGOs, or new categories of law formation that are more individually oriented. In the best of scenarios, the use of such proxies seems unlikely to accomplish more than substituting the judgments of one imperfect proxy with that of another. In the worst scenarios, the public and politically accountable proxy of the state is dislodged by unaccountable actors with specialized policy investments. Professor Christiana Ochoa sharpened these normative intuitions into a direct call for formal incorporation of individuals in the doctrine of customary international law formation through methods such as surveys.

A move toward a collection of individual expression through networked technology provides a reliable theoretical framework for direct and uninvasive opportunity for the expressions of individuals to not only reflect custom, but also to actively participate in its creation and alteration. The volume of expressions that create networked knowledge are difficult to manipulate and far more resistant to capture by special interests.

treaties were intended to protect individuals from their own governments rather than to govern international interactions between states).


B. A Useful Platform for Principled Hierarchies of Norms

As noted by Professors Jack Goldsmith and Darryl Levinson, modern international law lacks “centralized, hierarchical ordering” that results in “struggles to coordinate public understandings of the content and application of its norms.” 205 In large part, the coordination problem Goldsmith and Levinson cite is a byproduct of the unobservable and normative nature of modern CIL. Unable to provide a convincing gauge (in quantity or quality) of relevant CIL formation elements, modern CIL rules are usually placed on the same uncertain footing. 206

Modern CIL is binary. Generally, under current doctrine, once a norm has “hardened” into customary law it possesses the same force and establishment of all other such rules. 207 Networked CIL formation would provide granular detail. Networked knowledge will provide fine-grained detail of differentiations between the volume of state practice across multiple norms. Just as soft law has provided an opportunity to create international rules exerting exclusively political force, the provision of substantial data undergirding networked CIL may provide soft CIL—perhaps not universally binding, but reflecting the influence of identified best practices across multiple states. In short, the depth offered by networked CIL formation can be a method by which international law can reclaim a framework of the “hierarchical ordering” necessary to effective governance.

C. The Normative Value of Accuracy

Theoretical changes and proposals to customary international law critique that has dogged modern customary law. The peculiar dynamics of the UN General Assembly appear more representative of the insularity of international organizations than the world populace. Similarly, even an intensive effort to include a broad variety of NGOs with a variety of perspectives would not resolve the force of self-selection that nurtures the growth and makeup of such organizations. Nor does it seem plausible that international scholars and officials who hold such sway in identifying or codifying customary international law would welcome organizations representing positions broadly unpopular among their ranks (e.g., socially conservative, anarchic, religious, libertarian).

205. Goldsmith & Levinson, supra note 53, at 1808.
207. Jus cogens norms are an exception. However, the “depth” argument that follows applies with equal strength to the definitional difficulty surrounding the scope of those norms. See generally Theodor Meron, On a Hierarchy of International Human Rights, 80 AM. J. INT’L L. 1 (1986).
formation have mostly been permeated with a scholarly assessment of normative value judgments as to the “best” content of international law norms and assertions of pragmatic gains as an ancillary benefit. This work has played a major role in the expansion of international law.

It is a necessary concession to note that, under a networked CIL approach, the substantive scope of CIL would change in ways that many international law scholars might find disturbing. The law that remains, however, should possess greater legitimacy, enforceability, and clarity. Further, major elements of legal regime design do not operate in isolation. Legitimacy enhancements within one realm tend to emanate crossover benefits. Within the international legal system, treaty instruments are most likely to be the ultimate beneficiaries. CIL with greater clarity and authority will ease the burden of treaty instruments, offsetting some of the costs associated with treaty alteration. Relatedly, CIL filling the gaps between treaties should similarly enhance the legitimacy of treaties by discouraging the stretching of treaty provisions beyond their anticipated application.

V. CONCLUSION

Networking customary law answers the most substantial challenges facing modern CIL formation, reinstating CIL as a responsive body of law capable of answering the challenges of our contemporary, globalized society. In addition to avoiding the harms inherent to modern CIL’s normative emphasis, reinstating an empirically oriented and high-resolution vehicle for law formation will provide an observable, quantifiable foundation of accuracy that not only has the chance to enhance the authority of CIL but also reinvigorate the system’s entire infrastructure.

208. In regard to some shifts, I am likely to be included among such scholars.