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Compliance & Effectiveness in International Regulatory Cooperation

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**COMPLIANCE & EFFECTIVENESS IN INTERNATIONAL
REGULATORY COOPERATION**
*Kal Raustiala**

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INTRODUCTION

Treaties, like all regulatory institutions, are purposive. Their primary aim is to produce effects on behavior that would not otherwise have occurred. What causes some treaties to achieve their purposes while others do not is a central question — perhaps *the* central question — in

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international cooperation today, for without an understanding of effectiveness we cannot design useful, productive institutions.

Legal rules and institutions affect behavior through a number of causal pathways.¹ Compliance, the focus of this symposium, is typically an important aspect of the production of institutional effectiveness, but not the only aspect. In this article, I analyze the often complex relationship between compliance, understood as conformity between behavior and a legal rule or standard, and effectiveness, understood as the degree to which a legal rule or standard induces desired changes in behavior.² I argue in the context of international regulatory cooperation that the prevailing analytical focus on compliance is often misplaced and even counterproductive. Contrary to the (often implicit) assumption in many studies of treaty compliance, low levels of compliance are not inherently an indication of low effectiveness. Indeed, as I will describe, high levels of compliance may signal low effectiveness. A more fruitful analytic focus is the causal impact of legal rules on behavior and the linkages between these causal connections and compliance.

In the body of this article, I make four more specific claims about compliance and effectiveness in international regulatory cooperation. While the claims concern the sources of treaty effectiveness, in each I endeavor to show how compliance and effectiveness interact. Collectively, these claims also illustrate the myriad and sometimes unexpected ways international law influences behavior. In making these claims, I draw mainly on recent research on environmental treaties and attempt to connect this research to this symposium's other focus: international intellectual property law. While international intellectual property law and international environmental law have little in common,³ I proceed from the supposition that at least some of

¹ See, e.g., Oran R. Young & Marc A. Levy (with the assistance of Gail Osherenko), *The Effectiveness of International Environmental Regimes*, in *THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIORAL MECHANISMS 1* (Oran R. Young ed., 1999) (discussing effectiveness in the international context); Lawrence Lessig, *The New Chicago School*, 27 *J. LEGAL STUD.* 661 (1998) (discussing the regulation of behavior in the domestic context).

² See *infra* Part II for definitions of these terms.

³ There are areas of overlap between the two fields. The 1992 Convention on Biological Diversity, for example, seeks to protect the genetic resources that are often at the heart of agricultural, biotechnological, and pharmaceutical innovations. See Convention on Biological Diversity, June 5, 1992, I.L.M. 818. The treatment of intellectual property rights in the Convention was a concern of the U.S. government (which has signed but not ratified the treaty) because it was seen as potentially undermining or "hollowing out" the substantive provisions in the Trade-Related Intellectual Property Rights (TRIPS) agreement, negotiated as part of the Uruguay Round of multilateral trade negotiations. See *infra* note 9. Similarly, many advocates from the developing world and indigenous communities see the extension of intellectual property through TRIPS as destructive of conservation and development efforts and antithetical to social values in those communities. See generally Kal Raustiala & David G. Victor, *Biodiversity Since Rio: The Future of the Convention on Biological Diversity*, ENVIRONMENT, May 1996, at 17 (discussing the biological diversity treaty); Vincente

what drives compliance with international regulatory commitments is independent of the precise issues involved, and that where the nature of issues does matter through careful comparative analysis we may draw useful lessons for law and policy.

My approach is interdisciplinary. While international lawyers have long been concerned with treaty compliance,⁴ political scientists have begun to examine treaty compliance as well.⁵ This latter line of research focuses on the causality of state behavior and the explicit analysis of effectiveness, though compliance is often an important variable. Research in political science also employs a broad perspective, starting with actor behavior and looking not only at international legal obligations but also at the wider array of norms and practices that may shape behavior vis-à-vis international treaties — what political scientists term an “international

Sánchez, *The Convention on Biological Diversity: Negotiation and Contents*, in *BIODIPLOMACY: GENETIC RESOURCES AND INTERNATIONAL RELATIONS* (Vicente Sánchez & Calestous Juma eds., 1994). For treatment of the plant genetic resources dimension, see David S. Tilford, *Saving the Blueprints: The International Legal Regime for Plant Resources*, 30 *CASE W. RES. J. INT'L L.* 373 (1998), Rebecca L. Margulies, Note, *Protecting Biodiversity: Recognizing International Intellectual Property Rights in Plant Genetic Resources*, 14 *MICH. J. INT'L L.* 322 (1993), and SEEDS AND SOVEREIGNTY: THE USE AND CONTROL OF PLANT GENETIC RESOURCES (Jack R. Kloppenburg, Jr. ed., 1988). On the diplomacy of TRIPS, see MICHAEL P. RYAN, *KNOWLEDGE DIPLOMACY: GLOBAL COMPETITION AND THE POLITICS OF INTELLECTUAL PROPERTY* (1998) and Susan K. Sell, *Intellectual Property Protection and Antitrust in the Developing World: Crisis, Coercion, and Choice*, 49 *INT'L ORG.* 315, 321-22 (1995).

⁴ See, e.g., LOUIS HENKIN, *HOW NATIONS BEHAVE* (2d ed. 1979). But see Edith Brown Weiss, *Understanding Compliance with International Environmental Agreements: The Baker's Dozen Myths*, 32 *U. RICH. L. REV.* 1555, 1555 (1999) (stating that “[u]ntil recently, little attention has been given to whether states and other actors comply with the agreements they negotiate.”).

⁵ For recent studies of compliance with international agreements from across the two disciplines, see *ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS* (Edith Brown Weiss & Harold K. Jacobson eds., 1998), *A Symposium on Implementation, Compliance and Effectiveness*, 19 *MICH. J. OF INT'L L.* 303 (1998), Beth A. Simmons, *Compliance with International Agreements* 1 *ANN. REV. POL. SCI.* 75 (1998), Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 *YALE L. J.* 2599 (1997); Günther Handl, *Compliance Control Mechanisms and International Environmental Obligations*, 5 *TUL. J. INT'L & COMP. L.* 29 (1997), George W. Downs et al., *Is the Good News About Compliance Good News about Cooperation*, 50 *INT'L ORG.* 379 (1996), Ibrahim F. I. Shihata, *Implementation, Enforcement, and Compliance with International Environmental Agreements — Practical Suggestions in Light of the World Bank's Experience*, 9 *GEO. INT'L ENVTL. L. REV.* 37 (1996), *IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW* (James Cameron et al. eds., 1996), ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* (1995), RONALD B. MITCHELL, *INTENTIONAL OIL POLLUTION AT SEA: ENVIRONMENTAL POLICY AND TREATY COMPLIANCE* (1994), and Abram Chayes & Antonia Handler Chayes, *On Compliance*, 47 *INT'L ORG.* 175 (1993).

regime”⁶ and what legal scholars might study under the rubric of social norms, social meaning, and sometimes as customary international law.⁷ The emerging multidisciplinary dialogue has enriched our understanding of the interplay between law, politics, and cooperation in international affairs, and I employ insights from both disciplines frequently.⁸

⁶ The utility of the international regime concept is that it comprises a fuller range of behaviors and behavioral influences, and highlights legal as well as extralegal aspects of cooperation. An international regime may contain several distinct treaties, or no treaty at all. While the notion of norms and practices shares much with customary international law, it is again broader, because it dispenses with the *opinio juris* requirement (though it sometimes appears that *opinio juris* has also been discarded by many jurists and theorists in international law — and so has the state practice requirement). On the latter, see Daniel Bodansky, *Customary (and Not So Customary) International Environmental Law*, 3 IND. J. GLOBAL LEGAL STUD. 105, 108-12 (1995). On customary international law, see generally Jack L. Goldsmith & Eric A. Posner, *A Theory of Customary International Law*, 66 U. CHI. L. REV. 1113 (1999) (using game theory to explain how customary international law arises), MICHAEL BYERS, *CUSTOM, POWER AND THE POWER OF RULES: INTERNATIONAL RELATIONS AND CUSTOMARY INTERNATIONAL LAW* (1999); LOUIS HENKIN, *INTERNATIONAL LAW: POLITICS AND VALUES* 29-40 (1995), and ANTHONY D'AMATO, *THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW* (1971). For a recent overview of the expansive literature within political science on international regimes, see generally ANDREAS HASENCLEVER ET AL., *THEORIES OF INTERNATIONAL REGIMES* (1997). See *INTERNATIONAL REGIMES* (Stephen D. Krasner ed., 1983) and ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* (1984) for the seminal treatments of international regimes.

⁷ See, e.g., Lessig, *supra* note 1; Richard A. Posner, *Social Norms and the Law: An Economic Approach* 87 AM. ECON. REV. 365 (1997); Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903 (1996); Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943 (1995); Eric A. Posner, *The Regulation of Groups: The Influence of Legal and Nonlegal Sanctions on Collective Action*, 63 U. CHI. L. REV. 133 (1996); Symposium, *Law, Economics & Norms*, 144 U. PA. L. REV. 1643 (1996). See generally Weiss, *supra* note 4, at 1555-58 (providing references on customary law).

⁸ The interdisciplinary literature is rapidly growing. The majority of this work looks to international relations theory to inform international legal scholarship, and is done by international lawyers (some of whom, such as Anne-Marie Slaughter and Richard Steinberg, are also political scientists). See, e.g., Goldsmith & Posner, *supra* note 6; *Symposium on Method in International Law*, 93 AM. J. INT'L L. 291, 291-423 (1999); Byers, *supra* note 6; Anne-Marie Slaughter et al., *International Law and International Relations Theory: A New Generation of Interdisciplinary Scholarship*, 92 AM. J. INT'L L. 367 (1998); Kenneth W. Abbott & Duncan Snidal, *Why States Act Through Formal International Organizations*, 42 J. CONFLICT RESOL. 3 (1998); Kal Raustiala, *States, NGOs, and International Environmental Institutions*, 41 INT'L STUD. Q. 719 (1997); Richard H. Steinberg, *Trade-Environment Negotiations in the EU, NAFTA, and WTO: Regional Trajectories of Rule Development*, 91 AM. J. INT'L L. 231 (1997); John K. Setear, *Responses to Breach of a Treaty and Rationalist International Relations Theory: The Rules of Release and Remediation in the Law of Treaties and the Law of State Responsibility*, 83 VA. L. REV. 1 (1997); John K. Setear, *An Iterative Perspective on Treaties: A Synthesis of International Relations Theory and International Law*, 37 HARV. INT'L L.J. 139 (1996); Robert J. Beck, *International Law and International Relations:*

The specific claims made in this article pertain to international law. But while international law is rapidly growing and increasingly significant for other areas of legal inquiry, and hence arguments about the causality of international law increasingly important, the conceptual and analytical framework I present in Part II of this article for understanding compliance, implementation, and effectiveness is applicable more generally. In Part III, I present a broad-gauged typology of theories of state behavior vis-à-vis international commitments, and link these theories to questions of compliance and effectiveness. In Part IV, I then discuss recent research on international environmental cooperation that addresses compliance and effectiveness in important and provocative ways. Part V tenders some brief comments on the import of the preceding for the leading intellectual property treaty, the Agreement on Trade-Related Aspects of Intellectual Property⁹, commonly known as TRIPS. Part VI concludes by underscoring the centrality of a behavioral approach to international institutions and of a more nuanced appreciation of the role of compliance in international law and world politics.

II. COMPLIANCE, IMPLEMENTATION, AND EFFECTIVENESS

Compliance generally refers to a state of conformity or identity between an actor's behavior and specified rule.¹⁰ In the international context, compliance is often specified as "an actor's behavior that conforms to a treaty's explicit rules."¹¹ While measuring or evaluating compliance with a given international commitment is typically conceptually-straightforward — though it may be empirically difficult — ascertaining why compliance or noncompliance occurs is more challenging. However, this latter causal inquiry is critical from the perspective of designing international commitments that reliably produce compliance. Since, as I will argue, compliance with international treaty commitments is in practice often inadvertent, coincidental, or an artifact of the legal rule or standard chosen,

The Prospects for Interdisciplinary Collaboration, 1 J. INT'L LEGAL STUD. 119 (1995); G. Richard Shell, *Trade Legalism and International Relations Theory: An Analysis of the World Trade Organization*, 44 DUKE L.J. 829 (1995); Anne-Marie Slaughter Burley, *International Law and International Relations Theory: A Dual Agenda*, 87 AM. J. INT'L L. 205 (1993). For one of the earliest, if not the earliest, efforts in the recent wave of incorporating international relations theory in the study of international law, see Kenneth W. Abbott, *Modern International Relations Theory: A Prospectus for International Lawyers*, 14 YALE J. INT'L L. 335 (1989).

⁹ See Agreement on Trade-Related Aspects of Intellectual Property Rights, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization [hereinafter WTO Agreement], Annex 1C, 33 ILM 1197 (1994) [hereinafter TRIPS Agreement].

¹⁰ Some compliance theorists argue that concepts of compliance vary given different theories of international law. See, e.g., Benedict Kingsbury, *The Concept of Compliance as a Function of Competing Conceptions of International Law*, 19 MICH. J. INT'L L. 345 (1998).

¹¹ MITCHELL, *supra* note 5, at 30; see also ROGER FISHER, *IMPROVING COMPLIANCE WITH INTERNATIONAL LAW* (1981).

the sheer fact of compliance with a given commitment tells us little about the utility and impact of that commitment. As a result, it offers little guidance for the creation and adjustment of future commitments.

To do more, it is critical to distinguish compliance from two closely related concepts: implementation and effectiveness. Distinguishing these concepts is necessary for a satisfactory causal analysis of compliance, and only through causal analysis can we begin to systematically understand and improve compliance. Implementation refers to the process of putting international commitments into practice: the passage of domestic legislation, promulgation of regulations, creation of institutions (both domestic and international), and enforcement of rules.¹² While implementation can occur at the international level, such as in the physical establishment of a secretariat created by a treaty, here I am chiefly concerned with implementation of commitments at the national level by the parties to a given treaty.

Implementation is a complex process about which few useful generalities can be made.¹³ However, as both a deductive and an empirical matter, it is the case that while implementation is typically a critical step toward compliance, compliance can occur without implementation. That is, compliance with a legal rule can occur without any effort or action by a government or regulated entity.¹⁴ If an international commitment matches current practice in a given state, for instance, implementation is unnecessary and compliance is automatic.¹⁵ Compliance is produced in many treaties in this manner; the international whaling treaties, for example, contained for most of their history total whale-catch quotas set to roughly match the demand of the whaling industry.¹⁶ Compliance with the quotas of the whaling accords was nearly perfect, but only because the legal standard codified then-current behavior.¹⁷ Similarly, the Non-Proliferation

¹² See David G. Victor et al., *Introduction and Overview to THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE 1* (David G. Victor et al. eds., 1998).

¹³ See *id.* at 3.

¹⁴ Of course, implementation can occur, as it sometimes does, without resulting in compliance. As I argue below, however, in the international arena, in which states must affirmatively consent to treaty rules, these rules are often crafted with a wide margin of error that aims to reliably produce compliance.

¹⁵ Even more strongly, international commitments may permit and legitimize states to do what they want to do. As Phillip R. Trimble argues, "Contrary to the realist/idealist view of law as a restraint on unruly governments, international law confirms much more authority and power than it denies." Phillip R. Trimble, *International Law, World Order, and Critical Legal Studies*, 42 STAN. L. REV. 811, 833 (1990).

¹⁶ David G. Victor, *Whale Sausage: Why the Whaling Regime Does Not Need Fixing*, in TOWARD A SUSTAINABLE WHALING REGIME 4 (Robert Freidheim ed., forthcoming).

¹⁷ Recently evidence has arisen that in the case of the Soviet Union the quotas may have been substantially exceeded; the Soviets systematically falsified their data on whale catches in order to appear in compliance with the legal rule. See DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW & POLICY 1021 (1998); David Caron, Current

Treaty obliges many states to do what they are currently doing: not use or develop nuclear weapons.¹⁸ Compliance exists, but the causal link between it and the legal rule of interest is very weak. The same phenomenon occurs in domestic law: while the law may be best designed for the "bad man,"¹⁹ most individuals would not commit murder were it legal, and the legal status of the prohibition often has only a marginal impact on behavior.²⁰

Compliance can also occur for reasons entirely exogenous to the legal process: economic collapse in the states of the former Soviet Union, for example, has produced perfect, but coincidental, compliance with many environmental treaties.²¹ Again, no causally-related implementation of the treaties occurred. Instead, as economic output has dropped, so has the associated pollution and waste discharges.²² This illustrates the danger of a "snapshot" approach to compliance; the economies of the former Soviet states will almost certainly improve in the future, and without further changes in production processes along with that improvement will likely come noncompliance with many environmental commitments. This example also suggests that attention to the empirics of implementation processes can shed light on the real impact of treaties and commitments.

These examples help distinguish implementation and compliance, but they also illustrate the critical distinction between compliance with an international obligation and the effectiveness of that obligation. Effectiveness is a concept that can be defined in varying ways: as the degree to which a given rule induces changes in behavior that further the goals of the rule; the degree to which a rule improves the state of the underlying problem; or the degree to which a rule achieves its inherent policy objectives.²³ While most common-sense notions of effectiveness

Development, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AMER. J. INT'L L. 154, 171-72 (1995).

¹⁸ Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161.

¹⁹ Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 459 (1897).

²⁰ Clearly law has a symbolic and expressive function that may reinforce existing social norms, such as the norm against murder. My point is simply that if we want to understand compliance with a legal rule, such as the prohibition on murder, we must recognize that many rules codify social behavior and thus we cannot, without more, causally link the rule to the observed behavior. The independent causal impact of the legality of the rule is likely to be small, though not necessarily zero.

²¹ See, e.g., Alexei Roginko, *Domestic Implementation of Baltic Sea Pollution Commitments in Russia and the Baltic States*, in THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE, *supra* note 12, at 575.

²² See *id.* at 577.

²³ See Young & Levy, *supra* note 1, at 3-6; Victor et al., *supra* note 12, at 6; Robert O. Keohane et al., *The Effectiveness of International Environmental Institutions*, in INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE INTERNATIONAL ENVIRONMENTAL PROTECTION 3, 7 (Peter Haas et al. eds., 1993); ORAN R. YOUNG, INTERNATIONAL

relate to "solving the underlying problem," the factors that may influence the solution to a complex international problem are myriad. In many cases disentangling them is impossible.²⁴ Hence, many analysts define and assess effectiveness in more modest terms: as observable, desired changes in behavior.²⁵ This is the definition that I prefer and employ here.

Under this definition, an effective rule is not one that solves a problem, nor one that is subjectively judged superior to alternative rules by some external criterion, such as efficiency. An effective rule is simply a rule that leads to observable, desired behavioral change. Effectiveness is the measure of that change. Even when defined in this modest manner, many international rules are not effective. The international whaling rules described above were ineffective even in this minimal sense; they produced almost no observable, desired changes in behavior. Compliance was very high, but effectiveness very low. Similarly, the effectiveness of many environmental treaties with regard to the former Soviet states is zero — though compliance is perfect. This pattern of no or negligible effectiveness is not uncommon in international law and, again, is sometimes present in domestic law as well. The critical factor here is the relationship between the stringency of the legal standard and the baseline of behavior. When the legal standard mimics or falls below the baseline — whether intentionally or coincidentally — compliance is high but effectiveness low.

The converse situation is also possible: rules can be effective even if compliance with them is low. If a legal standard is quite demanding, even widespread failure to meet it may still correlate with observable, desired changes in behavior. Domestic environmental law in the United States, for example, often exhibits low levels of compliance but sometimes relatively high levels of effectiveness.²⁶ Many U.S. cities are non-attainment zones

GOVERNANCE: PROTECTING THE ENVIRONMENT IN A STATELESS SOCIETY 142-52 (1994); THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS: A SURVEY OF EXISTING LEGAL INSTRUMENTS 4-7 (Peter H. Sand ed., 1992).

²⁴ Young and Levy write:

The most intuitively appealing sense of effectiveness centers on the degree to which a regime eliminates or alleviates the problem that prompts its creation. Yet this definition presents practical problems that are sometimes severe. The social systems that are the focus of international regimes (as well as the natural systems within which they operate) are typically complex. Longitudinal data on the evolution of these systems, moreover, are frequently inconsistent or nonexistent. As a result, it is often difficult to ascribe observed changes in these systems to the operation of international regimes. The difficulties are compounded by the fact that most problems serious enough to justify the creation of an international regime motivate actors to pursue solutions through a variety of initiatives, including some that do not involve the regime directly.

Young & Levy, *supra* note 1, at 4.

²⁵ See *id.* at 4-5; Victor et al., *supra* note 12, at 6; Keohane et al., *supra* note 23, at 7.

²⁶ See generally Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 HARV. ENVTL. L. REV. 297, 299 (discussing the centrality of noncompliance to environmental law). Relatedly, Farber

under the Clean Air Act and some, such as Los Angeles, have unsuccessfully struggled for decades to be in attainment.²⁷ Yet air quality throughout the United States and in particular in Los Angeles has improved, and few would suggest that the Clean Air Act has had no positive impact upon behavior.²⁸ In general, rules and standards within domestic legislation are not final targets, but rather are often starting points in an ongoing interaction and negotiation between regulators and regulatees.²⁹ Within this interaction the existence of significant noncompliance is not anomalous but anticipated,³⁰ and the scope and depth of noncompliance forms the basis for much of the later negotiations. In such contexts, the existence of noncompliance with a legal rule on its own does not indicate much about the effectiveness of that rule.

Speed limits on freeways present a more prosaic example of effectiveness without compliance. Speed limits are rarely complied with in a strict sense — most traffic exceeds speed limits by a comfortable margin — but speed limits appear to dampen traffic speeds nonetheless.³¹ In cabining some driving behavior the speed limits are effective, even if

notes that Justice Scalia, before joining the Supreme Court, suggested that some environmental statutes “are not really meant to be universally enforced and implied that justiciability doctrine should provide leeway for a certain degree of agency flexibility.” *Id.* at 312 (citing Antonin Scalia, *The Doctrine of Standing as an Element of the Separation of Powers*, 17 SUFFOLK U. L. REV. 881, 894 (1983)).

²⁷ See Clean Air Act, 42 U.S.C. §§ 7401-7671q (1994). Frequently, environmental standards are not reached and are even unreachable: Congress mandated in the Clean Water Act, for instance, that all water pollution end by 1985. 33 U.S.C. § 1251(a)(1) (1994).

²⁸ For example, while Los Angeles regularly exceeds EPA limits on (tropospheric) ozone pollution, the number of days it does so has dropped markedly in the 1990s. While in the late 1980s, 180 days a year of noncompliance was not unknown, the EPA’s 1999 estimate is less than sixty days of noncompliance, about 33% of the previous level. See Mathew L. Wald, *EPA Says Smog for 1999 Has Been Bad, Not Hideous*, N.Y. TIMES, Sept. 10, 1999, at A16. While many factors may be at play — and the Clean Air Act is clearly riddled with numerous problems — it does appear to have led to appreciable air quality improvements in many cities.

²⁹ See generally Jody Freeman, *Collaborative Governance in the Administrative State*, 45 U.C.L.A. L. REV. 1 (1997) (presenting a critical analysis of regulatory negotiation); Cary Coglianese, *Assessing Consensus: The Promise and Performance of Negotiated Rulemaking*, 46 DUKE L.J. 1255 (1997); Farber, *supra* note 26, at 315-16. The Environmental Protection Agency’s Project XL takes this notion one step further. It has as its goal the trading of “indulgences” to non-comply with statutory or regulatory rules in exchange for greater performance (thus the commonly-quoted phrase, “if it isn’t illegal, it isn’t XL”). See generally United States Environmental Protection Agency, *Project XL* (last updated May 8, 2000) <http://www.epa.gov/ProjectXL>.

³⁰ See John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 ECOLOGY L.Q. 233, 233 (1990).’

³¹ See discussion *infra* note 40 (discussing the case of Montana, which illustrates the complexities of the relationship between compliance, legal standards, and social practices or norms).

compliance with the legal standard is very low or even non-existent. While from an effectiveness perspective more compliance with a well-designed standard is better, *ceteris paribus* — just as more compliance with speed limits is better — rules with significant noncompliance still can be effective if they induce desired changes in behavior that otherwise would not have occurred.³²

This statement is particularly important given the differing contexts of international and domestic regulatory rules. Domestic statutes, such as the Clean Air Act or regulations, such as speed limits, are created and enforced in the context of a legal and political system in which the majority can effectively and legitimately impose rules upon the minority. International rules, by contrast, are the product of explicit bargains among sovereign equals.³³ With few exceptions, states are the architects of international rules and explicit state consent the only source of legitimate power for those rules.³⁴ The need for consent in turn entails consensus or near-consensus bargaining rules among the states involved in a treaty negotiation. Treaties are thus an endogenous regulatory strategy for the governments involved: governments initiate treaty negotiations, determine their scope, and fix the content of international commitments collectively.³⁵ By doing so,

³² Exactly how legal rules operate to cabin behavior is a murky and unresolved area of legal theory, but one with significant import. Economistic analyses see law as simply giving rise to costs that deter certain behaviors; other theories, like that of Joseph Raz, claim that reasons for actions can be divided in first and second orders, and that second-order reasons, such as illegality, operate to preclude some actions even if first-order reasons suggest them. Lawful rules can be seen as one form of second-order reasons. See generally JOSEPH RAZ, PRACTICAL REASON AND NORMS 35-47 (1975); Lewis Kornhauser, *The Normativity of Law*, Manuscript Presented at the Colloquium on Law, Philosophy, and Political Theory at NYU Law School (Sept. 23, 1999) (on file with the *Case Western Reserve Journal of International Law*) (discussing Raz and contrasting economistic theories).

³³ On the impact of different voting rules in the international and domestic settings, see Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677, 735-42 (1998).

³⁴ See HENKIN, *supra* note 6, at 26-28. Some international rules are peremptory norms, which cannot be broken by any states regardless of consent, and some are customary norms, which are not “consented” to explicitly but instead develop through a tacit process. See generally *id.* at 29-40 (discussing the differing forms of international rules); D’AMATO, *supra* note 6. States may escape emergent customary norms only by regularly denouncing the norm, a concept known as the “persistent objector doctrine.” See also Hiram E. Chodosh, *Neither Treaty Nor Custom: The Emergence of Declarative International Law*, 26 TEX. INT’L L.J. 87, 114-18 (1991). For a critical discussion of customary law, see Goldsmith & Posner, *supra* note 6. For a critique in the environmental context, see Bodansky, *supra* note 6. For an illustration of the centrality of state consent in international law, see David D. Caron, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT’L L. 154, 166-67 (1995).

³⁵ Other actors, such as international organizations and non-governmental organizations, of course play a role and often are instrumental in setting the agenda of international negotiations. But it is undeniable that governments run negotiations and

governments also largely — though not totally — determine compliance levels with the resulting international rules.³⁶ Collectively setting the legal standard at a low level that is readily met is one way governments can ensure their compliance with international rules.³⁷ Compliance in the international system is thus a very different phenomenon than compliance in a domestic legal system, with distinct antecedents and causal factors.

Because compliance levels are largely an artifact of the legal standard employed, the significance of high or low compliance levels in any given case is not self-evident, and especially so internationally. Louis Henkin's famous aphorism that "almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time"³⁸ was stated in support of the notion that international law is important and effective. But that statement can be readily re-interpreted to instead support the notion that international law is insignificant and ineffective: if international legal rules simply mirror state behavior, compliance is perfect but effectiveness zero. In short, evidence of compliance without more is largely meaningless, and conclusions about compliance cannot reliably be extrapolated from data about state behavior.

Evaluating and improving compliance instead requires data about state behavior plus a theory and analysis of the causality of compliance, coupled with a counterfactual analysis or, if possible, a natural experiment. Evaluating effectiveness requires a similar analysis. Indeed, both inquiries can be subsumed under the rubric of "analyzing the causes of state behavior vis-à-vis an international treaty or commitment." A natural experiment is exactly that: a situation in which many variables are held constant but one or two change, such as when one (domestic) state or locality changes product liability laws while others do not. Natural experiments are a rare

formally determine their ambit and resolution, even if they are aided in that process by non-state actors. On the varied roles played by non-state actors, see Special Issue, *Knowledge, Power, and International Policy Coordination*, 46 INT'L ORG. 1 (1992); MARGARET E. KECK & KATHRYN SIKKINK, *ACTIVISTS BEYOND BORDERS: ADVOCACY NETWORKS IN INTERNATIONAL POLITICS* (1998); Raustiala, *supra* note 8; Jessica T. Mathews, *Power Shift*, reprinted in *THE AMERICAN ENCOUNTER: THE UNITED STATES AND THE MAKING OF THE MODERN WORLD* 515 (James F. Hoge, Jr. & Fareed Zakaria eds., 1997); Steve Charnovitz, *Two Centuries of Participation: NGOs and International Governance*, 18 MICH. J. INT'L L. 183 (1997).

³⁶ I explore how governments determine compliance levels endogenously and the tools that exist to improve compliance more fully below. See *infra* Part III.

³⁷ This is often called the "slowest boat" phenomenon. It is true that international rules are sometimes set at a relatively high level, but in these cases, states often refrain from accepting those rules until they are ready and able to comply. For example, this dynamic can be seen in the international monetary system, where governments can choose to accept Article VIII of the International Monetary Fund Articles of Agreements. Compliance in these cases is not caused by the existence of the rule in a direct manner, but rather the rule acts as a goal that governments aim to meet for various reasons, such as a desire to signal investors. See Beth Simmons, *COMPLIANCE WITH INTERNATIONAL MONETARY AGREEMENTS*, INTERNATIONAL ORG. (forthcoming, 2000).

³⁸ HENKIN, *supra* note 4, at 47.

but wonderful aid to analysis when they occur. A counterfactual analysis is a comparison of the observed outcome and the analyst's best guess about the likely course of events if the treaty or commitment or particular institution had not existed. A counterfactual analysis is a thought experiment rather than a natural experiment.³⁹ To return to the speeding example, the likely outcome in the absence of any speed limit is reasonable speeds by many drivers but excessive and even extreme speeds by some. This is in fact the outcome observed in Montana's recent experiment with a "reasonableness" standard for daytime driving.⁴⁰ Given this, speeding laws appear (in the aggregate) to be somewhat effective: compliance is low, but counterfactual reasoning suggests that there is probably a change in behavior due to the law.⁴¹ By engaging in counterfactual analysis and tracing the processes by which specific factors influence behavior, analysts can begin to identify and disentangle the key variables that lead to compliance with international commitments.

In sum, to speak of compliance is to be agnostic about causality: compliance as a concept draws no causal linkage between a legal rule and behavior, but simply identifies a conformity between the rule and behavior. To speak of effectiveness is to speak directly of causality: to claim that a rule is "effective" is to claim that it led to certain behaviors or outcomes, which may or may not meet the legal standard of compliance. To be sure, compliance is important. The central issue in a speeding infraction is the

³⁹ See Young & Levy, *supra* note 1, at 18; Keohane et al., *supra* note 23, at 18-19; James D. Fearon, *Counterfactuals and Hypothesis Testing in Political Science*, 43 WORLD POL. 169 (1991).

⁴⁰ See Robert E. King & Cass R. Sunstein, *Doing Without Speed Limits*, 79 B.U. L. REV 155 (1999) (analyzing the Montana experience). King and Sunstein note that for most residents the revocation of the speed limit altered driving behavior little, but for some and in particular for some tourists it led to very high speed driving. *See id.* at 156.

As King and Sunstein note, however, the most interesting parts of the story are in the details. While they interpret the data to suggest that "much of driving behavior is governed by informal norms" — a view with which I concur — they also note that many other factors may explain observed speeds on Montana's highways, such as the often treacherous road conditions and that drivers may be using the old speed standard (in reality, something in the 60-65 mph range) as a focal point for behavior. *See id.* at 156, 163. They also note the percentage of motorists travelling above 80 mph increased from 2% to 5% (a 150% increase) in the opening months of the new law — though the majority were out-of-state drivers, perhaps drawn to Montana by the "speed magnet." *See id.* at 162-63, 191. Thus, on the one hand, the Montana experience suggests that, as this article argues, the link between observed compliance and law *qua* law is often quite weak in comparison to the role of other causal factors. *See id.* at 162-85. On the other, it seems clear that the legal status and sanctions of the old speed limits had some causal impact, and that for a small percentage of drivers this impact was quite large.

⁴¹ The "states as laboratories" argument so often heard in the law draws implicitly on the utility of natural experiments. In the speeding example, we in fact had somewhat of a natural experiment in the United States in that states in the 1990s adopted many different limits, with Montana setting only a standard of reasonableness during the daytime. *See generally id.* (discussing the Montana experience).

relationship between the observed speed and the legal limit, a question of compliance.⁴² But as the experience of Montana suggests, the law's effectiveness in controlling speeding cannot simply be inferred from data about compliance with speed limits.⁴³ If we seek to understand how and why legal rules or standards operate as they do and when they are effective, we must self-consciously analyze the underlying sources of behavior and their relationship to the legal rule or standard. Indices of compliance, without more, are helpful but insufficient.

III. CAUSAL THEORIES OF STATE BEHAVIOR

The analysis in the preceding Part is applicable, with minor variations, to the study of any legal rule or standard. However, the focus of this symposium is compliance with international rules, and hence the behavior of interest is that of states. The study of why states behave as they do is central to the discipline of international relations. Political scientists have developed a wide range of often sophisticated theories that are applicable to questions of treaty compliance and effectiveness. Below I categorize and introduce the main theories of state behavior vis-à-vis international commitments under three headings: rationalist or utilitarian state-actor theories; norm-driven or sociological theories; and liberal or domestic institutional theories. While these categories are broad, and the lines between them not always sharp or mutually exclusive, the categories capture the major distinctions in existing theories in a heuristically-useful way.

Each family of theories identifies a distinctive set of variables as the critical causal factors that explain variation in state behavior.⁴⁴ In brief, rationalist or utilitarian theories are economic in nature. They treat states as rational, strategic, interdependent choice-making actors and examine the underlying structure of problems and incentives in a particular area of cooperation. Norm-driven theories of state behavior stress the role of socialization, the social construction of state interests (and preferences), and the internalization of norms within states. Liberal theories, like rationalist theories, are epistemologically rationalist in orientation, but break down the state into its component parts and emphasize the centrality of domestic politics and institutions to explanations of variation in state behavior.

⁴² Even there, and more generally in the criminal law, however, there is a concern with causality: an affirmative defense of justification is a causal claim about noncompliance with a legal rule that, if accepted, may exonerate or mitigate the defendant's guilt. An excuse claim is similarly a claim about the causality of noncompliance.

⁴³ King & Sunstein, *supra* note 40, at 156.

⁴⁴ This is not to imply that there are extant analyses of compliance self-consciously employing each of these theoretical traditions. Rather, I have taken the main branches of international relations theory and applied them to the compliance question, which is really a subset of a broader question these theories do address: what are the sources of state behavior in international affairs?

A. Rationalist Theories

Rationalist theories of international relations emphasize the structure of interests, actors, power, and incentives at play in a particular issue. Perhaps the most basic variables in rationalist theories are comprised by what is sometimes termed “problem structure.” One central aspect of problem structure draws on basic non-cooperative game theory,⁴⁵ which illustrates the very different incentives to comply with collective rules that exist in problems characterized by coordination games or by collaboration games.⁴⁶ Coordination games refer to situations in which actors benefit from the existence of a shared standard: the paradigmatic case is the rule that one drives on the right (or the left) side of the road, but not both. Once such a rule is established the incentive to deviate is weak or non-existent; compliance is an equilibrium.⁴⁷ Conversely, in collaboration games mixed motives for cooperation exist. While all actors collectively are better off if they all comply, noncompliance can produce benefits for individual parties. Here the paradigmatic case is the (perhaps-overused) prisoner’s dilemma,⁴⁸ in which the incentives not to comply are strong and the equilibrium outcome is mutual noncompliance.⁴⁹ These different problem structures correspond to different real world contexts. Rules governing international aviation, for example, are largely coordination games and hence compliance should be, and empirically is, fairly high.⁵⁰ Rules for many

⁴⁵ For introductions to game theory in the international context, see ARTHUR A. STEIN, *WHY NATIONS COOPERATE: CIRCUMSTANCE AND CHOICE IN INTERNATIONAL RELATIONS* (1990) or JAMES D. MORROW, *GAME THEORY FOR POLITICAL SCIENTISTS* (1994). For a classic treatment, see THOMAS C. SCHELLING, *THE STRATEGY OF CONFLICT* (1960). For a modern and technical overview, see ERIC RASMUSEN, *GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY* (2nd ed. 1994).

⁴⁶ Games of deadlock are logically excluded in the context of this article, which addresses cooperation achieved through explicit agreements such as treaties (and thus treats situations in which states have an underlying interest in resolving a collective action problem).

⁴⁷ There are often major distributional issues in coordination games, however. These create incentives to shift the equilibrium solution, if the state is powerful enough to do so. See Steven D. Krasner, *Global Communications and National Power: Life on the Pareto Frontier*, in *NEOREALISM AND NEOLIBERALISM: THE CONTEMPORARY DEBATE* 234 (David A. Baldwin ed., 1993) (discussing the centrality of power and distributional issues in regulatory cooperation).

⁴⁸ The prisoner’s dilemma is a story in which two prisoners, in separate rooms and unable to communicate, have the choice of confessing or maintaining silence. If each maintains silence they will only receive a short sentence, but if one cooperates with the police she goes free and her partner receives a long sentence. The equilibrium outcome is that each cooperates with the police, producing a collectively sub-optimal outcome. The outcome depends on the absence of enforceable agreements between the prisoners and limited information about each other’s actions.

⁴⁹ Under certain conditions, such as indefinite or unknown iteration, cooperation can be sustained in what is otherwise a prisoner’s dilemma game.

⁵⁰ Many customary international law norms can be understood as coordination games in which equilibria define the norm. Cf. Goldsmith & Posner, *supra* note 6, at 1127-28.

international trade issues are largely collaboration games⁵¹ and compliance is lower, *ceteris paribus*.⁵²

The concept of problem structure comprises more than this basic dichotomy between coordination and collaboration, though the dichotomy is important and often overlooked.⁵³ Some problems are marked by reciprocal actions that can, either through "tit for tat," specific reciprocity or more general, diffuse reciprocity, sustain cooperation and induce compliance with commitments over time, even in collaboration game situations.⁵⁴ Systematic tariff reductions in trade accords, for example, provide reciprocal benefits to states that can effectively, if imperfectly, promote compliance and that can be withdrawn in the event of noncompliance by another state.⁵⁵ While many treaties involve reciprocal obligations, the cooperative benefits are not necessarily reciprocal in this sense and the attendant politics very different. Most environmental treaties are not reciprocal in this sense;⁵⁶ similarly, the violation of human rights

⁵¹ From a pure neoliberal economic perspective, one can argue that international trade is not a collaboration game; each state is better off as a free trader regardless of what other states do. Politically, that view is not widely accepted, however, and the structure and history of the GATT attest to the view that international trade is a collaboration game. *See generally* RYAN, *supra* note 3, at 67-89 (discussing U.S. trade diplomacy). For international intellectual property, a similar argument can be made: while it is narrowly rational to afford little intellectual property protection and free-ride on the innovation of others, many states may also argue that their developing status makes low levels of intellectual property protection rational from a development perspective. Other analysts suggest that low levels of protection are economically counterproductive over time because they deter investment. *See id.* at 152-53. Regardless of the empirical veracity of these differing claims, the effective structure of the game is collaboration: many states would rather free-ride, and that is why TRIPS was folded in the GATT in the first place, rather than pursued through a forum such as the World Intellectual Property Organization. *See id.* at 91-139.

⁵² Alternatively, compliance requires other strategies, such as the development of a system of sanctions or formalized dispute resolution, such as we see in the Dispute Settlement Understanding of the WTO. *See Understanding on Rules and Procedures Governing the Settlement of Disputes*, Dec. 15, 1993, WTO Agreement, *supra* note 9, Annex 2, 33 I.L.M. 1226 (1994).

⁵³ *See e.g.*, Robert O. Keohane, Commentary, *When Does International Law Come Home?* 35 HOUSTON L. REV. 699, 702-09 (1998).

⁵⁴ *See* ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* (1984) (discussing reciprocity as a source of sustained cooperation); ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* 57-60 (1990). The distinction between specific and diffuse reciprocity is largely temporal: in diffuse settings acts may "balance" over time, even if at any specific time one party may "owe" the other quite a bit. Specific reciprocity is pure tit-for-tat: one act for another. *See* KEOHANE, *supra*, at 128-31; AXELROD, *supra*, at 57-60.

⁵⁵ On the precise nature of such an enforcement dynamic in the GATT, see GEORGE W. DOWNS & DAVID M. ROCKE, *OPTIMAL IMPERFECTION?: DOMESTIC UNCERTAINTY AND INSTITUTIONS IN INTERNATIONAL RELATIONS* 76-100 (1995).

⁵⁶ For an argument that the underlying dynamic of human rights treaties is the promotion of external barriers to ex post policy shifts rather than reciprocity in the

commitments by one state cannot be effectively deterred by the threat of violations by another state, nor is this strategy likely to be pursued as an empirical matter.⁵⁷

The breadth of the underlying regulatory problem can also impact compliance. Problems that require the cooperation of only a few states ("minilateralism")⁵⁸ may eliminate or dampen the public goods nature of enforcement efforts and thus enjoy higher levels of compliance than comparable multilateral agreements. Some relevant behaviors are more transparent, and hence more capable of being monitored, than others, again improving compliance.⁵⁹ Transparency is linked to a central variable in many rationalist explanations of compliance: reputational concerns. Governments may desire a reputation for law-abidingness generally, or they may be concerned with reputation with regard to particular legal commitments only. Where the credibility of commitments is important to governments, compliance with existing commitments may be understood as a means to enhance and signal current and future credibility.⁶⁰

GATT sense, see Andrew Moravcsik, *Explaining the Emergence of Human Rights Regimes: Liberal Democracy and Political Uncertainty in Postwar Europe*, (unpublished manuscript presented at NYU Law School, Sept. 1999).

⁵⁷ The analogue in environmental treaties is, in the case of a commons problem like ozone depletion, more pollution in exchange for noncompliance with pollution abatement rules. For upstream-downstream problems, like acid deposition between the United States and Canada (in which the vast majority flows from the United States to Canada) there is no real analogue because obligations and impacts are not reciprocal. But even for more purely commons problems, like ozone depletion, the reciprocity dynamic is much weaker than in the trade context—even though from a pure trade theory perspective the suspension of benefits is costly for the suspending state, and thus the examples very similar—because the politics of trade and of environment are very different. In the environmental context, actors in Party B concerned about noncompliance by Party A, because they are typically concerned about the environment as a whole, are unlikely to seek noncompliance by Party B as a compliance-inducing tool. That move is common, even ubiquitous in the trade context, and is explicitly permitted by the WTO. See Karen D. Lee & Silke von Lewinski, *The Settlement of International Disputes in the Field of Intellectual Property*, in *FROM GATT TO TRIPS — THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS* 278, 303 (ICC Studies vol. 18, Friedrich-Karl Beier & Gerhard Schricker eds., 1996). Trade obligations are generally viewed (at least explicitly) as reciprocal concessions, not as efforts to address a shared problem.

⁵⁸ See, e.g., Miles Kahler, *Cooperation with Small and Large Numbers*, 46 INT'L ORG. 681 (1992) (discussing the diminishing role of minilateral leadership by the great powers).

⁵⁹ See Ronald B. Mitchell, *Sources of Transparency: Information Systems in International Regimes*, 42 INT'L STUD. Q. 1, 109, 122-23 (1998).

⁶⁰ There is a substantial literature on credibility, much of which is tangential to compliance concerns in that it focused on other means to create credibility. See, e.g., Lisa L. Martin, *Credibility, Costs, and Institutions: Cooperation on Economic Sanctions*, 45 WORLD POL. 406 (1993).

Exogenous changes in relative prices can change the cost and benefits of compliance-related behavior, as well as the ability of states to monitor behavior.⁶¹ Concerns about relative gains among states may discourage compliance.⁶² The regulatory scope and complexity of the underlying problem can influence the capacity to comply and hence the likelihood of compliance. For example, compliance with the current moratorium on whaling under the International Whaling Convention,⁶³ which requires little to no action by most states, should, *ceteris paribus*, be higher than compliance with the Kyoto Protocol to the Framework Convention on Climate Change,⁶⁴ which will, should it come into force, require pervasive and costly domestic regulatory action.⁶⁵ Collectively, these examples illustrate that some problems are more “malign” than others, and correspondingly harder to address.⁶⁶ Compliance levels should be correspondingly lower.

Problem structure, while centrally important to observed compliance levels, is not the whole story in rationalist analysis. Treaties marry a problem to a solution. Some aspects of problem structure, such as the number of relevant parties, are themselves endogenous to the chosen solution. The structure of the chosen solution — the rules, standards, and institutions created by a treaty — is centrally important and is the primary, and often the only, focus of legal analyses of compliance with international agreements. What I term “solution structure” comprises the specific institutional design choices of a treaty, such as the nature and content of the primary rules of behavior, the employment of punitive measures (both multilateral and unilateral), positive inducements or capacity-building programs, and the use of arbitration or judicialized dispute settlement. These are the factors most commonly mentioned in discussions of compliance, because they, unlike many aspects of problem structure, are manipulable through law and policy.

⁶¹ Again, *ceteris paribus*, cheaper or easier monitoring, such as through technological advance, should increase compliance by enhancing transparency. See Mitchell, *supra* note 59.

⁶² Realists contend that patterns of cooperation are often explained by the structure of relative gains and losses among states and the resulting concern that such gains could be converted to military power. See, e.g., JOSEPH M. GRIECO, COOPERATION AMONG NATIONS: EUROPE, AMERICA, AND NON-TARIFF BARRIERS TO TRADE, 28-29 (1990).

⁶³ International Convention for the Regulation of Whaling, December 2, 1946, 62 Stat. 1716, 161 U.N.T.S. 72.

⁶⁴ See Conference of the Parties to the Framework Convention on Climate Change: Kyoto Protocol, Dec. 10, 1997, arts. 3(1), 3(2), 37 I.L.M. 22, 33 [hereinafter Kyoto Protocol].

⁶⁵ Similarly, compliance with basic tariff reductions, because they are easier to implement, should be higher than compliance with the complex set of domestic rules and standards contained in the TRIPS accord.

⁶⁶ On “malignness” and “benignness,” see JØRGEN WETTESTAD, DESIGNING EFFECTIVE ENVIRONMENTAL REGIMES 1-18 (1999).

The standard-setting dynamic is centrally important to the determination of compliance: the rules or standards chosen can be more or less difficult to comply with.⁶⁷ Similarly, conduct rules can be more or less specific and/or clear.⁶⁸ The regulated activity can be more or less transparent and hence more or less easily monitored by other parties or international or non-governmental organizations.⁶⁹ The institutionalized use of inducements or capacity-building programs,⁷⁰ or the threat or employment of sanctions for noncompliance may deter non-compliant acts and affirmatively promote compliance by assuring all states that others are complying with international rules.⁷¹ The reactions to and institutions created for occurrences of noncompliance are centrally important in many rationalist compliance analyses.⁷² Many rationalist theories emphasize the importance of deterrence and explore the optimal level of sanctions required to sustain cooperation and compliance.⁷³ In some cases the most

⁶⁷ See *supra* Part II (discussing the centrality of the chosen standard for compliance).

⁶⁸ This leads to more or less ambiguity about what constitutes compliance and influences the degree to which states can make plausible claims concerning ambiguity to justify or explain noncompliance; this in turn should alter the costs of noncompliance and thus alter compliance rates.

⁷⁰ For example, training programs through the World Intellectual Property Organization may lower the costs of compliance with intellectual property commitments by disseminating cost-effective and successful regulatory practices. See RYAN, *supra* note 3, at 125-39 (discussing WIPO's training programs).

⁷¹ Problem structure can, as noted above, limit the degree to which specific or diffuse reciprocity may enhance cooperation and compliance. However, the solution structure chosen may also influence the production of compliance by authorizing suspensions of specific benefits under certain conditions, as is done in the GATT, or creating other sanctions that are not integrated into the benefit structure of cooperation but raise the costs of noncompliance.

⁷² The recent evolution of the dispute settlement system within the GATT/WTO system reflects empirically the pervasive concern with reactions to noncompliance and the improvement of centralized enforcement. See generally MICHAEL J. TREBILCOCK & ROBERT HOWSE, *THE REGULATION OF INTERNATIONAL TRADE* 51-94 (2nd ed., 1999); John H. Jackson, *Fragmentation or Unification Among International Institutions: The World Trade Organization*, 31 N.Y.U. J. INT'L L. & POL. 823 (1999); ERNST-ULRICH PETERSMANN, *THE GATT/WTO DISPUTE RESOLUTION SYSTEM* (1997) (discussing the evolution of the GATT/WTO dispute settlement system from 1948 to 1996 and presenting the problems the system continues to face); Andreas F. Lowenfeld, *Remedies Along With Rights: Institutional Reform in the New GATT*, 88 AM. J. INT'L L. 477 (1994). For earlier GATT history, see ROBERT E. HUDEC, *ENFORCING INTERNATIONAL TRADE LAW: THE EVOLUTION OF THE MODERN GATT LEGAL SYSTEM* (1993). As noted, the reciprocal nature of much trade cooperation enhances the prospects for compliance with trade accords.

⁷³ See, e.g., DOWNS & ROCKE, *supra* note 55. Downs and Rocke have developed a sophisticated analysis of the necessary level of deterrence, suggesting that as a deductive matter the deterrence embodied within the GATT/WTO system is insufficient to truly deter noncompliance, but that it is explicable within a political context in which states seek to maintain the freedom to respond to domestic demands for noncompliance. See *id.*

important incentive to comply falls out of the formal solution structure altogether: the fear of unilateral retaliation by a more powerful state, such as the United States.⁷⁴ Nonetheless, the incentive effects are the same. In short, rationalist theories explain compliance in instrumental terms that link actor behavior to the nature of the problem, the structure of the chosen solution, and the costs and benefits associated with different behaviors.

B. Norm-Driven Theories

Norm-driven theories differ from rationalist theories in their focus on the power of norms and ideas to influence state behavior. These theories do not necessarily claim that states are "irrational," but rather that there are important influences on states that are not reducible to material costs and benefits and that states are best understood as the product of, and denizens of, a socialized environment.⁷⁵ This socialized environment can itself shape and determine the interests that rationalist theorists use to explain outcomes. Norm-driven theories can also be labeled "cognitive" or "constructivist" because they stress the power of shared ideas and because they see state interests and even states themselves as socially-constructed, in part by norms, rather than as pre-theoretical givens.⁷⁶

⁷⁴ While the usual assumption in rationalist theory is that these incentives must be built into the legal instrument or international institution itself, as is the case with the GATT, cooperation-sustaining incentives need not be. U.S. unilateralism in a wide range of areas has been deployed to punish perceived noncompliance, even if the behavior in question was not noncompliant strictly construed. In the international environmental realm, the United States has sometimes used unilateral sanctions to great effect, notably under the Pelly Amendment to the Packwood-Magnuson Act. See Packwood-Magnuson Act, 16 U.S.C. § 1821(e)(2) (1994); Pelly Amendment, 22 U.S.C. § 1978(a) (1994). While there is serious debate over whether such unilateralism is ultimately desirable, it clearly can influence incentives to comply with international rules. See generally Steve Charnovitz, *Encouraging Environmental Cooperation Through the Pelly Amendment*, 3 J. ENV'T & DEV. 3 (1994) (discussing the efficacy of Pelly and Packwood-Magnuson); CHAYES & CHAYES, *supra* note 5, at 88-108 (discussing unilateral sanctions); GARY CLYDE HUFBAUER ET AL., *ECONOMIC SANCTIONS RECONSIDERED* (2d ed. 1990).

⁷⁵ Constructivism is a branch of international relations theory that explores the means by which concepts like sovereignty or the state, or specific state practices, are constructed through a social process. See HASENCLEVER ET AL., *supra* note 6, at 188. Unlike rationalists who begin with agents (states), many constructivists believe social structures themselves constitute agents and hence are central to understanding outcomes and behavior. See generally *id.* at 186-92; THE CULTURE OF NATIONAL SECURITY: NORMS AND IDENTITY IN WORLD POLITICS 45-47 (Peter Katzenstein ed., 1996); MARTHA FINNEMORE, NATIONAL INTERESTS IN INTERNATIONAL SOCIETY (1996) (discussing how the international social structure informs the behavior of states); Alexander Wendt, *Collective Identity Formation and the International State*, 88 AM. POL. SCI. REV. 384, 385 (1994); see also FRIEDRICH V. KRATO CHWIL, RULES, NORMS, AND DECISIONS (1989) (critiquing theories which make the social order dependent upon the existence of certain institutions, thus characterizing international relations in terms of anarchy).

⁷⁶ The terms cognitive and constructivist have become terms of art in international relations theory, but for present purposes there is significant overlap.

Norm-driven theories are common in international legal scholarship.⁷⁷ For example, some scholars have suggested that the legitimacy of the process of rule creation itself is a central factor in explaining compliance.⁷⁸ The legitimacy theory of compliance has as its core thesis the claim that “in a community organized around rules, compliance is secured — to whatever degree it is — at least in part by the perception of a rule as legitimate by those to whom it is addressed.”⁷⁹ The legitimacy of rules, in turn determined by various, mainly procedural factors, allegedly determines the rules’ “compliance-pull” on governments.⁸⁰ In this theory, legitimacy and its perception is not best understood as an incentive or disincentive to compliance; legitimacy is a norm or value that influences state behavior toward compliance when it is present.⁸¹

In a similar vein, though with greater focus on the domestic-international interface, some scholars argue that the “vertical internalization” of norms within states is a powerful promoter of compliance with international commitments.⁸² Such internalization often begins with norm entrepreneurs (individuals or non-governmental organizations that promote specific norms)⁸³ and issue-networks (networks of actors interested in specific issues)⁸⁴ and extends to actors within governments. Then, “[o]nce nations begin to interact, a complex process occurs, whereby international legal norms seep into, are internalized, and become embedded in domestic legal and political processes,” creating not only compliance but obedience.⁸⁵ This process is critical, proponents argue, to an explanation of why states follow international law.

The legal status of rules also may influence compliance with them. That is, there may be a powerful norm in favor of compliance with the law because it is law. The status of a commitment as law may implicate norms

⁷⁷ See Robert O. Keohane, *International Relations and International Law: Two Optics*, 38 HARV. INT'L L.J. 487, 488 (1997) (characterizing the impact that shared norms have on state behavior as a “major theme of students of international law”). Such theories are not limited to international legal scholarship, however. See, e.g., KRATO CHWIL, *supra* note 75 (discussing norms in the context of the philosophy of international relations).

⁷⁸ See, e.g., Thomas M. Franck, *Legitimacy in the International System*, 82 AMER. J. INT'L L. 705 (1988).

⁸⁰ See *id.* at 713-59.

⁸¹ See *id.* at 705-13.

⁸² See Harold Honju Koh, *Bringing International Law Home*, 35 Hous. L. Rev. 623, 673-79 (1998).

⁸³ Ethan A. Nadelmann, *Global Prohibition Regimes: The Evolution of Norms in International Society*, 44 INT'L ORG. 479, 524-25 (1990); Sunstein, *supra* note 7, at 909.

⁸⁴ See, e.g., Kathryn Sikkink, *Human Rights, Principled Issue-Networks, and Sovereignty in Latin America*, 47 INT'L ORG. 411 (1993).

⁸⁵ Harold Hongju Koh, *Transnational Legal Process*, 75 NEB. L. Rev. 181, 205 (1996). By obedience Koh essentially means compliance that is internalized and unthinking. Koh's account is primarily descriptive; he does not offer a theory of when, or under what conditions, internalization does and does not occur.

of obligation flowing from the special role of law as an ordering principle within contemporary societies.⁸⁶ Noncompliance with legal norms usually entails particular forms of justification, because legal discourse is largely about the giving of reasons for actions relating to rules. The justificatory discourse that legal norms engender may also promote compliance because it forces states to affirmatively defend their actions within the bounds of a discursive tradition.⁸⁷

“Managerialists” have developed a prominent theory of compliance with international commitments that is largely norm-driven, though it also contains important rationalist themes.⁸⁸ Starting from an assumption of state compliance as the norm, managerialists argue that efforts to create punitive enforcement mechanisms — such as are often defended by rationalists — are generally misplaced, rarely available, and sometimes counterproductive.⁸⁹ Managerialists argue that noncompliance is typically non-volitional: the result of a lack of administrative or financial capacity, ambiguity in treaty terms, or unforeseen changes in conditions.⁹⁰ As a result punitive measures will not effectively induce compliance. Rather, the best response is to assist the deviant state, through the provision of information, technical and financial assistance, or interpretive dialogue aimed at resolving interpretive disputes, to come into compliance.⁹¹ This discursive process of noncompliance management should be non-confrontational, forward-looking, and broadly cooperative, aimed not at

⁸⁶ HENKIN, *supra* note 4 at 60. “There is an influence for law observance in the very quality of law, in the sense of obligation which it implies.” *Id.* Of course, this statement can be seen as merely restating the issue: law is followed because law is obligatory.

⁸⁷ See, e.g., Eyal Benvenisti, *Exit and Voice in the Age of Globalization*, 98 MICH. L. REV. 167, 209 (1999) (“...the requirement that transnational institutions offer reasons for their decisions will increase the accountability of decisionmakers, just as the reasoning of court opinions serves as a constraint on judicial power.”) citing *Planned Parenthood v. Casey*, 505 U.S. 833, 865-66 (1992) (“The Court must take care to speak and act in ways that allow people to accept its decisions on the terms the Court claims for them, as grounded truly in principle, not as compromises with social and political pressures having, as such, no bearing on the principled choices that the Court is obliged to make. Thus, the Court’s legitimacy depends on making legally principled decisions under circumstances in which their principled character is sufficiently plausible to be accepted by the Nation.”). It is precisely the belief in this power of justification that undergirds occasional suggestions that Permanent Members of the UN Security Council be required to give reasons when exercising their veto.

⁸⁸ See, e.g., Abram Chayes et al., *Managing Compliance: A Comparative Perspective*, in *ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS*, *supra* note 5, at 39; see also CHAYES & CHAYES, *supra* note 5, at 1-28 (discussing theory of compliance, the focus of treaties, and the norms that apply); CHAYES & CHAYES, *supra* note 5, at 177-87.

⁸⁹ See Chayes et al., *supra* note 88, at 49.

⁹⁰ See *id.* at 41-42.

⁹¹ Similar arguments have been made (and criticized) in the domestic regulatory context. See Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. CAL. L. REV. 1181 (1998).

identifying wrongful behavior but at the collective improvement of performance.⁹² This process works, managerialists suggest, in part because states must increasingly take part in international cooperative regimes and because they seek to be members in good standing within these regimes.⁹³ Thus the social nature of the international system is an important component of managerial compliance theory.

The debate over managerialism illustrates a key difference between norm-driven and rationalist approaches to compliance. Rationalists have criticized managerialism on the grounds that the empirical evidence for it — much of it drawn from environmental treaties — suffers from selection bias because it fails to account for the depth of the cooperative solution chosen.⁹⁴ Selection bias, as the term implies, is the failure to select cases that appropriately represent the larger universe of cases a theory addresses: for example, to look only at successful cases of cooperation produces selection bias in a study of the causes of cooperation.⁹⁵ Depth refers in this context to the degree of costly change a treaty requires from the *status quo ante*. Rationalist critics of managerialism agree that “shallow” treaties exhibit high levels of compliance and therefore can employ “management” with some success.⁹⁶ For deeper treaties that demand more costly actions, however, they argue managerial prescriptions are not sufficient; more severe punishments are necessary to maintain compliance.⁹⁷ This is so because rationalists believe incentives to deviate from a treaty’s commitments rise as the depth and costs of change also rise.⁹⁸ Thus, rationalist critics argue, enforcement is increasingly necessary to the

⁹² See Martti Koskeniemi, *Breach of Treaty or Non-Compliance? Reflections on the Enforcement of the Montreal Protocol*, 1992 Y.B. INT'L ENV'T L. L., 123 (discussing the role of wrongfulness in noncompliance systems such as the one in the Montreal Protocol on Substances That Deplete the Ozone Layer). A parallel debate is increasingly found in discussions and practice of domestic law compliance. See generally Rechtschaffen, *supra* note 91, at 1184 (stating that U.S. states “have been leading the charge to modify enforcement practices. They have championed a ‘compliance first’ strategy that emphasizes working cooperatively with violators to obtain compliance, and eschewing penalties in favor of persuasion.”).

⁹³ See CHAYES & CHAYES, *supra* note 5, at 271-74.

⁹⁴ See Downs et al., *supra* note 5, at 387-99; George W. Downs, *Enforcement and the Evolution of Cooperation*, 19 MICH. J. INT'L L. 319, 329 (1998).

⁹⁵ David Collier & James Mahoney, *Insights and Pitfalls: Selection Bias in Qualitative Research*, 49 WORLD POL. 56, 59 (1996).

⁹⁶ Downs et al., *supra* note 5, at 388-92.

⁹⁷ See *id.*

⁹⁸ This is true particularly in a collaboration game situation, where the dominant strategy is noncompliance. The deepening of coordination games can also create stronger incentives to deviate from equilibrium if the distribution of costs and benefits of different equilibria vary from actor to actor; one actor may choose to attempt to shift the game from one equilibria to another. See generally Krasner, *supra* note 47, at 234-47 (discussing the importance of distributional issues).

production of compliance as the depth of cooperation embodied in an agreement increases.⁹⁹

C. Liberal Theories

Liberalism is an increasingly prominent branch of international relations theory that rejects the focus on the state as a unitary actor prevalent in rationalist theory yet also rejects the largely sociological approach of norm-driven theory. Contemporary liberal international relations theory stresses domestic-level actors and structures in explaining external behavior.¹⁰⁰ While norm-driven theories often look to the domestic process,¹⁰¹ liberal theory does not embrace the concept of international norms nor does it reject the rationalists' focus on strategic interaction.¹⁰² Indeed, strategic interaction is a key component. However, the locus of attention is on domestic actors, the institutions that aggregate and shape the interests of such actors, and the variation among states in these internal attributes.¹⁰³

The literature in political science on the "democratic peace," for instance, suggests that democratic institutions significantly constrain the

⁹⁹ The recent debate between proponents of rationalist and norm-driven theories about the importance of treaty depth reflects the distinction I drew earlier between compliance and effectiveness. A shallow treaty is almost by definition ineffective or of low effectiveness: to be shallow, it must require little or no behavioral change from the *status quo ante*. A deep treaty may be effective because it requires substantial change — though it may be ineffective if such change fails to occur. Thus, overstating to some degree, depth may be a necessary but not a sufficient condition for effectiveness.

¹⁰⁰ See Andrew Moravcsik, *Taking Preferences Seriously: A Liberal Theory of International Politics*, 51 INT'L ORG. 513, 514 (1997).

¹⁰¹ See, e.g., Koh, *supra* note 5, at 2631-45. Liberal international relations theory also looks to the impact of ideas and norms, but grounds this impact in the resulting effects on the individuals and societal groups that create (mediated by institutions) state preferences. States as entities are not "socialized" in the liberal view; rather, individuals may be, but then they act rationally and strategically to achieve political ends.

¹⁰² See Moravcsik, *supra* note 100, at 520 ("The configuration of interdependent state preferences determines state behavior.").

¹⁰³ In Moravcsik's words, "liberal IR theory elaborates the insight that state-society relations — the relationship of states to the domestic and transnational social context in which they are embedded — have a fundamental impact on state behavior in world politics." *Id.* at 513. He grounds liberal theory in three core assumptions: the primacy of individuals and private groups as actors, the notion that states represent some subset of these actors, and the notion that the configuration of the resulting state preferences shapes behavior. See *id.* at 516-24. See also Kal Raustiala, *Domestic Institutions and International Regulatory Cooperation: Comparative Responses to the Convention on Biological Diversity*, 49 WORLD POL. 482 (1997) (providing a parallel argument that uses a variant of liberal theory to explain divergent approaches to international regulatory cooperation) [hereinafter Raustiala, *Domestic Institutions and International Regulatory Cooperation*].

types of conflicts in which democratic states engage.¹⁰⁴ The prominence and important policy implications of this argument have spearheaded greater attention to the influence of domestic structure generally. In a similar vein, proponents of liberal theory have suggested that liberal states — generally, states with representative governments, constitutional protections for individual rights, and market economies — operate in an international “zone of law” rather than a “zone of politics.”¹⁰⁵ International law, and correspondingly compliance with international commitments, is qualitatively distinct within the community of liberal states. The presence of domestic liberal and/or democratic institutions thus may promote compliance with international legal rules, just as it has promoted the development of “complex interdependence” among the nations of the West.¹⁰⁶

Because one common facet of liberal societies is domestic reverence for the “rule of law,” liberal theory suggests that liberal states may agree to and comply with decisions by international tribunals more readily than illiberal states.¹⁰⁷

States “willing to submit to the rule of law and civil society at the domestic level are more likely to submit to their analogues at the international level.”¹⁰⁸ Hence, aspects of domestic structure, such as constitutional design, political tradition, and so forth may directly influence compliance levels. Domestic structure may also influence compliance

¹⁰⁴ The basic claim is that democracies rarely or never engage in war with one another. See, e.g., BRUCE RUSSETT, *GRASPING THE DEMOCRATIC PEACE: PRINCIPLES FOR A POST-COLD WAR WORLD* 3-5 (1993); Michael W. Doyle, *Kant, Liberal Legacies, and Foreign Affairs*, 12 PHIL. & PUB. AFF. 205, 205-06 (1983). For a cautionary variation on the argument, see Edward D. Mansfield & Jack Snyder, *Democratization and the Danger of War*, 20 INT'L SEC. 5 (1995) (discussing the aggressiveness of transitional democracies). The theory of the democratic peace has antecedents in Immanuel Kant's thought. See Doyle, *supra*; see also Ernst-Ulrich Petersmann, *How to Constitutionalize International Law and Foreign Policy for the Benefit of Civil Society?*, 20 MICH. J. INT'L L. 1, 7-12 (1998) (discussing Kant's views of international affairs); Fernando R. Tesón, *The Kantian Theory of International Law*, 92 COLUM. L. REV. 53 (1992).

¹⁰⁵ Anne-Marie Slaughter, *International Law in a World of Liberal States*, EUR. J. INT'L L. (1995).

¹⁰⁶ See ROBERT O. KEOHANE & JOSEPH S. NYE, *POWER AND INTERDEPENDENCE: WORLD POLITICS IN TRANSITION* 29-30 (1977) (introducing the phrase “complex interdependence”).

¹⁰⁷ Laurence R. Helfer & Anne-Marie Slaughter, *Toward a Theory of Effective Supranational Adjudication*, 107 YALE L. J. 273, 331 (1997); William J. Dixon, *Democracy and the Management of International Conflict*, 37 J. CONFLICT RESOL. 42, 46 (1993). On the distinctive qualities of liberal states with regard to international law see Petersmann, *supra* note 104 and Ernst-Ulrich Petersmann, *Constitutionalism and International Adjudication: How to Constitutionalize the U.N. Dispute Settlement System*, 31 N.Y.U. J. INT'L L. & POL. 753, 764-65 (1999).

¹⁰⁸ Charles A. Kupchan & Clifford A. Kupchan, *Concerts, Collective Security, and the Future of Europe*, INT'L SECURITY, Summer 1991, at 114, 149 n.100.

indirectly: liberal states appear more willing, for example, to receive and engage in scrutiny of domestic laws and policies.¹⁰⁹ Perhaps, as a result, liberal states appear more willing to create the kinds of domestically-focused international institutions that can promote compliance.¹¹⁰ In other words, variations in domestic structure may in turn shape the chosen solution structure to a shared international problem, and this approach may explain variations in compliance.

Finally, liberal theory suggests that cooperation generally and, in turn, compliance with legal rules specifically may be explained by who benefits and who loses in a given cooperative setting: the distributional impacts, at a societal level, of the regulatory structure created by the legal instrument. These distributional impacts are in turn shaped and aggregated by domestic political and legal institutions.¹¹¹ For example, some analyses of domestic trade politics suggest that one factor explaining compliance with international trade law is the shifting interests of firms and trade-induced changes in the balance of political power between firms aided and firms injured by extensive economic interdependence.¹¹² Thus, international law can be progressively self-enforcing as these societal lock-in effects stabilize domestic preferences around compliance with international commitments.¹¹³

IV. COMPLIANCE & EFFECTIVENESS: SOME EVIDENCE FROM INTERNATIONAL ENVIRONMENTAL LAW

International environmental law has been fertile ground for research on treaty compliance and effectiveness. In the last thirty years, many treaties have been negotiated addressing a wide range of global and regional environmental issues, ranging from international trade in endangered species to wetlands protection to global climate change to marine pollution from ships.¹¹⁴ Because in a large fraction of these cases the underlying

¹⁰⁹ See Kal Raustiala & David G. Victor, *Conclusions*, in *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE*, *supra* note 12, at 659, 694-95.

¹¹⁰ See *id.* at 691. As I discuss further below, there is evidence from international environmental treaties that relatively intrusive systems for the review of domestic implementation promote compliance and effectiveness.

¹¹¹ See, e.g., Raustiala, *Domestic Institutions and International Regulatory Cooperation*, *supra* note 103, at 482-83, 507.

¹¹² See HELEN V. MILNER, *RESISTING PROTECTIONISM: GLOBAL INDUSTRIES AND THE POLITICS OF INTERNATIONAL TRADE* 290-91 (1988).

¹¹³ Fixed investments by firms, the interests of political organizations (e.g., NGOs), and even institutional adaptation by the state may embed cooperation domestically. See Moravcsik, *supra* note 100, at 537.

¹¹⁴ See generally *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE*, *supra* note 12 (presenting in-depth analyses of these agreements).

environmental problems continue to worsen,¹¹⁵ concern with treaty implementation, compliance, and effectiveness has been high. Several large-scale studies of environmental treaties are underway or recently completed, and these provide new insights into the causality of compliance and effectiveness.¹¹⁶ This line of research has begun to examine compliance in counterintuitive ways, such as by examining the ways in which compliance concerns can undermine the effectiveness of legal strategies,¹¹⁷ or how noncompliance can itself be part of a successful regulatory strategy.¹¹⁸

Below I briefly present some of the more interesting or powerful insights and arguments that have emerged from this multidisciplinary body of research. The first subsection illustrates the importance of “architecture” as a regulatory strategy, using the example of intentional marine oil pollution¹¹⁹ and the power of non-state actors to promote compliance with regulatory rules governing pollution. The next subsection argues that regularized systems for the review of national implementation can promote effective international cooperation by focusing on performance and collective learning rather than the punishment of compliance. Thus, both of these arguments concern ways in which the effectiveness of treaty instruments can be enhanced through institutional design: through changes in the solution structure of the international regime. Drawing on a study of acid rain cooperation in Europe, the third subsection presents the argument that regulatory rules are sometimes best seen as normative registers of intent and commitment that can be skillfully used by political actors to further cooperation. In other words, an effective regulatory regime does not require strong rules that are complied with, and indeed noncompliance may further the regime's effectiveness. The last subsection takes this argument one step further, and tackles the implicit focus in most discussions of compliance on binding treaties as the optimal legal form. I suggest that non-binding agreements, which side-step the entire question of legal compliance, offer significant advantages — in part for reasons related to compliance concerns — and hence they may, under some circumstances, be

¹¹⁵ See United Nations Environment Programme, *Global Environment Outlook 2000* (visited Mar. 22, 2000) <http://www.unep.org/unep/eia/geo2000/english/index.htm> (assessing the state of the global environment for a series of problems addressed under international law).

¹¹⁶ See THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIORAL MECHANISMS, *supra* note 1; WETTESTAD, *supra* note 66; ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS, *supra* note 5; THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE, *supra* note 12.

¹¹⁷ See Raustiala & Victor, *supra* note 109, at 681-84.

¹¹⁸ See Marc A. Levy et al., *Improving the Effectiveness of International Environmental Institutions*, in INSTITUTIONS FOR THE EARTH: SOURCES FOR EFFECTIVE ENVIRONMENTAL PROTECTION, *supra* note 23, at 398, 412-14.

¹¹⁹ See Lessig, *supra* note 1, at 663-64.

equally or more effective regulatory instruments than are binding international agreements.

A. Architecture and the Private Enforcement of International Rules

One of the most comprehensive studies of treaty compliance is Ronald Mitchell's analysis of the international rules governing intentional marine oil pollution.¹²⁰ Intentional oil pollution occurs through the routine operations of ocean-going tankers, as opposed to accident spills of the type associated with the Exxon Valdez disaster in Alaska.¹²¹ While spills are dramatic and sometimes devastating for local ecosystems, the vast majority of oil entering the oceans is the result of normal operations like tanker cleaning.¹²² Beginning with the 1954 Convention for the Prevention of Pollution of the Sea by Oil,¹²³ a series of international agreements were negotiated to govern routine oil pollution at sea. Compliance with these accords has varied widely, and thus they provide an interesting test case for hypotheses about the causality of compliance.¹²⁴

In its early history, the intentional oil pollution regime employed a series of control measures focused on regulating the act of discharging oil from tankers.¹²⁵ These included limits on the size and location of discharges and rules mandating the recording of each discharge.¹²⁶ Discharges were largely unobservable on the high seas, and hence the regulatory rules were an ineffective deterrent. These rules were replaced in 1978 by equipment standards: the mandated use, for new tankers, of segregated ballast tanks (SBT), and the option of SBT or a new washing technique for older tankers.¹²⁷ Despite the fact that equipment standards such as SBT were significantly more expensive than the previous discharge controls, compliance with the SBT requirement was much higher.¹²⁸

One reason for the higher levels of compliance was that the introduction of SBT included a grant of legal authority to port states to

¹²⁰ See MITCHELL, *supra* note 5; Ronald Mitchell et al., *International Vessel-Source Oil Pollution*, in THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIORAL MECHANISMS, *supra* note 1, at 33, 33-90.4.

¹²¹ See Ronald Mitchell, *Intentional Oil Pollution of the Oceans*, in INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE INTERNATIONAL ENVIRONMENTAL PROTECTION, *supra* note 23, at 183, 183.

¹²² See Mitchell et al., *supra* note 120, at 35 (providing aggregated data on pollution sources).

¹²³ International Convention for the Prevention of Pollution of the Sea by Oil, May 12, 1954, 12 U.S.T. 2989.

¹²⁴ See Mitchell et al., *supra* note 120, at 41 (noting that attempts at negotiating controls occurred as early 1926).

¹²⁵ See Mitchell, *supra* note 121, at 193-221.

¹²⁶ See *id.* at 200.

¹²⁷ See Mitchell et al., *supra* note 120, at 43-45.

¹²⁸ See Mitchell, *supra* note 121, at 211-15.

detain non-compliant ships.¹²⁹ In practice, however, this sanction, because extreme, was rarely used.¹³⁰ A much more powerful and theoretically-interesting cause of higher compliance levels is related to the structure of the tanker industry, the role of private actors within that structure, and the nature of an equipment standard. Though they were not legally obligated to do so, shipbuilders and ship-classification societies, who are private actors with pre-existing roles in the industry, ensured that SBT was integrated when a new ship was commissioned and built.¹³¹ Lack of proper classification from a society withheld necessary insurance and made the operation of the tanker prohibitively costly.¹³² These private actors were not compelled to enforce the international standard but rather chose to use it as an authoritative benchmark. This decision, in conjunction with the pre-existing role these actors played in the industry, helped ensure compliance by ship owners with the international rule.¹³³ Thus, one lesson of the oil pollution case is that the production of compliance with an international standard may largely result from private actors and market forces, and may not require an exclusive focus on government actions, though here the prospect of the sanction of ship detainment reinforced the pressures and incentives that stemmed from non-governmental sources.¹³⁴

A second lesson of the oil pollution case is the critical importance of “architecture” as a regulatory strategy. It is important to underscore that the role that industry actors played in the production of compliance with SBT was contingent on the particular quality of the SBT rule itself. Because SBT was integral to the ship itself, the decision to build with SBT involved a one-time, irreversible decision to comply with international standards, in contrast to the continuous series of essentially unverifiable decisions associated with the discharge standard. Once installed, SBT could not be de-installed. Compliance was quite literally built into the vessels. By creating a structure of rules that made a noncompliance decision very costly and capitalized on the structure of the solution itself – the irreversible decision to build with new equipment – the revised oil pollution regime prevented noncompliance rather than deterred it. This form of prevention resonates with recent research in domestic law on architecture as a

¹²⁹ *See id.* at 212.

¹³⁰ *See id.* at 220.

¹³¹ *See id.*

¹³² *See id.*

¹³³ *See id.* at 219-20. It is not clear to what degree this result was intended. These groups had little incentive not to follow international law and ensure compliance with the treaty rules, but it is not clear why they chose to in effect “enforce” the SBT requirement. *See id.*

¹³⁴ *See generally* Jody Freeman, *Private Parties, Public Functions and the New Administrative Law*, in *RE-CRAFTING THE RULE OF LAW: THE LIMITS OF LEGAL ORDER* 331 (David Dyzenhaus ed., 1999) (discussing the role of non-governmental actors in the exercise of public authority in the domestic administrative context).

regulatory strategy.¹³⁵ Just as speed bumps can regulate traffic speed even in the absence of police patrols and tickets, so, too, the equipment standards blocked discharges without the need for external monitoring of ship operations. While these physical barriers can at the margin become a form of deterrence — speed bumps, for example, deter noncompliance with traffic laws by threatening damage to cars and occupants — the causal link and mode of operation is distinctive.

B. Systems for Implementation Review

The oil pollution regime focused on private actors and their behavior in the global commons. Many international environmental treaties focus, at least in proximate terms, on state behavior and state compliance, even if the ultimate regulatory targets are private actors. For example, control of nitrous oxide pollution (a form of air pollution) requires regulation of the emissions of many individually-owned cars and trucks. But the relevant international treaties address aggregate national emissions; compliance with international law is gauged by reference to aggregate national emissions.¹³⁶ How to effectively control such emissions is a major challenge for industrialized societies, and, as is true for many such cases, there are no clear technological fixes like SBT for nitrous oxide pollution.

For such complex regulatory issues — which are a mainstay of contemporary international environmental law — effective regulation and improved treaty compliance can be promoted through the promulgation of international rules and standards followed by collective international review of domestic implementation. This review often takes place through formal procedures and bodies created by treaty, but also sometimes involves informal, extra-legal procedures.¹³⁷ These formal and informal procedures are collectively termed “systems for implementation review.”¹³⁸

Systems for implementation review (“SIRs”) include regularized collection of relevant data from state parties, meetings of experts and political leaders, collective reviews of performance, and processes for the adjustment of treaty commitments in light of new information and experiences.¹³⁹ Not all SIRs involve all these aspects, but many reappear

¹³⁵ See Lessig, *supra* note 1, at 663-64. Mitchell himself prefers the term “preventive strategies.”

¹³⁶ Nitrous oxide is governed internationally by the Protocol to the 1974 Convention on Long-Range Transboundary Air Pollution Convention Concerning the Control of Emissions of Nitrous Oxides or Their Transboundary Fluxes, Oct. 31, 1988, 28 I.L.M. 212.

¹³⁷ The following discussion tracks that in Victor et al., *supra* note 12, at 1-46.

¹³⁸ See *id.* at 3.

¹³⁹ See *id.* SIRs are not limited to environmental treaties; as discussed below, the World Trade Organization's Trade Policy Review Mechanism is a form of SIR. See generally DONALD B. KEESING, IMPROVING TRADE POLICY REVIEWS IN THE WORLD TRADE ORGANIZATION (1998) (discussing the Trade Policy Review Mechanism). The International Monetary Fund also engages in “surveillance” of member states’ macroeconomic policies through a regularized review process. See Second Amendment

frequently. SIRs perform a number of important functions that both theories of international institutions and empirical evidence suggest further cooperation and promote compliance and effectiveness. By increasing the flow of information among states, SIRs enhance cooperation by lowering the associated transaction costs.¹⁴⁰ More specifically, by making national actions more transparent, SIRs often help assure reluctant participants that others are complying with shared obligations.¹⁴¹ Where choices are interdependent — that is, where actors are likely to comply conditionally based on others' behavior — this can foster compliance by making clear other actors' compliance. Such “contingent compliance” may be common, and thus SIRs are an important tool in compliance promotion.¹⁴² SIRs may also redistribute power to domestic actors that favor full implementation and compliance. Such actors can use the international process to strengthen their position in domestic policy debates, leveraging the information the SIR supplies and the legitimacy it may endow. By involving relevant industry and other interested actors, SIRs can help produce more realistic, achievable rules and standards and may also help produce “buy-in” to the regulatory decisions undertaken.¹⁴³ SIRs can provide assistance and capacity-building tools to non-compliant states, helping to manage compliance in line with managerial theory.¹⁴⁴ Finally, and perhaps most importantly, SIRs can promote “learning” by governments and private actors. Governments can learn to make better, more effective and implementable commitments collectively, and they can also better implement existing commitments by learning from the efforts of other

to the Articles of Agreement of the International Monetary Fund, Second Amendment, April 30, 1976, art. IV, §3, 29 U.S.T. 2203, 2209.

¹⁴⁰ This claim echoes functional or neo-liberal institutionalist arguments about the role of international institutions in international cooperation. *See, e.g.*, KEOHANE, *supra* note 6, at 243-59; HASENCLEVER ET AL., *supra* note 6, at 1-7.

¹⁴¹ Transparency is a central theme in many SIRs. The WTO's Trade Policy Review Mechanism formal purpose is, for example, “to contribute to improved adherence by all WTO Members to rules, disciplines and commitments made under the Multilateral Trade Agreements...by achieving greater transparency in, and understanding of, the trade policies and practices of Members.” KEESING, *supra* note 139, at 5 (citing WTO Agreement, Annex 3).

¹⁴² *See* Simmons, *supra* note 5, at 81.

¹⁴³ The former is likely to be more evident than the latter. *See* Victor et al., *National Implementation, in* THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE, *supra* note 12, at 305, 305-09 (presenting a related discussion). There is an extensive literature on regulatory negotiation in the domestic context; see generally Jody Freeman, *The Private Role in Public Governance*, 75 NYU L. REV. 600 (2000); Jody Freeman, *Collaborative Governance in the Administrative State*, 45 UCLA L. Rev. 1 (1997).

¹⁴⁴ *See supra* Part III(B) (discussing managerialism).

states and systematically involving experts from a wide range of interested private actors.¹⁴⁵

Perhaps the best-developed SIR in international environmental law is that of the Montreal Protocol on Substances That Deplete the Ozone Layer.¹⁴⁶ The Montreal Protocol is widely regarded as one of the most successful examples of multilateral environmental cooperation.¹⁴⁷ It regulates a wide range of substances that destroy stratospheric ozone (stratospheric ozone protects the earth from harmful ultraviolet radiation) and has reduced the production of some of these substances to very low levels.¹⁴⁸ Over time, the parties to the Montreal Protocol have created a complex array of ozone-related regulations that have been regularly revised in light of new scientific and technical information.¹⁴⁹ By creating an ongoing process of performance review and technical assessment, the formal and informal implementation review mechanisms of the Montreal Protocol have promoted relatively thorough implementation, learning, compliance, and effectiveness.

The basis of the Montreal Protocol SIR is the data reporting procedure. Each year parties to the Protocol must provide to the treaty Secretariat statistical data on the production, import, and export of a series of substances controlled by the treaty.¹⁵⁰ These data, and other data submissions by governments, are analyzed and used by a wide range of treaty-related institutional bodies: the Ozone Secretariat, an Implementation Committee, the Executive Committee of the Multilateral Fund (the

¹⁴⁵ For a parallel, quite elaborated argument in the domestic context, see Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267 (1998).

¹⁴⁶ Protocol on Substances That Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1541.

¹⁴⁷ For the definitive history of the negotiation of the Montreal Protocol, see RICHARD ELLIOT BENEDICK, *OZONE DIPLOMACY* (1991); see also Edward A. Parson, *Protecting the Ozone Layer*, in INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE INTERNATIONAL ENVIRONMENTAL PROTECTION, *supra* note 23, at 27, 71; Edith Brown Weiss, *The Five International Treaties: A Living History*, in ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS, *supra* note 5, at 89, 157; David D. Caron, *Protection of the Stratospheric Ozone Layer and the Structure of International Environmental Lawmaking*, 14 HASTINGS INT'L & COMP. L. REV. 755, 759-61 (1991). United Nations Environment Programme, *The Ozone Secretariat* (visited Mar. 2, 2000) <http://www.unep.org/unep/secretar/ozone/home.htm> (providing more recent information).

¹⁴⁸ See Owen Greene, *The System for Implementation Review in the Ozone Regime*, in THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE, *supra* note 12, at 89, 89-92.

¹⁴⁹ See Edward A. Parson & Owen Greene, *The Complex Chemistry of the International Ozone Agreements*, ENVIRONMENT, Mar. 1995, at 16, 20.

¹⁵⁰ See Greene, *supra* note 148, at 92-124. In this sense, by looking at direct data, the Montreal Protocol SIR is superior to similar efforts, such as that within the Convention on International Trade in Endangered Species, which focus on "paper reviews" of national legislation implementing the treaty's provisions. See *id.* at 118-19.

Multilateral Fund exists to help cover the financial costs of compliance by developing states, such as the improvement of administrative capacity), and a series of expert advisory bodies known as assessment panels. These include a scientific assessment panel, an environmental assessment panel, and a technical and economic assessment panel.¹⁵¹ The assessment panels can be quite large; the scientific assessment panel has over 500 members.¹⁵² Within the assessment panels, working groups and committees address, *inter alia*, issues of implementation by economies in transition and determinations of "essential uses" for which the regulation of controlled substances is eased.¹⁵³ As Owen Greene and David Victor have shown, other organizations, such as the Global Environment Facility and the UN Development Programme, play an important though informal role in the Montreal Protocol review process.¹⁵⁴ The wealth of institutions that are comprised by the SIR has, in the view of several analysts, fostered a progressive expansion of the Protocol's commitments and has contributed to the effectiveness of the regime.¹⁵⁵

In particular, the Montreal Protocol's SIR has played an important role in addressing noncompliance by parties. The treatment of noncompliance by the SIR is complex and reflects both sides of the managerialism-enforcement debate discussed above.¹⁵⁶ In 1992, the parties to the Montreal Protocol created a specific Non-Compliance Procedure ("NCP") to be operated by an Implementation Committee.¹⁵⁷ This procedure serves as a model for other environmental regimes, such as the climate change regime.¹⁵⁸ There are two components to the Montreal Protocol procedure: a "regular" component that meets on a regular basis and acts as a standing body to hear any compliance-related issues that parties or Committee

¹⁵¹ See *id.*

¹⁵² See Interviews with various members of the Ozone Secretariat, in Nairobi, Kenya (Nov. 1999)[hereinafter Interviews].

¹⁵³ See Greene, *supra* note 148, at 94-96.

¹⁵⁴ See *id.* at 122.

¹⁵⁵ See *id.* at 118-24; David G. Victor, *The Operation and Effectiveness of the Montreal Protocol's Non-Compliance Procedure*, in *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE*, *supra* note 12, at 137, 137-40.

¹⁵⁶ See *supra* Part II.

¹⁵⁷ See Review of the Non-Compliance Procedure of the Montreal Protocol Pursuant to Decision IX/35 of the Ninth Meeting of the Parties, U.N. Environment Programme, U.N. Doc. UNEP/OzL.Pro/WG.4/1/1 (1998). The NCP was modified in 1998. See *id.* On the operation of the NCP, see Patrick Széll, *Implementation Control: Non-Compliance Procedure and Dispute Settlement in the Ozone Regime*, in *THE OZONE TREATIES AND THEIR INFLUENCE ON THE BUILDING OF INTERNATIONAL ENVIRONMENTAL REGIMES* 43 (Winfried Lang ed., 1996), Victor, *supra* note 155, Koskenneimi, *supra* note 92, at 128-34, and Elizabeth P. Barratt-Brown, *Building a Monitoring and Compliance Regime Under the Montreal Protocol*, 16 *YALE J. INT'L L.* 519, 563-69 (1991).

¹⁵⁸ See Interviews with various members of the UNFCCC Secretariat, in Bonn, Germany (Nov. 1999).

members may think are important; and an “ad hoc” component that addresses specific submissions about noncompliance.¹⁵⁹ The main objective is to create a multilateral, non-confrontational, and discursive process to further implementation — a process very much in line with managerial precepts. The Committee has no direct levers over non-compliant states and does not act in a judicial mode; discussions are not couched as legal arguments.¹⁶⁰ Rather, the Committee relies upon facilitation and whatever political pressure emerges from open, transparent discussion of compliance difficulties. It employs what is essentially an administrative, rather than a judicial, approach to noncompliance.

Interestingly, several parties have used the Non-Compliance Procedure to essentially “accuse” themselves of noncompliance. In 1995, Belarus, Bulgaria, Poland, Russia, and Ukraine all made submissions of noncompliance that were “interpreted” as formal applications under the Procedure.¹⁶¹ The Implementation Committee initiated a process of development of compliance plans and subsequent reviews of those plans by the Committee.¹⁶² Because complex technical issues were involved, the Committee also sought the advice of experts from the assessment panels described above.¹⁶³

A central part of the power of the Implementation Committee to foster and elicit compliance from the states involved stems from a decision by an organization external to the treaty: the Global Environment Facility. The Global Environment Facility was providing funds for the incremental costs of compliance with the Montreal Protocol to the countries involved.¹⁶⁴ The Global Environment Facility decided to withhold additional funds for new ozone-related projects in those states until their compliance plans were approved by the Implementation Committee.¹⁶⁵ This decision was critical to the success of the NCP in these cases. The Implementation Committee’s handling of the submissions and review of subsequent country-specific plans has worked well, and all the states involved in the NCP process were, as of 1998, moving toward full compliance with the Montreal Protocol.¹⁶⁶ Since this first set of cases, several other parties facing compliance difficulties (all with economies in transition) have been brought before the Committee using the Non-Compliance Procedure, though in these cases it is

¹⁵⁹ See Victor, *supra* note 155.

¹⁶⁰ See Interviews, *supra* note 152.

¹⁶¹ See Victor, *supra* note 155, at 156, 174 n.64 (citing UNEP/OzL.Pro/ImpCom/11/1, 14 September 1995, at 13-14).

¹⁶² See *id.* at 155-60 (discussing this case in more detail).

¹⁶³ See *id.* at 159.

¹⁶⁴ See *id.* at 164.

¹⁶⁵ See Greene, *supra* note 148, at 105.

¹⁶⁶ See Victor, *supra* note 155, at 159.

the Secretariat that brought the cases forward using data supplied by the parties themselves in their annual reports.¹⁶⁷

What lessons can be drawn from this experience for compliance theory? The Non-Compliance Procedure, and its linkage to a form of aid conditionality, can be interpreted as supporting either the norm-driven approach of managerialism or the rationalist, enforcement-focused views of its critics. The existence of assistance tied to a discursive, non-confrontational process fits with the cooperative, capacity-building thrust of managerialism, while the link between noncompliance and denial of future funds, which in practice has been critical to the success of the procedure, is consistent with the views of rationalist critics.¹⁶⁸ Under either interpretation, however, it is important to note that the linkage between continued economic aid and compliant behavior is not built directly into the Montreal Protocol treaty structure, but rather emerged informally from decisions by the Global Environment Facility in conjunction with the Implementation Committee. This highlights the importance of research that looks beyond formal legal text and closely traces the process of interaction among the relevant actors and institutions.

More broadly, the case suggests that implementation review can be an effective aid to uncovering compliance — many of the submissions were voluntary, and all emerged from the broader SIR process — and can be effective in crafting useful and productive compliance strategies. The case also suggests that while international lawyers have long looked to courts and tribunals as the preferred mode of peaceful adjudication in the international system, non-judicial and largely administrative structures such as the NCP may be more effective in a second-best world of sovereign states largely unwilling to seek or abide international legal judgments. Finally, the Montreal Protocol experience shows that such a compliance institution can build credibility and power slowly but meaningfully. The NCP was dormant for several years, but now is being invoked directly by the Secretariat using data from national reports. This suggests it is important to consider the need for such institutions early in the process of regime formation, before compliance issues rise to the fore.

C. International Standards and the Politics of Noncompliance

While implementation review can in practice be an often highly technical exercise with input by experts drawn from industry and science, some analyses of international environmental commitments have

¹⁶⁷ See Interview with K.M. Sarma, Executive Secretary of the Ozone Secretariat, in Nairobi, Kenya, (Nov. 4, 1999).

¹⁶⁸ Moreover, decisions by the Multilateral Fund of the Protocol to terminate funding to those developing country parties that failed to provide baseline data on production and use — as required by the treaty — has also been successful at inducing compliance with that basic requirement. See Victor, *supra* note 155, at 152; see also Elizabeth R. DeSombre & Joanne Kauffman, *The Montreal Protocol Multilateral Fund: Partial Success Story*, in INSTITUTIONS FOR ENVIRONMENTAL AID: PITFALLS AND PROMISES 89 (Robert O. Keohane & Marc A. Levy eds., 1996).

emphasized the importance of popular politics to the regulatory process and the many ways in which international commitments may influence national behavior. In particular, the history of acid rain cooperation in Europe illustrates well the importance of institutional enmeshment and the somewhat paradoxical role that noncompliance can play in promoting effective international regulation.

The problem of transboundary acid deposition (or "acid rain") in Europe has been addressed through the Long-Range Transboundary Air Pollution Convention of 1979 ("LRTAP")¹⁶⁹ and its subsequent pollutant-specific protocols (a sulfur protocol was signed in 1985, a nitrogen oxides protocol in 1988, a volatile organic compounds protocol in 1991, and a second sulfur protocol in 1994).¹⁷⁰ The regime also includes a scientific data-gathering component, "EMEP," which actually pre-dates the Convention but was incorporated into it.¹⁷¹ EMEP was critical to the success of LRTAP because it provided a fairly neutral, respected source of environmental data that helped many initially skeptical states recognize the impact of the acid rain problem within their own borders.

Marc Levy's study of the early years of the acid rain regime suggests that the regulatory rules embodied in LRTAP and its Protocols did not serve primarily as binding rules that altered behavior through the force of legal prescription. Rather, they operated largely as a normative register of political commitment to the European environment. Their mode of influence was persuasion rather than coercion. As Levy argues, this role was quite important in practice:

The regulatory rules [of LRTAP] were weak but not irrelevant. They served a vital role in magnifying pressure on recalcitrant states, in keeping the consensus building activities high on governments' agendas, and in assisting domestic environmental proponents of action. Rules serve these functions in a process I call "tote-board diplomacy."...If mutual adjustment toward joint gains is the goal, one needs strong rules that are complied with. But in a process of tote-board diplomacy weak

¹⁶⁹ Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 18 I.L.M. 1442. See generally Don Munton et al., *Acid Rain in Europe and North America*, in THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIORAL MECHANISMS, *supra* note 1, at 155, 155-247 (assessing the impact of LRTAP on the acid rain problem during the 1980s); MARVIN S. SOROOS, THE ENDANGERED ATMOSPHERE: PRESERVING A GLOBAL COMMONS 6-9 (1997) (discussing the development of the LRTAP regime); SONJA BOEHMER-CHRISTIANSEN & JIM SKEA, ACID POLITICS: ENVIRONMENTAL AND ENERGY POLICIES IN BRITAIN AND GERMANY 185-289 (1991) (discussing the same).

¹⁷⁰ Marc A. Levy, *European Acid Rain: The Power of Tote-Board Diplomacy*, in INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE INTERNATIONAL ENVIRONMENTAL PROTECTION 75, 91-105 (Peter M. Haas et al. eds., 1993).

¹⁷¹ See *id.* at 166. EMEP stands for the Cooperative Programme for the Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe and was begun by the Organization for Economic Cooperation and Development in the wake of the 1972 Stockholm Conference on the Human Environment. See *id.*

rules can work quite well, and noncompliance can be part of a successful strategy. In the case of LRTAP, regulatory protocols served as a normative register [a tote-board], indicating both what behavior was considered legitimate and which countries had accepted such a standard as a guide to national policy.¹⁷²

The LRTAP story is a complex one involving Cold War diplomacy, European cohesion, and evolving science. The states involved in LRTAP had varied reasons for their interest in the treaty: Nordic countries suffered from imported acid deposition, for example, while the Soviet Union was interested in promoting East-West cooperation.¹⁷³ Many states “over-complied,” going well beyond the regulatory targets, while others failed to comply or just met the targets.¹⁷⁴ For the states that changed policies or behavior based on the treaty regime — for those states for whom the regime appeared to be effective — Levy argues they changed behavior for one of two reasons. Some states did so primarily because the cooperative process, and in particular the EMEP program, prompted them to reevaluate their interests with regard to acid rain control.¹⁷⁵ Other states changed behavior primarily because of political pressure aided and abetted by the regime’s regulatory rules and standards — by tote-board diplomacy.¹⁷⁶ Germany is an example of the former, a state that discovered, through scientific programmatic activities created by the regime, that it, too, suffered harm from transboundary acid rain.¹⁷⁷ It subsequently favored stricter international regulation. The United Kingdom is an example of the latter, in which the local effects of transboundary acid rain were minimal, but domestic actors used the regulatory provisions and emissions targets of the international regime in their political efforts domestically.¹⁷⁸ LRTAP set clear benchmarks that aided domestic (and foreign) criticisms of British policy, and helped propel cooperation forward.¹⁷⁹

The complexity of LRTAP’s impact on state behavior illustrates the frequent disjuncture between compliance and effectiveness. The ultimate aim of LRTAP and its pollution-specific Protocols was to reduce the acid rain problem throughout Europe, but compliance with the concrete regulatory rules of the regime was only a small part of the process of achieving this aim. LRTAP’s primary means of influence was to spur the reevaluation of interests by governments. Indeed, noncompliance with

¹⁷² See *id.* at 76-77 .

¹⁷³ See Munton et al., *supra* note 169, at 182-92.

¹⁷⁴ See *id.* at 178-79. Reductions in nitrous oxide emissions from 1980 to 1994, for example, range from 61% to -786%. See *id.* The Protocol’s target was a freeze by 1995 at 1987 levels. See *id.* at 170.

¹⁷⁵ See Levy, *supra* note 170, at 116-22.

¹⁷⁶ See *id.* at 122-27.

¹⁷⁷ See *id.* at 111-12.

¹⁷⁸ See *id.* at 123-26.

¹⁷⁹ See Munton et al., *supra* note 169, at 235.

international rules appeared to have ultimately fed the cooperative process by providing an incentive and a focal point for domestic pressure to do more to address acid rain and the European environment generally.¹⁸⁰ This argument that “non-compliance can be part of a successful strategy”¹⁸¹ is dependent, however, on certain preconditions. The most central precondition is the existence of open and responsive governments and institutions that permitted societal demands to be transmitted to government elites. In other words, Levy’s argument about the intersection between noncompliance and treaty rules is fundamentally liberal, in the sense of the liberal international relations theory discussed in Part III above.¹⁸² Societal preferences and structure of state-society relations were critical to the operation and power of tote-board diplomacy.

D. Binding and Non-Binding Instruments

The preceding subsections have focused on the causality of compliance and the interaction between compliance and effectiveness within the context of legally-binding agreements. The LRTAP story suggests a rethinking of the centrality of binding instruments in cooperation, and in this subsection I take this rethinking one step further. Conventional wisdom holds that the most effective international commitments are legally binding. Concern with compliance as a legal matter flows from the existence of binding obligations. Yet many international agreements are not legally binding.¹⁸³ The entire field of “soft-law” attests to the spectrum of bindingness that has emerged in practice and the multiplicity of non-binding instruments currently in existence.¹⁸⁴ There is evidence that non-binding instruments are not merely “failed treaties,” but may, under some circumstances, be as effective or more effective than legally-binding treaties.¹⁸⁵ Non-binding instruments have distinct advantages, ranging from more rapid “entry into force” to greater flexibility

¹⁸⁰ See Levy, *supra* note 170, at 132 (“LRTAP held states publically accountable to principles they accepted on paper but violated in practice, boosted the power of domestic proponents of action, and created a multilateral knowledge base supporting the need for action.”).

¹⁸¹ *Id.* at 77.

¹⁸² See *supra* Part III(C) (discussing liberal international relations theory).

¹⁸³ For an examination of the form of agreements, see Charles Lipson, *Why Are Some International Agreements Informal?*, 45 INT’L ORG. 495 (1991); Abbott & Snidal, *supra* note 8 (providing a more focused treatment of the use of international organizations).

¹⁸⁴ See Hartmut Hillgenberg, *A Fresh Look at Soft Law*, 10 EUR. J. INT’L L. 499 (1999); INTERNATIONAL COMPLIANCE WITH NON-BINDING ACCORDS (ASIL Studies in Transnational Legal Policy No. 29, Edith Brown Weiss ed., 1997); Pierre-Marie Dupuy, *Soft Law and the International Law of the Environment*, 12 MICH. J. INT’L L. 420, 422-28 (1991); Prosper Weil, *Towards Relative Normativity in International Law?*, 77 AM. J. INT’L L. 413, 414-15 (1983); Oscar Schachter, Editorial Comment, *The Twilight Existence of Nonbinding International Agreements*, 71 AM. J. INT’L L. 296 (1977).

¹⁸⁵ See Rautistala & Victor, *supra* note 109, at 659, 684-89; Brown Weiss, *supra* note 4, at 1566-70.

to greater willingness by governments to consider ambitious or experimental approaches.¹⁸⁶ They also have distinct costs: if law is a tool to strengthen and signal the depth and credibility of commitment, a non-binding instrument will not achieve these ends as well as a binding instrument. Given the high transaction costs associated with negotiating treaties,¹⁸⁷ however, even a finding that non-binding instruments are, under certain conditions, equally effective or nearly as effective as treaties is significant.

One advantage of non-binding instruments is that they may avoid the lowest-common-denominator problem in regulatory standards. As I argued in Part II of this article, compliance is often simply an artifact of the legal standard used. This dynamic is particularly important in the international context. Given that states are the creators of international law and international treaties an endogenous regulatory strategy, it is perhaps not surprising that many treaties demand little of their signatories.¹⁸⁸ While civil actors and interest groups may exert considerable pressure in negotiations, governments ultimately set the rules and standards of international treaty law.¹⁸⁹ If governments care about compliance — as they

¹⁸⁶ See Raustiala & Victor, *supra* note 109, at 685; Hillgenberg, *supra* note 184, at 501. *But see* Kal Raustiala, *Democracy, Sovereignty, and the Slow Pace of International Negotiations*, 8 INT'L ENV'T'L. AFF. 3 (1996) (discussing, in the context of international environmental cooperation, the normative problems that may ensue generally when international decisions are not subject to the full panoply of domestic approval structures.; *see also* JEREMY RABKIN, *WHY SOVEREIGNTY MATTERS* 32-33 (1998). These normative concerns are not limited to non-binding accords and can arise in many contexts where international decisions with domestic ramifications are not subject to adequate democratic procedures. While I maintain those concerns, my focus here is purely on the effectiveness of non-binding accords as instruments of environmental management, and not on the democratic dilemmas they may raise.

¹⁸⁷ The Uruguay Round of the GATT took eight years, for example, while many international negotiations routinely take several years and extensive diplomatic energy. *See* Paul Katzenberger & Annette Kur, *TRIPs and Intellectual Property, in FROM GATT TO TRIPs — THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS*, *supra* note 57, at 1, 1. In many cases a tremendous amount of time is consumed in fine-grained debates over “bracketed text” that is driven in part by the legal status of the commitments under consideration. While the widely held assumption until recently was that regardless of the intensity of differences in an environmental treaty negotiation, some agreement, however flawed or incomplete, would result — witness the Kyoto Protocol; the rejection of the draft Biosafety Protocol in Cartagena in 1999 has undermined that view (though negotiations were renewed in January 2000 and a new Protocol successfully emerged). For the comprehensive coverage of the negotiations, see *Earth Negotiations Bulletin* (last visited May 13, 2000) www.iisd.ca/linkages/vol12.

¹⁸⁸ *See supra* Part II.

¹⁸⁹ On the role of non-governmental actors in international cooperation, see Steve Charnovitz, *Two Centuries of Participation: NGOs and International Governance*, 18 MICH. J. INT'L L. 183 (1997); Kal Raustiala, *The “Participatory Revolution” in International Environmental Law*, 21 HARV. ENV'T'L L. REV. 537 (1997); *NGOS, THE UN, AND GLOBAL GOVERNANCE* (Thomas G. Weiss & Leon Gordenker eds., 1996).

appear to in many cases¹⁹⁰ — they will resist creating standards that are too challenging for fear they will not be in compliance. In several cases of environmental cooperation, however, states have appeared more willing to adopt commitments that are clearer and more ambitious when those commitments are in non-binding form. What is most significant is that these non-binding instruments have led to observable, sometimes marked, changes in behavior, and sometimes these changes in behavior appear greater than the likely change under a regime with binding rules.

For example, agreements to address marine pollution in the North Sea have been made in both binding and non-binding form.¹⁹¹ The non-binding agreements emerged out of a high-level political process aided by scientific assessment and collective reviews of implementation.¹⁹² The non-binding commitments were far more ambitious than the binding commitments, and because they were drafted in a clear form — percentage cuts of major pollutants — they were easily assessed through the review process and proved fairly effective.¹⁹³ Over time, the non-binding commitments have pioneered the path of regulation for the parties, and commitments undertaken only when non-binding have later been promulgated in binding form.¹⁹⁴ While the evidence is not robust, non-binding commitments appear to be most effective when they are linked to well-developed and regularized systems of implementation review.¹⁹⁵ In the North Sea case, the promulgation of non-binding instruments was closely tied to an SIR that involved technical as well as political input — often at the highest levels.

Non-binding commitments have also produced wider and more intensive domestic regulatory efforts than likely would have occurred with a binding agreement. The Nitrogen Oxides Protocol to LRTAP, for example, called for a freeze on emissions by a set date.¹⁹⁶ A group of states went further and agreed to cut emissions by 30%, but made that

¹⁹⁰ To be sure, some governments do not care about compliance in some cases. Many states have signed human rights agreements, for example, with seemingly little intent to comply. But, to rephrase Louis Henkin's famous aphorism, in most cases and for most states, governments care about compliance most of the time. *See supra* text accompanying note 38.

¹⁹¹ *See* Jon Birger Skjærseth, *The Making and Implementation of North Sea Commitments: The Politics of Environmental Participation*, in *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE*, *supra* note 12, at 327, 327.

¹⁹² *See* Raustiala & Victor, *supra* note 109, at 685-86.

¹⁹³ *See id.*

¹⁹⁴ *See* Skjærseth, *supra* note 191, at 328.

¹⁹⁵ *See* Rautistala & Victor, *supra* note 109, for a description of cases that support this assertion; *see also* Thomas Bernauer & Peter Moser, *Reducing Pollution of the River Rhine: The Influence of International Cooperation*, 5 J. ENV'T & DEV. 389 (1996) (discussing the non-binding "action plan" for the Rhine); Brown Weiss, *supra* note 4, at 1569 (arguing that the experience with human rights under the Helsinki Final Act also demonstrates the utility of non-binding accords).

¹⁹⁶ *See* Levy, *supra* note 170, at 96.

commitment non-binding.¹⁹⁷ Nonetheless, for the states involved, emissions were cut more than they likely would have been without the non-binding target, and detailed case studies suggest that the stricter target induced meaningful regulatory efforts that probably would not have occurred in the non-binding target's absence.¹⁹⁸ As is clear, these claims are heavily dependent on counterfactual analysis, but the evidence is nonetheless suggestive.

Non-binding commitments are likely to be particularly useful when states are unsure about what they can feasibly implement. When such "implementation uncertainty"¹⁹⁹ is high — as it often is in environmental cooperation — the benefits of non-binding commitments are particularly evident. In such situations, as I have argued, the concern with compliance leads states to negotiate treaties with unchallenging rules and standards, with a large margin of error built in. Rather than address uncertainty by weakening the regulatory framework, non-binding instruments provide flexibility in the face of uncertain means and costs — perhaps one reason they are often used for international monetary coordination.²⁰⁰

To be sure, flexibility can at times be written into a legally-binding instrument; the Kyoto Protocol to the Framework Convention on Climate Change, for example, introduces flexibility both by setting a range of target dates for emissions reductions²⁰¹ and by employing various forms of emissions trading and joint implementation.²⁰² The Kyoto approach may

¹⁹⁷ See SOROOS, *supra* note 169, at 7.

¹⁹⁸ Jørgen Wettestad, *Participation in NO_x Policy-Making and the Implementation in the Netherlands, UK, and Norway: Different Approaches but Similar Results?*, in *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE*, *supra* note 12, at 381.

¹⁹⁹ See Raustiala & Victor, *supra* note 109, at 660-63.

²⁰⁰ The "Plaza" and "Louvre" accords on exchange rates, for example, were non-binding agreements to manipulate and guide exchange rates between the key economic powers. See YOICHI FUNABASHI, *MANAGING THE DOLLAR: FROM THE PLAZA TO THE LOUVRE* 9-10, 177, 240 (1988). Much of international monetary cooperation is governed by non-binding agreements or tacit cooperation. See generally *id.* On the international law of money, see Dominick Salvatore, *The International Monetary System: Past, Present, and Future*, 62 *FORDHAM L. REV.* 1975 (1994); Joseph Gold, *Strengthening the Soft International Law of Exchange Arrangements*, 77 *AM. J. INT'L L.* 443 (1983). A basic introduction to international monetary relations can be found in JOAN E. SPERO & JEFFREY A. HART, *THE POLITICS OF INTERNATIONAL ECONOMIC RELATIONS* 31-64 (4th ed. 1990).

²⁰¹ See Kyoto Protocol, *supra* note 64, arts. 3(1), 3(2). The "commitment period" runs from 2008-2012 for the industrialized country parties; these parties must show "demonstrable progress" in achieving their numerical greenhouse gas reduction target goals by 2005. See *id.*

²⁰² See, e.g., Richard N. Cooper, *Toward a Real Global Warming Treaty*, *FOR. AFF.*, Mar.-Apr. 1998, at 66, 70-74 (1998). The emissions reductions targets themselves vary from party to party. See Kyoto Protocol, *supra* note 64, Annex B.

turn out to be an important model.²⁰³ However, one lesson of the cases discussed above is that non-binding instruments coupled with implementation review processes provide an alternative means of achieving flexibility, one that does not require the same degree of laborious legal drafting and hence is likely to be faster and easier to put into place. Moreover, non-binding instruments may promote the use of clear and ambitious targets coupled with a focus on regular reviews of performance — which is useful, as discussed above, for many reasons — rather than the creation of legal structures that are flexible by virtue of extensive and sometimes complex rules and exceptions. While the use of a structure of extensive, complex rules and exceptions can be effective, as the General Agreement on Tariffs and Trade²⁰⁴ and the Convention on International Trade in Endangered Species (“CITES”)²⁰⁵ have both shown, non-binding instruments may be comparably effective and are often simpler.

To realize these virtues, however, the evidence to date suggests that the parties involved need to carefully review implementation at a political level high enough to ensure that serious and continuing attention is given to putting commitments into place. Also, echoing liberal arguments, it may be the case that non-binding instruments work best when the parties involved are liberal democracies. Liberal democracies are comfortable with external scrutiny of implementation and familiar with extensive regulatory cooperation.²⁰⁶ The relative advantages of each approach in any given case will often rest in part on idiosyncratic and contextual factors, though any general theory of instrument choice will likely embrace the trade-off between the credibility gains associated with binding instruments and the flexibility and learning-by-doing gains of non-binding instruments. The central point in this context is that the paradigm of creating binding rules and then seeking to achieve compliance with them is not the only possible route to effective international cooperation. While non-binding instruments are not a panacea, the evidence suggests that more consideration of their utility in international cooperation, and of the comparative advantages of different legal forms generally, is warranted.

V. SOME CONSIDERATIONS FOR THE EFFECTIVENESS OF THE TRIPS ACCORD

The topic of this symposium — compliance with international intellectual property agreements — reflects the rising salience of

²⁰³ However, the implementation of Kyoto is far off, and there are very daunting challenges to creating and implementing the rules that will put the Protocol's vaunted flexibility into place in an administrable and effective manner.

²⁰⁴ On the structure of GATT and the WTO, see TREBILCOCK & HOWSE, *supra* note 72.

²⁰⁵ See Convention on Biological Diversity, *supra* note 3. On the complex rule-and-exception structure of CITES as promotive of compliance, see Peter H. Sand, *Whither CITES? The Evolution of a Treaty Regime in the Borderland of Trade Environment*, EUR. J. INT'L L. 29 (1997) 29-58. (Dr. Sand is a former Secretary-General of CITES).

²⁰⁶ Victor et al., *supra* note 12.

intellectual property in international affairs. Intellectual property is vitally important in domestic law and increasingly important in international law.²⁰⁷ The international trade implications of intellectual property protection are large and growing.²⁰⁸ These trade implications provided the conceptual link that permitted the incorporation of intellectual property law into the World Trade Organization — though the history of the negotiations demonstrates that it was the power of the United States, the fear of continued “aggressive unilateralism,”²⁰⁹ and the package nature of the Uruguay Round negotiations that permitted what might have been another treaty under the auspices of the World Intellectual Property Organization²¹⁰ to instead become part of the most powerful international organization in the world today.²¹¹ Below I briefly summarize the TRIPs accord and apply one of the lessons of international environmental law described above—that of the utility of systems of implementation review—to the international intellectual property context.

²⁰⁷ This is evidenced by the rise of coursebooks on international intellectual property. *See, e.g.,* DORIS ESTELLE LONG & ANTHONY D'AMATO, *INTERNATIONAL INTELLECTUAL PROPERTY* (2000).

²⁰⁸ Although intellectual property may be traded or embodied in traded goods, intellectual property protection does not directly or inevitably promote international trade; as long as the treatment of innovation is non-discriminatory with regard to foreign innovators, an absence of national protection is indeterminate in its international trade effects. But as a political matter, the impact for international trade of intellectual property protection is great.

²⁰⁹ *See generally* AGGRESSIVE UNILATERALISM: AMERICA'S 301 TRADE POLICY AND THE WORLD TRADING SYSTEM (Jagdish Bhagwati & Hugh T. Patrick eds., 1990); *see also* Bénédicte Callan, *Piracy Protection in the Twenty-First Century*, in *PARTNERS OR COMPETITORS? THE PROSPECTS FOR U.S.-EUROPEAN COOPERATION ON ASIAN TRADE* 158 (Richard H. Steinberg & Bruce Stokes eds., 1999) (containing a list of intellectual property-related actions by the United States under Section 301 of the 1974 Trade Act).

²¹⁰ WIPO, based in Geneva, became a UN agency in 1974 and has been the site of negotiation of several intellectual property treaties. *See* MICHAEL BLAKENEY, *TRADE RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS* 24-26 (1996).

²¹¹ Many developing states, suspicious of the merits of intellectual property protection (particularly patent law), did not welcome its inclusion in the GATT/WTO negotiations. *See* RYAN, *supra* note 3, at 107 (“... developing countries maintained that WIPO, not the GATT, was the appropriate forum for discussions of intellectual property rights...”). However, the wide scope of the Uruguay Round provided some things that developing countries did want — such as improved dispute resolution and agriculture — and thus they accepted TRIPs as part of the broader trade bargain, and also in the hopes that they would not be subject to the continued threat of unilateral sanctions by the United States. *See id.* at 112. On the general efforts of industrialized countries to extend intellectual property protection globally, *see* Sell, *supra* note 3, at 321-32; Callan, *supra* note 209.

A. The TRIPS Agreement

The negotiation of the TRIPS agreement has dramatically expanded the scope and depth of international intellectual property law.²¹² TRIPS extends the basic GATT norms of national treatment and most-favored nation to intellectual property and incorporates minimum standards for intellectual property protection in the GATT/WTO system for the first time.²¹³ These minimum standards are largely drawn from pre-existing international intellectual property agreements, in particular the Paris²¹⁴ and Berne²¹⁵ Conventions. "Minimum standards" means that the TRIPS accord is not a harmonization treaty. TRIPS parties are free, as long as they meet the minimum standards, to determine the appropriate way to do so within their own national legal systems.²¹⁶ (These minimum standards are, however, largely set at the level of the industrialized countries and thus are not so minimal for many developing countries).²¹⁷ "Minimum" also means that parties can, if they desire, offer protections beyond those contained in TRIPS.

The fact that TRIPS only sets a regulatory floor does not alter its fundamental importance: TRIPS contains many innovative, significant, and difficult obligations. For example, TRIPS offers product and process patents to inventions "in all fields of technology,"²¹⁸ presumably incorporating software, transgenic animals and plants, and other controversial areas of patent scope.²¹⁹ TRIPS covers copyright, trademark,

²¹² For extensive overviews of the legal provisions of TRIPS, see FROM GATT TO TRIPS — THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS, *supra* note 57 and DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS* (1998).

²¹³ See Rochelle Cooper Dreyfuss & Andreas F. Lowenfeld, *Two Achievements of the Uruguay Round: Putting TRIPS and Dispute Settlement Together*, 37 VA. J. INT'L L. 275, 277, 279 (1997); see also LONG & D'AMATO, *supra* note 207, at 283-412; J.H. Reichman, *From Freeriders to Fair Followers: Global Competition Under the TRIPS Agreement*, 29 N.Y.U. J. INT'L L. & POL. 11 (1997); Frederick M. Abbott, *Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework*, 22 VAND. J. TRANSNAT'L L. 689, 738-39 (1989).

²¹⁴ Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 25 Stat. 1372, 828 U.N.T.S. 305.

²¹⁵ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 828 U.N.T.S. 221 [hereinafter Berne Convention].

²¹⁶ See TRIPS Agreement, *supra* note 9, art. 1; see also Adrian Otten & Hannu Wager, *Compliance with TRIPS: The Emerging World View*, 29 VAND. J. TRANSNAT'L L. 391, 394 (1996).

²¹⁷ See Otten & Wager, *supra* note 216, at 396.

²¹⁸ TRIPS Agreement, art. 27.

²¹⁹ This extension, however, is bounded by the express right of parties to exclude patents on grounds of public order or morality. See *id.* India and the United States have already feuded over this issue. See Daniel Pruzin, *U.S., India, Spar at WTO Meeting on Need to Bolster Patent Protection of Life Forms*, 16 INT'L TRADE REP. 1741 (1999).

integrated circuits (“maskworks”), industrial designs, and trade secrets.²²⁰ TRIPS also contains detailed obligations on the domestic structure and process of intellectual property protection: parties must, *inter alia*, provide for judicial review of patent revocations,²²¹ have civil judicial procedures that guarantee the right to independent legal counsel,²²² and provide for criminal procedures in cases of counterfeiting and piracy.²²³ These requirements radically intrude into traditionally domestic spheres of law and policy and are one of the most interesting aspects of TRIPS. Perhaps most significant from a compliance perspective, TRIPS provides access to the new dispute resolution and enforcement procedures of the WTO, which have no real analogue in international environmental law, and, unlike most dispute resolution procedures in international law, are widely used and appear largely effective.²²⁴

One salient similarity between international intellectual property law and international environmental law is that both present regulatory

²²⁰ See TRIPS Agreement, *supra* note 9, arts. 9-39; Otten & Wager, *supra* note 216, at 397-402.

²²¹ See *id.* art. 32.

²²² See *id.* art. 42.

²²³ See *id.* art. 51.

²²⁴ The WTO dispute resolution system is often cited as a model for other areas of international law. See, e.g., Ernst-Ulrich Petersmann, *Dispute Settlement in International Economic Law — Lessons for Strengthening International Dispute Settlement in Non-Economic Areas*, 2 J. INT'L ECON. L. 189 (1999). While international tribunals have proliferated in recent years, most have low or non-existent caseloads. For a survey and discussion, see Symposium, *The Proliferation of International Tribunals: Piecing Together the Puzzle*, 31 N.Y.U. J. INT'L L. & POL. 679 (1999); in particular Cesare P.R. Romano, *The Proliferation of International Judicial Bodies: The Pieces of the Puzzle*, 31 N.Y.U. J. INT'L L. & POL. 709, 709-10 (1999) (stating that “since 1989, almost a dozen international judicial bodies have become active or have been extensively reformed, compared to only about six or seven previously populating the international scene”); Jonathan I. Charney, *The Impact on the International Legal System of the Growth of International Courts and Tribunals*, 31 N.Y.U. J. INT'L L. & POL. 697, 701 (1999) (stating that “...a comparison of the number of cases handled by the [International Court of Justice] and those handled by the highest courts of states, or even several other standing international dispute settlement tribunals, shows that the [International Court of Justice]’s caseload is relatively low.”) The formal dispute resolution procedures that are boilerplate in international environmental agreements have, to my knowledge, never been invoked, with the possible exception of the recent decision by the International Tribunal for the Law of the Sea in the Southern Bluefin Tuna Cases. See International Tribunal for the Law of the Sea, *Southern Bluefin Tuna Cases* (visited May 12, 2000) <http://www.un.org/Depts/los/ITLOS/Order-tuna34.htm>. The Convention on the Law of the Sea, while it has environmental elements, is at the fringes of international environmental law. See United Nations Convention on the Law of the Sea, Dec. 10, 1982, 21 I.L.M. 1288. Nonetheless, this is an important case and perhaps, though I doubt it, an indicator that formal dispute resolution will be more widely used in the future in environmental treaties.

challenges for governments that are not just administrative or cost-based.²²⁵ Both are areas in which extensive debate over the nature of the problem and the preferred nature of solutions exists. TRIPS is also largely about domestic regulation and regulatory structures rather than border controls.²²⁶ This focus on “behind the border” issues is shared by nearly all environmental treaties.²²⁷ The incorporation of such behind the border, domestic protection provisions into TRIPS may pose challenges for the WTO dispute resolution system, which was largely designed around the long collective experience with trade in tangible goods and border measures under GATT.

As Rochelle Dreyfuss and Andreas Lowenfeld argue, “neither the [dispute settlement body], nor the TRIPS agreement nor the Berne or Paris Conventions, provide guidance on how minimum standards...will work in conjunction with an adjudicatory dispute resolution system that is backed with enforcement procedures.”²²⁸ For example, they ask, is national legislation that grants copyright protection for software sufficient for compliance with the minimum standards standard of TRIPS, even if in practice programs are often found by the national courts to be unprotected methods of operation?²²⁹ Intellectual property law is new to many WTO member states and different understandings of its conceptual basis, scope, and utility co-exist uneasily and will undoubtedly lead to different approaches to the same minimum standards. The implementation of behind the border measures is also not likely to be easy,²³⁰ particularly when many states have not embraced intellectual property protection willingly.²³¹ Collective understandings among the parties about what TRIPS requires probably do not exist.²³² The five-year transitional period for developing countries comes to an end this year, and these countries will become open

²²⁵ In addition, both are often characterized by North-South divisions. There are also very interesting overlaps involved in the genetic resources debate taking place in numerous international fora. *See supra* note 3.

²²⁶ *See* RYAN, *supra* note 3, at 141 (“TRIPS is also an unprecedented initiative of the industrialized world to strengthen the judicial systems of developing countries. Implementation of the agreement by third world governments in the late 1990s and beyond will challenge accepted strategies of economic development, the governments’ capacity to enforce policy, and the effectiveness of the judiciary.”).

²²⁷ ROBERT Z. LAWRENCE ET AL., ALBERT BRESSAND, AND T. ITO, *A VISION FOR THE WORLD ECONOMY: OPENNESS, DIVERSITY, AND COHESION* 22 (1996).

²²⁸ Dreyfuss & Lowenfeld, *supra* note 213, at 281. “This difference in focus between TRIPS and the remainder of the GATT means that participants in disputes involving intellectual property will be moving in largely uncharted waters.” *Id.* at 280. *See also* J.H. Reichman, *Enforcing the Enforcement Procedures of the TRIPS Agreement*, 37 VA. J. INT’L L. 335, 336-40 (1997) [hereinafter Reichman, *Enforcing Enforcement*] (commenting on Dreyfuss & Lowenfeld, *supra* note 213).

²²⁹ *See* Dreyfuss & Lowenfeld, *supra* note 213, at 284-85.

²³⁰ *See, e.g.*, Raustiala & Victor, *supra* note 109, at 692.

²³¹ *See* Sell, *supra* note 3, at 321-22.

²³² *See* Dreyfuss & Lowenfeld, *supra* note 213, at 333.

to attack through the DSU.²³³ Many developing countries are apparently not on track to have TRIPS fully implemented and are thus quite vulnerable to a noncompliance complaint.²³⁴

B. SIRs and TRIPS

One means to address the lacunae in collective understandings that Dreyfuss and Lowenfeld identify is to consider this and other jurisprudential issues the WTO dispute settlement bodies may face in advance. This is the method Dreyfuss and Lowenfeld take, and they present several scenarios that illustrate the range of problems the WTO faces and then present some possible solutions for the DSU.²³⁵ Another means is to consider how the legal resolution of such compliance-related disputes might be avoided in the first place. The evidence discussed in Part IV above concerning SIRs suggests one pathway to achieve this.

A chief benefit of SIRs is that they foster collective learning in regulatory situations where governments often do not know how to get to where they want to go.²³⁶ While many disputes over the scope of intellectual property protection will no doubt be driven by protectionist — in the international trade sense — sentiments, some will reflect fundamental uncertainties over the scope, concepts, and means of intellectual property protection. Some differences might be discussed, defused and resolved through a regularized process of review of the domestic implementation of TRIPS. To be sure, much of the animating force behind the creation of TRIPS in nations like the United States was the concern with software and other piracy, a relatively straightforward issue, but even here the TRIPS accord expressly permits states to determine the appropriate methods of implementing its provisions within their national legal systems.²³⁷ Because the bounds of this rule are not yet clear, these differences in approach and conception could lead to many potential disputes. Because TRIPS covers a wide range of intellectual property fields and doctrines, it is necessarily scanty on details and on areas of intellectual property law that are new or emerging. While these are not necessarily the core concerns that motivated the creation of TRIPS, they are nonetheless within the jurisdiction of TRIPS and increasingly important in the world economy. Issues such as the rise of the internet pose real challenges to many received intellectual property doctrines, and as one commentator has noted, “the TRIPS initiative did not

²³³ See TRIPS Agreement, *supra* note 9, art. 65. The general transitional period came to an end January 1 2000. (For least-developed states, the transitional period ends in 2006). See *id.* art. 66. Certain areas of the law, such as patent protection for pharmaceuticals, are subject to a longer transition period. See *id.* art. 65.

²³⁴ See J.H. Reichman, *The TRIPS Agreement Comes of Age: Conflict or Cooperation with the Developing Countries?*, 32 CASE W. RES. J. INT'L L. 441 (2000) [hereinafter Reichman, *TRIPS Agreement Comes of Age*].

²³⁵ See Dreyfuss & Lowenfeld, *supra* note 213, at 281-332.

²³⁶ Cf. Victor et al., *supra* note 12, at 16-20.

²³⁷ See TRIPS Agreement, *supra* note 9, art. 1.

address the policy challenges imposed on intellectual property law by information and communication technologies that are revolutionizing business activity, government service, and social life."²³⁸ Different states will have different views on how to best address these challenges. SIRs can foster collective learning and the sharing of ideas as parties begin to grapple with the complexities of creating or modifying their intellectual property systems.²³⁹

Regularized implementation review, because it permits ongoing but informal negotiation to continue, may also encourage potential disputants to work out differences politically rather than judicially. While some observers might consider this problematic — judicial solutions, after all, often cast useful shadows that can shape expectations and influence the terms of future agreements reached privately — judicial solutions can also be quite costly in a political and politicized context like that of world trade.²⁴⁰ As the December 1999 events in Seattle demonstrated, there is significant resentment in many quarters against the WTO, with the dispute resolution process a central target.²⁴¹ Moreover, as the continuing French ban of British beef demonstrates, the politics of economic liberalization can be intense enough to override judicial solutions even when the relevant dispute system, in that case the European Union's, is far more adequately legitimated than the WTO's.²⁴² These experiences suggest caution in the use of contentious dispute resolution as a means to determine and induce an "acceptable level of compliance"²⁴³ with TRIPS and highlight the merits of the extensive use of a flexible, less judicialized approach, such as that embodied in a well-developed, regular process of implementation review.²⁴⁴

²³⁸ RYAN, *supra* note 3, at 199; *see also* Callan, *supra* note 209, at 148-149.

²³⁹ Not only structural and administrative issues but core conceptual divisions, such as the idea-expression dichotomy, are likely to be problematic for states that are newcomers to intellectual property law. Even in mature intellectual property systems these conceptual divisions are continuing sources of controversy. *See, e.g.*, Jon O. Newman, *New Lyrics for an Old Melody: The Idea-Expression Dichotomy in the Computer Age*, 17 CARDOZO ARTS & ENT. L.J. 691 (1999).

²⁴⁰ This view has general support in the WTO system as well as specific support in the context of TRIPS. *See* Otten & Wager, *supra* note 216, at 411 (stating that the attitude of the TRIPS Council is to resolve differences diplomatically whenever possible).

²⁴¹ *See* Same Howe Verhovek & Steven Greenhouse, *National Guard is Called to Quell Trade-Talk Protests*, N.Y. TIMES, Dec. 1, 1999, at A1.

²⁴² *See, e.g.*, David Woodruff & Brandon Mitchener, *France's Continuing Blockage of British Beef Gives European Union a Familiar Bone to Pick*, WALL ST. J., Dec. 14, 1999, at A19.

²⁴³ *See* CHAYES & CHAYES, *supra* note 5, at 17-20 (explaining that there is no single acceptable level of compliance and discussing the difficulty of determining what is acceptable).

²⁴⁴ The view that use of the DSU to pursue TRIPS claims raises many problems is not unorthodox. *See, e.g.*, Dreyfuss & Lowenfeld, *supra* note 213, at 332-33; Judith H. Bello, *Some Practical Observations About WTO Settlement of Intellectual Property*

Another argument in favor of an intensive process of implementation review of TRIPS is that an SIR may be more effective in resolving conflicts than an approach based purely on the enforcement of compliance through the DSU. In other words, an SIR may help resolve conflicts as well as avoid them. The DSU jurisprudence to date on TRIPS suggests, as J.H. Reichman has argued in his article in this symposium series, that violations of TRIPS will likely have to be clear, if not flagrant, to be cognizable by the DSU.²⁴⁵ If true, many important intellectual property issues will not be justiciable via the DSU even should select parties wish to pursue a legal claim. Implementation review, not bound by doctrinal or precedential rules, can engage issues that may be difficult to reach through the DSU. While this may not always produce compliance per se, it will help the parties come to accord on what TRIPS really demands, help promote full, mutually-satisfactory implementation of its provisions, and, over time, may produce a more effective TRIPS.²⁴⁶

C. The TRIPS Council

The drafters of TRIPS anticipated the approach recommended here. Implementation review in general is not new to the WTO system: the Trade Policy Review Mechanism, which examines member states' general trade policies in depth, has been operating in some form for over a decade.²⁴⁷ The TRIPS agreement in turn created a specialized TRIPS Council charged

Disputes, 37 VA. J. INT'L L. 357 (1997); Reichman, *Enforcing Enforcement*, *supra* note 228.

²⁴⁵ See Reichman, *TRIPS Agreement Comes of Age*, *supra* note 234, at 448 (citing Report of the Appellate Body, India — Patent Protection for Pharmaceutical and Agricultural Chemical Products, WT/DS50/AB/R, Bernan's Annotated Trade Rep., vol. 4, at 249 (Dec. 19, 1997)); Reichman, *Enforcing Enforcement*, *supra* note 228, at 339-40. The India Patents case is analyzed in David K. Tomar, *A Look into the WTO Pharmaceutical Patent Dispute Between the United States and India*, 17 WIS. INT'L L.J. 579 (1999).

²⁴⁶ A central barrier to this process is widespread discord on what an effective TRIPS in fact looks like: many states view the merits of U.S.-style intellectual property law dubiously and there is widespread disagreement about the appropriate shape and scope of many TRIPS provisions. See generally Reichman, *TRIPS Agreement Comes of Age*, *supra* note 234 at 454 (discussing this widespread disagreement).

²⁴⁷ The Trade Policy Review Mechanism was launched in 1989. See CHAYES & CHAYES, *supra* note 5, at 390 n.61 (citing *Functioning of the GATT System*, Apr. 12, 1989, GATT B.I.S.D. (36th Supp.) at 403 (1990)); KEESING, *supra* note 139; WTO, *Overseeing National Trade Policies: The TPRM* (last updated Jan. 22, 2000) <http://www.wto.org/wto/reviews/reviews.htm>. As Keesing writes, "The [TPRM] is a little-known but important activity of the World Trade Organization (WTO). Its purpose is to strengthen observance of WTO commitments and promote trade liberalization by providing all member countries with current and objective information about the trade policies and practices of each member individually and by establishing a forum within which members can question one another's policies and practices in a nonconfrontational manner." KEESING, *supra* note 139, at 1.

with monitoring the implementation and operation of the accord.²⁴⁸ The Council's primary mandate is to "monitor the operation of this Agreement [TRIPS] and, in particular, Members' compliance with their obligations hereunder."²⁴⁹ The TRIPS Council meets roughly five times a year, and is required to submit an annual report to the WTO's General Council.²⁵⁰ In particular, it receives notifications of member states' implementing legislation²⁵¹ and conducts reviews of members' national TRIPS-related legislation.²⁵² In past years it has also, *inter alia*, discussed draft model legislation drawn up by the World Customs Organization regarding border enforcement obligations;²⁵³ established formal contacts with the World Intellectual Property Organization and organized workshops with the Organization on technical cooperation;²⁵⁴ reviewed the provisions within TRIPS on geographical indications (such as wine appellations);²⁵⁵ examined the implications for TRIPS of electronic commerce by request of the WTO General Council,²⁵⁶ and considered the extension of the current moratorium on "non-violation" disputes under TRIPS.²⁵⁷ Thus TRIPS has a

²⁴⁸ See TRIPS Agreement, *supra* note 9, art. 68.

²⁴⁹ See *id.* In addition, the Council is to "afford Members the opportunity of consulting on matters relating to [TRIPS]" and "provide any assistance requested by [Members] in the context of dispute settlement procedures." *Id.*

²⁵⁰ See, e.g., Council for Trade-Related Aspects of Intellectual Property, Annual Report (1999) of the Council for TRIPS, IP/C/19 (Oct. 22, 1999), available at World Trade Organization (visited Apr. 20, 2000) www.wto.org [hereinafter Annual Report (1999)]. The basic structure is four tiers: the Ministerial Conference; the General Council; the Council for TRIPS (and parallel councils for trade in goods and in services); and specialized committees.

²⁵¹ See TRIPS Agreement, *supra* note 9, art. 63(2).

²⁵² See *id.* art. 68. For example, in 1997 the Council reviewed the legislation of 30 members in the areas of trademarks, geographical indications and industrial designs. See Annual Report (1997) of the Council for TRIPS (IP/C/12), 28 November 1997, Part III, at www.wto.org.

²⁵³ See Council for Trade-Related Aspects of Intellectual Property Rights, Minutes of Meeting, IP/C/M/1 (Apr. 25, 1995), available at World Trade Organization (visited May 13, 2000) <http://www.wto.org>.

²⁵⁴ See Council for Trade-Related Aspects of Intellectual Property Rights, Report (1996) of the Council for TRIPS, IP/C/8 (Nov. 6, 1996), ¶¶ 20-25, available at World Trade Organization (visited Apr. 20, 2000) <http://www.wto.org> [hereinafter Annual Report (1996)].

²⁵⁵ See, e.g., Council for Trade-Related Aspects of Intellectual Property, Annual Report (1997) of the Council for TRIPS, IP/C/12 (Nov. 28, 1997), available at World Trade Organization (visited Apr. 20, 2000) www.wto.org [hereinafter Annual Report (1997)].

²⁵⁶ See Annual Report (1999), *supra* note 250.

²⁵⁷ See Daniel Pruzin, *EU and Cuba Attack U.S. Law Denying Trademark Holder Protections*, 17 INT'L TRADE REP. 726, 727 (1999) (stating that under GATT Article XXIII(1), "a WTO member may commence dispute settlement proceedings against any measure that it believes is directly or indirectly impairing its trading rights, regardless of whether the measure actually conflicts with WTO rules").

SIR. My goal here is to illustrate how this SIR has thus far, and might in the future, work to improve the effectiveness of TRIPS, and to suggest that greater reliance on the TRIPS Council (rather than on the WTO dispute settlement process) has many potential advantages.

Review of national laws and regulations is, along with discussion of issues left unresolved within the TRIPS Agreement,²⁵⁸ the core of the TRIPS Council's work.²⁵⁹ This review helps identify problems with the implementation of TRIPS and creates a dialogue that can foster more thorough implementation. The TRIPS Council has established a schedule for the review of national legislation and a set of procedures: the Council issues written questions in advance of the review meeting, to which members may reply in writing, and during the meeting itself there are follow-up questions and replies.²⁶⁰ States under review provide a brief overview of their national TRIPS-related legislation and of the changes, if any, implemented to bring that legislation into compliance with TRIPS.²⁶¹ Council members may then query the state under review about its legislation. Sometimes they do so pointedly; for example, in the January 1999 meeting, during a review of Mongolia, the representative of the European Communities "expressed serious concerns with regard to the legislation of Mongolia in the area of enforcement and said that, in the view of his delegation, there was a serious violation of the WTO Protocol..."²⁶² At other times, the inquiry is quite specific and provides an opportunity for WTO member states to receive tutorials in the details of national intellectual property law. In a review of U.S. copyright law, for example, Australia asked the U.S. government to "[p]lease explain, having regard to the decisions in *Sega Enterprises v. Accolade, Inc.*, and *Princeton University Press v. Michigan Document Services, Inc.* and any similar cases whether and how the U.S. law of fair use complies with Article 9(2) of the Berne Convention and Article 13 of TRIPS."²⁶³ Interactions like these

²⁵⁸ See, e.g., TRIPS Agreement art. 23(4) (providing that the TRIPS Council must undertake negotiations on the creation of a multilateral register of geographical indications for wine and spirits); see also Council for Trade-Related Aspects of Intellectual Property Rights, Minutes of Meeting, IP/C/M/21 (Jan. 22, 1999) [hereinafter TRIPS Council Minutes of Jan. 22, 1999], available at World Trade Organization (visited Apr. 20, 2000) <http://www.wto.org>.

²⁵⁹ Some analysts believe, however, that it should be doing more monitoring and dispute settlement. See, e.g., GERVAIS, *supra* note 212, at 27-28.

²⁶⁰ See Annual Report (1996), *supra* note 254, 4-25.

²⁶¹ See, e.g., TRIPS Council Minutes of Jan. 22, 1999, *supra* note 258, 10-21.

²⁶² *Id.* 12.

²⁶³ Council for Trade-Related Aspects of Intellectual Property Rights, Review of Legislation on Copyright and Related Rights: United States, IP/Q/USA/1 (Oct. 30, 1996) II(1), available at World Trade Organization (visited Apr. 20, 2000) <http://www.wto.org>. The U.S. response was, in part, that in *Sega*, "the court applied the doctrine of fair use to the specific facts of the case before it... courts are required to balance several factors... This narrow holding based on the particular facts . . . is a defensible judgment for the

are useful because they inform other member states about substantive national law, signal potential areas of conflict and dispute, alert the queried member states to weaknesses of their national laws vis-à-vis TRIPS, and begin to create the norms and standards that will guide both the work of the TRIPS Council and subsequent disputes and settlements.

Member states have also begun to raise issues about TRIPS implementation and compliance by other members outside the context of the formal review process. In 1999, questions were raised in TRIPS Council meetings about U.S. compliance with TRIPS provisions regarding trademarks and trade names,²⁶⁴ and Austrian compliance with provisions regarding geographical indications.²⁶⁵ This was the first time such questions appeared in the Council's Annual Reports.²⁶⁶ In the U.S. case, Cuba, the complaining party, used the TRIPS Council as a forum for confronting the United States on the issue and sought explanations from U.S. representatives.²⁶⁷ In the Austrian case, after verbal sparring in the Council the parties are now seeking a bilateral solution.²⁶⁸ While the evidence is preliminary, it appears that the TRIPS Council may be following a similar trajectory to that of the Montreal Protocol Implementation Committee: beginning with very general issues of implementation and, as parties grow more comfortable with the process of national review, increasing the degree of focus on discrete issues of national compliance and on clarifying and interpreting TRIPS obligations.²⁶⁹

purposes of the exceptions permitted under [TRIPS].” *Id.* There are many such detailed questions in the records of the Council.

²⁶⁴ The issue involves the trademark “Havana Club” for rum and a U.S. court’s invalidation of the Cuban trademark in the United States. See Daniel Pruzin, *EU Seeks WTO Talks with U.S. on Cuba Trademark Provisions*, 16 INT’L TRADE REP. 1189 (1999). The mark is partially owned by the French company Pernod Ricard. See *id.*; see also *EU and Cuba Attack U.S. Law Denying Trademark Holder Protections*, *supra* note 257, at 726; *A Rum Affair*, *ECONOMIST*, July 10, 1999, at 70.

²⁶⁵ See Tom Hundley, *Horse’s Name Breeds Controversy: Slovenia Seeks Exclusive Rights to ‘Lippizaner’ as Symbol*, CHI. TRIB., Jan. 7, 2000, at 1. The issue involves the rights to the geographical indication of Lipizzaner, currently used to refer to the horses of the Viennese “Spanish Riding School.” Slovenia, which contains the town for which the horses are named, seeks to have the indication recognized, much like Champagne is recognized for specific sparkling wines. Austria, for whom the horses are a major tourist attraction, argues that horses are known by their breeds and not their place of origin. See *id.*

²⁶⁶ See Annual Report (1999), *supra* note 250.

²⁶⁷ See *EU and Cuba Attack U.S. Law Denying Trademark Holder Protections*, *supra* note 257, at 726.

²⁶⁸ See *U.S., India Spar on Need to Bolster Patent Protection of Life Forms*, *supra* note 219, at 1742.

²⁶⁹ See *supra* text accompanying notes 146-68. Of course, the TRIPS Council cannot formally interpret the provisions of TRIPS — only the parties can do so — but in practice it will likely have an important interpretive role.

It is important to underscore that by itself an SIR like the TRIPS Council may not be enough to secure an effective treaty process. The experience of the Montreal Protocol Non-Compliance Procedure, for example, suggests that having some kind of powerful sanction in the background of the process is likely an important element in maximizing the utility of an SIR.²⁷⁰ In that context, the stick was the linkage to desired implementation-related funding by external but linked institutions such as the Global Environment Facility.²⁷¹ In the context of TRIPS, of course, the existence of powerful sanctions to back up an SIR process is not at issue: the DSU provides one of the most effective sticks in international law. The challenge is instead to avoid reaching for this stick too often — to avoid an overly litigious focus on securing compliance through coercion and contentious dispute settlement, to the detriment of the broader cooperative process.

D. Effectively Implementing TRIPS

TRIPS, more so than most international agreements, contains complex obligations that relate to core domestic structures (such as the nature and scope of judicial processes), thorny conceptual distinctions (such as the idea-expression dichotomy), and contentious social issues (such as the scope of patents for life forms). As two commentators close to the scene have argued, “[i]t is all too clear that the TRIPS Agreement does not solve all problems in the area of international relations regarding intellectual property matters. By the very nature of [intellectual property], these problems are constantly changing.”²⁷² TRIPS is part of the WTO and therefore part of the WTO DSU, a very powerful judicialized approach to compliance with international obligations. This combination is volatile and may work to the detriment of both TRIPS and the dispute settlement process. Given the preceding factors, the state of intellectual property protection in many developing countries, and the ambiguities in and often vagueness of TRIPS, a purely or even largely contentious approach to the pursuit of compliance may produce several undesirable effects. These include serious political discontent with ramifications for the broader international trade agenda, backsliding in TRIPS implementation in ways that are unreachable via the DSU, delegitimation of the DSU itself, and negative spillovers in parallel World Intellectual Property Organization processes.

The international environmental experience, as well as the experience of the WTO, OECD and other organizations, suggests that intensive

²⁷⁰ See Raustiala & Victor, *supra* note 109, at 683-84. It is of course possible that an SIR, performance-based approach and a contentious dispute resolution-based approach are not fully compatible, in that the political fallout from litigation may make more cooperative approaches difficult to engage in. The interaction between managerial and enforcement approaches is an interesting area for further research.

²⁷¹ See *id.* at 683.

²⁷² Otten & Wager, *supra* note 216, at 413.

implementation review performed in a spirit of collective enterprise can produce positive results. This is particularly true in complex situations exhibiting high levels of implementation uncertainty. Noncompliance procedures like that of the Montreal Protocol can also address discrete compliance problems in detail and productively while avoiding the need for formal dispute settlement. While there are many differences between international environmental law and international intellectual property law, I have drawn on the claims and cases in Part IV of this article to suggest the utility of an SIR-centered approach to TRIPs effectiveness. Greater attention to and use of implementation review and the TRIPs Council, backed by the threat of formal dispute resolution, and perhaps even moves toward a quasi-noncompliance procedure within TRIPs, is more likely to yield an implemented, effective TRIPs than is an aggressive focus on compliance achieved through contentious judicial solutions. At the very least, such an approach deserves serious attention, especially in years to come as the developing member states of the WTO become vulnerable to TRIPs-related compliance challenges under the DSU.

VI. CONCLUSION

Compliance with international regulatory treaties is an important goal. However, this article has made the case that looking beyond compliance to the evaluation of effectiveness, particularly in the context of international law, yields many benefits. Legal scholarship's prevailing focus on compliance often obscures these benefits. Only by understanding the limits of compliance, and how compliance and effectiveness interact, can we move toward both richer, deeper analysis and more productive, effective international law.

As the literature on international environmental cooperation amply illustrates, many international agreements have their greatest influence not simply (or even mainly) as compendia of enforceable rules about behavior. International law can influence behavior through a number of behavioral pathways. Modification of the costs and benefits of particular actions to induce compliance with binding rules is a familiar path, but not the only path — as many lawyers are no doubt aware. Treaties and regimes can, *inter alia*, enhance the evolution of cooperation by providing frameworks within which information is dispersed, transparency fostered, and transaction costs lowered; promote collective learning about the nature of shared problems and the costs and benefits of various solutions; signal the credibility of commitments to other governments and to private actors; foster the reevaluation of those problems and solutions over time; legitimize particular decisions and policies and delegitimize others; create new market conditions and foster innovation; and empower some interest groups while disempowering others.

While compliance or noncompliance is not wholly irrelevant to the operation of these causal pathways, it is only a small part of the overall picture. As the examples and arguments above also illustrate, the pursuit of compliance can sometimes be counterproductive to the achievement of

effectiveness. Only through a behavioral approach to the operation of international law, one that is grounded in theories of international relations and is cognizant of these myriad modes of influence and their relation to traditional concerns such as compliance, can we begin to appreciate international law's actual role in structuring and organizing state behavior. This is critical if the international community is to create legal rules that effectively achieve their purposes.