

Litigating Canada-U.S. Transboundary Harm: International Environmental Lawmaking and the Threat of Extraterritorial Reciprocity

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INTRODUCTION

One of the challenges facing international legal theorists is to understand the extent of recent changes in international law and relations. A burgeoning amount of scholarship exists that grapples with the declining relevance of territoriality¹ and state sovereignty,² the impact of globalization,³ and the migration of law across borders.⁴ Scholars have similarly debated the role that non-state actors play in international law,⁵

1. See, e.g., Thomas J. Biersteker, *State, Sovereignty and Territory*, in HANDBOOK OF INTERNATIONAL RELATIONS 157 (Walter Carlsnaes et al. eds., 2002); Kal Raustiala, *The Evolution of Territoriality: International Relations and American Law*, in TERRITORIALITY AND CONFLICT IN AN ERA OF GLOBALIZATION 9 (Miles Kahler & Barbara F. Walter eds., 2006); John G. Ruggie, *Territoriality and Beyond: Problematizing Modernity in International Relations*, 47 INT'L ORG. 139 (1993); Saskia Sassen, *Territory and Territoriality in a Global Economy*, 15 INT'L SOC. 372 (2000). For a recent law and geography perspective, see John Agnew, *Sovereignty Regimes: Territoriality and State Authority in Contemporary World Politics*, 95 ANNALS ASS'N AM. GEOGRAPHERS 437 (2005).

2. See, e.g., Jack Goldsmith, *Sovereignty, International Relations Theory, and International Law*, 52 STAN. L. REV. 959 (2000) (describing how globalization has presented a challenge to state sovereignty); Winston P. Nagan & Craig Hammer, *The Changing Character of Sovereignty in International Law and International Relations*, 43 COLUM. J. TRANSNAT'L L. 141 (2005); see also ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* (1995); STEPHEN D. KRASNER, *SOVEREIGNTY: ORGANIZED HYPOCRISY* (1999); SASKIA SASSEN, *LOSING CONTROL? SOVEREIGNTY IN AN AGE OF GLOBALIZATION* (1996).

3. See, e.g., Eyal Benvenisti, *Exit and Voice in the Age of Globalization*, 98 MICH. L. REV. 167 (1999); Paul Schiff Berman, *From International Law to Law and Globalization*, 43 COLUM. J. TRANSNAT'L L. 485, 492–511 (2005); Shampa Biswas, *W(h)ither the Nation-state? National and State Identity in the Face of Fragmentation and Globalisation*, 16 GLOBAL SOC'Y 175, 182–85 (2002). See generally Miles Kahler & David A. Lake, *Globalization and Governance, in GOVERNANCE IN A GLOBAL ECONOMY: POLITICAL AUTHORITY IN TRANSITION I* (Miles Kahler & David A. Lake eds., 2003).

4. See, e.g., Judith Resnik, *Law's Migration: American Exceptionalism, Silent Dialogues, and Federalism's Multiple Ports of Entry*, 115 YALE L.J. 1564 (2006); Melissa A. Waters, *Mediating Norms and Identity: The Role of Transnational Judicial Dialogue in Creating and Enforcing International Law*, 93 GEO. L.J. 487 (2005).

5. See, e.g., Duncan B. Hollis, *Private Actors in Public International Law: Amicus Curiae and the Case for the Retention of State Sovereignty*, 25 B.C. INT'L & COMP. L. REV. 235, 235–36

including the salience of international institutions,⁶ and the importance of transnational processes⁷ and global networks.⁸ Intimately connected to all these debates is another phenomenon, which the changes in the international system foster: the extraterritorial application of U.S. laws by U.S. courts⁹ to solve transboundary disputes.¹⁰

These changes have played out with pronounced force in the international environmental law context. For many environmentalists, the traditional view of environmental lawmaking as the exclusive business of nation states has become anachronistic.¹¹ In a fast-paced global econo-

(2002); Julie Mertus, *Considering Nonstate Actors in the New Millennium: Toward Expanded Participation in Norm Generation and Norm Application*, 32 N.Y.U. J. INT'L L. & POL. 537, 552–56 (2002); Philippe Sands, *Turtles and Torturers: The Transformation of International Law*, 33 N.Y.U. J. INT'L L. & POL. 527, 529 (2001); Peter J. Spiro, *Nonstate Actors in Global Politics*, 92 AM. J. INT'L L. 808 (1998).

6. See, e.g., Kal Raustiala, *Rethinking the Sovereignty Debate in International Economic Law*, 6 J. INT'L ECON. L. 841, 857–62 (2003); Phillip R. Trimble, *Globalization, International Institutions and the Erosion of National Sovereignty and Democracy*, 95 MICH. L. REV. 1944, 1946 (1997).

7. See Harold Hongju Koh, *Transnational Legal Process*, 75 NEB. L. REV. 181 (1996). See generally OONA A. HATHAWAY & HAROLD HONGJU KOH, *FOUNDATIONS OF INTERNATIONAL LAW AND POLITICS* (2005) (describing various approaches to international law).

8. See, e.g., ANNE-MARIE SLAUGHTER, *A NEW WORLD ORDER* 108–27 (2004); Robert O. Keohane & Joseph S. Nye, *Transgovernmental Relations and International Organizations*, 27 WORLD POL. 39, 41 (1974) (describing the development of transgovernmental networks as a driving force behind international policy); Kal Raustiala, *The Architecture of International Cooperation: Transgovernmental Networks and the Future of International Law*, 43 VA. J. INT'L L. 1 (2002).

9. In recent years, U.S. courts have applied extraterritorially a wide range of domestic laws. Philip B. Dye et al., *International Litigation*, 40 INT'L LAW. 275, 299–303 (2006) (listing cases in the past year where U.S. courts have “considered extraterritoriality in disputes involving the federal habeas corpus statute, as well as intellectual property, antitrust, securities, employment, disabilities, tort claims, criminal law, and immigration issues.”). See generally Christopher A. Whytock, *Transnational Law, Domestic Courts and Global Governance* (forthcoming 2007) (on file with author).

10. See Paul B. Stephan, *A Becoming Modesty: U.S. Litigation in the Mirror of International Law*, 52 DEPAUL L. REV. 627, 631–39 (2002) (describing how U.S. courts have sought to widen their international influence through shifts in doctrines such as personal jurisdiction, forum non conveniens, comity, and choice of law). See generally GEORGE A. BERMAN, *TRANSNATIONAL LITIGATION IN A NUTSHELL* (2003); GARY B. BORN & PETER RUTLEDGE, *INTERNATIONAL CIVIL LITIGATION IN U.S. COURTS* (2006); VED. P. NANDA & DAVID K. PANSIUS, *LITIGATION OF INTERNATIONAL DISPUTES IN U.S. COURTS* (2003).

11. See Michael M'Gonigle, *Between Globalism and Territoriality: The Emergence of an International Constitution and the Challenge of Ecological Legitimacy*, 15 CAN. J.L. & JURISPRUDENCE 159, 168 (2002); see also Russell A. Miller, *Surprising Parallels Between Trail Smelter and the Global Climate Change Regime*, in *TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE TRAIL SMELTER ARBITRATION* 168 (Rebecca M. Bratspies & Russell A. Miller eds., 2006) (explaining that the rise of “nonstate actors suggests a new world order in which the nation state’s Westphalian prerogative is increasingly suspect”); cf. Duncan B. Hollis,

my, international environmental treaties are often too cumbersome and sluggish to address environmental challenges.¹² From climate change litigation,¹³ to transboundary pollution,¹⁴ to shared management of natural resources,¹⁵ international environmental lawmaking is increasingly occurring at the subnational level in U.S. courts.¹⁶ Some American environmentalists cheer these developments, perceiving them to encourage an environmental race to the top.¹⁷ Other scholars declare the “dawn of a new era” of transboundary environmental litigation.¹⁸

Why State Consent Still Matters—Nonstate Actors, Treaties, and the Changing Sources of International Law, 23 BERKELEY J. INT'L L. 137 (2005).

12. See, e.g., Geoffrey Palmer, *New Ways To Make International Environmental Law*, 86 AM. J. INT'L L. 259, 259 (1992) (stating that the treaty process causes international environmental law to be “slow, cumbersome, expensive, uncoordinated and uncertain”); James Gustave Speth, *International Environmental Law: Can it Deal with the Big Issues?*, 28 VT. L. REV. 779, 787 (2004) (describing the cumbersome treaty process); cf. Paul Schiff Berman, *Conflict of Laws, Globalization, and Cosmopolitan Pluralism*, 51 WAYNE L. REV. 1105, 1134–35 (2005) (praising transnational common-law adjudication because “treaties...are cumbersome and slow to adjust to changing technologies or social conditions”).

13. For a discussion of subnational regimes and climate change litigation, see ADJUDICATING CLIMATE CHANGE: SUB-NATIONAL, NATIONAL, AND SUPRA-NATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky eds., forthcoming 2007); Hari M. Osofsky, *The Geography of Climate Change Litigation: Implications for Transnational Regulatory Governance*, 83 WASH. U. L.Q. 1789 (2005); see also Symposium, *The Role of State Attorneys General in National Environmental Policy*, 30 COLUM. J. ENVTL. L. 403, 404 (2005) (describing state Attorneys' General filing of innovative lawsuits to combat global climate change).

14. See, e.g., Noah D. Hall, *Transboundary Pollution: Harmonizing International and Domestic Law*, 40 U. MICH. J.L. REFORM 681 (2007); Austen L. Parrish, *Trail Smelter Déjà Vu: Extraterritoriality, International Environmental Law, and the Search for Solutions to Canadian-U.S. Transboundary Water Pollution Disputes*, 85 B.U. L. REV. 363 (2005). See generally TRANSBOUNDARY HARM IN INTERNATIONAL LAW, *supra* note 11 (exploring the changing nature of state responses to transboundary harm).

15. A good example is contained in the December 2005 Great Lakes Water Resources Compact and Agreement. See generally Noah D. Hall, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405 (2006) (describing the citizen's suit provisions of the Great Lakes-St. Lawrence River Basin Water Resources Compact and Agreement); Austen L. Parrish, *Mixed Blessings: The Great Lakes Compact and Agreement, the IJC, and International Dispute Resolution*, MICH. ST. L. REV. (forthcoming 2007) (explaining how the agreement between eight states and two provinces moves Great Lakes management to the subnational level, in part by permitting citizen's suits).

16. See DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1509–45 (3d ed. 2007) (describing the extraterritorial application of U.S. environmental statutes); see also Martha A. Candiello, *The Extraterritorial Reach of Environmental Laws*, 70 TEMP. L. REV. 1235 (1997); Paul E. Hagen, *The Extraterritorial Reach of U.S. Environmental Law*, 46 A.L.I.-A.B.A. 151 (2005); Anna D. Stasch, *Arc Ecology v. United States Department of the Air Force: Extending the Extraterritorial Reach of Domestic Environmental Law*, 36 ENVTL. L. 1065 (2006).

17. See Michael J. Robinson-Dorn, *The Trail Smelter: Is What's Past Prologue? EPA Blazes a New Trail for CERCLA*, 14 N.Y.U. ENVTL. L.J. 233, 315–19 (2006) (arguing that domestic lawsuits can create a race to the top in environmental regulation, and encouraging the extraterritorial

As broad as this scholarship is, however, in some respects it remains undeveloped. First, the existing scholarship often speaks in abstract theoretical terms or in broad generalities, while failing to explain how domestic law can practically address transboundary challenges. The scholarship at times ignores context and nuance; generically proposing domestic litigation is one thing, explaining how a suit in a particular dispute might succeed is another.¹⁹ Second, the scholarship is United States-centric. Missing from the conversation is an understanding of how trends in international law and relations are playing out beyond U.S. borders.²⁰ Will other countries' citizens seek in their courts to apply their own domestic environmental laws extraterritorially? If so, how will this impact American interests? This Article will jump headfirst into this scholarship gap. It does so by focusing on an unlikely flashpoint: the U.S.-Canada relationship.

application of domestic environmental laws); *see also* Joel A. Gallob, *Birth of the North American Transboundary Environmental Plaintiff: Transboundary Pollution and the 1979 Draft Treaty for Equal Access Remedy*, 15 HARV. ENVTL. L. REV. 85 (1991) (arguing for court-based solutions to transboundary pollution problems); *cf.* Noah D. Hall, *Bilateral Breakdown: U.S.-Canada Pollution Disputes*, 21 NAT. RESOURCES & ENV'T. 18, 23 (2006) ("Ideally, we could allow domestic litigation to resolve these disputes in a way that strengthens, not undermines, the United States-Canada relationship."); Hall, *supra* note 14, at 723-736 (describing how domestic litigation can be used to address transboundary pollution).

18. Randall S. Abate, *Dawn of a New Era in the Extraterritorial Application of U.S. Environmental Statutes: A Proposal for an Integrated Judicial Standard Based on the Continuum of Context*, 31 COLUM. J. ENVTL. L. 87 (2006) (recognizing but criticizing the extraterritorial application of law); *see also* Gallob, *supra* note 17, at 85; Rachel Kastenber, Note, *Closing the Liability Gap in the International Transboundary Water Pollution Regime—Using Domestic Law to Hold Polluters Accountable: A Case Study of Pakootas v. Teck Cominco Ltd.*, 7 OR. REV. INT'L L. 322 (2005).

19. Attorneys asserting Alien Tort Claims Act (ATCA) claims have first-hand knowledge of the disconnect between theory and practice. Although academics have encouraged those claims for human rights violations, the number of successful claims has been limited. *See* Barnali Choudhury, *Beyond the Alien Tort Claims Act: Alternative Approaches to Attributing Liability to Corporations for Extraterritorial Abuses*, 26 NW. J. INT'L L. & BUS. 43, 44 (2005) (explaining that "individuals using the ATCA to hold MNCs accountable for human rights violations have not met with considerable success"); Sean D. Murphy, *Taking Multinational Corporate Codes of Conduct to the Next Level*, 43 COLUM. J. TRANSNAT'L L. 389, 428-29 n.158 (2005) (explaining that "numerous suits have been filed against MNCs under the Alien Tort Claims Act...although to date with limited success").

20. Outside the environmental context, a few articles exist. *See, e.g.*, David J. Feeney, *The European Commission's Extraterritorial Jurisdiction over Corporate Mergers*, 19 GA. ST. U. L. REV. 425 (2002) (describing the European context); David J. Gerber, *The Extraterritorial Application of German Antitrust Laws*, 77 AM. J. INT'L L. 756 (1983) (Germany); Won-Ki Kim, *The Extraterritorial Application of U.S. Antitrust Law and its Adoption in Korea*, 7 SING. J. INT'L & COMP. L. 368 (2003) (Korea).

Transboundary problems straddling the 49th parallel have recently cast a pall over the relationship between the world's closest political and economic allies. This Article forecasts that, in light of recent border-tensions and the apparent American willingness to extraterritorially apply U.S. laws, Canadians increasingly will explore the extraterritorial application of their own domestic laws to remedy transboundary environmental harm.²¹ The Article explores this argument through the lens of a particularly contentious cross-border issue—the transboundary air pollution that the province of Ontario suffers from U.S. stationary pollution sources. Canadian diplomatic attempts to resolve this longstanding pollution problem have failed. And, with recent studies showing that U.S. pollution causes yearly health and environmental costs in Ontario exceeding \$5.2 billion,²² Canadians may be less willing to overlook the problem in anticipation of a cooperative solution.²³

This Article proceeds in three parts. In Part I, the Article provides context: it describes the deterioration of U.S.-Canadian cooperation and the increasingly common rejection of bilateral institutions and treaties to solve cross-border disputes. In so doing, the Article canvases several of the most important and recent transboundary cases between Canada and the United States. Part II places the focus on a particular irritant in U.S.-

21. Noah Hall has noted the issue without reaching it: "If American citizens can protect themselves from Canadian pollution using citizen suits under U.S. law in U.S. courts, should not the Canadian federal government also give its citizens the same opportunity to protect themselves from American pollution using Canadian domestic laws in Canadian courts?" Hall, *supra* note 14, at 738 n.338; *see also* Abate, *supra* note 18, at 133 (asking whether the "floodgates of litigation" will open with suits "hauling U.S. businesses into Canadian courts for the effects of polluting activities that originate in the United States"); Marcia Valiante, "Welcomed Participants" or "Environmental Vigilantes"? *The CEPA Environmental Protection Action and the Role of Citizen Suits in Federal Environmental Law*, 25 DALHOUSIE L.J. 81 (2002) (exploring the desirability of citizen suits under Canadian law).

22. *See* Press Release, Ont. Ministry of the Env't, High Profile Transboundary Air Pollution Committees Tackle Ontario's Shared Air Issues (June 21, 2006), *available at* <http://www.ene.gov.on.ca/en/news/2006/062102.pdf> (noting that U.S. pollution causes more than \$5.2 billion in health and environmental damages); *see also* Press Release, Ont. Ministry of the Env't, Report on Transboundary Air Pollution in Ontario (June 16, 2005), *available at* <http://www.ene.gov.on.ca/en/news/2005/061601mb.pdf>; Press Release, Ont. Ministry of the Env't, Support for Ontario Filing Comments with the United States Environmental Protection Agency (Feb. 17 2006), *available at* <http://www.ene.gov.on.ca/en/news/2006/021701mb2.pdf> (listing damages caused by transboundary pollution).

23. *See* Laurel Broten, Minister of Env't, Remarks at a Media Briefing on Transboundary Air in Washington, D.C. (May 10, 2006), *available at* <http://www.ene.gov.on.ca/en/about/minister/speeches/051006.php> (describing the problem of transboundary air pollution as one "that kills Canadians and Americans without prejudice" and "a problem that we cannot ignore").

Canada relations: the problems facing Ontario from U.S. pollution and Canada's failure to find lasting and comprehensive diplomatic solutions. In Part III, the Article suggests that the province of Ontario in particular likely will explore enacting and then using extraterritorial laws to remedy transboundary harm when traditional dispute mechanisms prove ineffective. The Article explains how changes in law and science have created a receptive environment for this kind of transboundary lawsuit brought in a foreign court against American polluters. Particularly, it explains how the province of Ontario could enact a statute that would enable transboundary litigation to proceed. Lastly, in Part IV, the Article briefly explores the normative question of whether international environmental lawmaking through domestic litigation is a positive development. In answering that question, the Article ends on an ambivalent note. In the near term, transboundary civil litigation is a viable and useful tool to address serious cross-border harm – a tool that Canadians should use. Over the long term, however, domestic transboundary litigation will likely prove a poor substitute for the bilateral cooperation and effective federal involvement that until recently characterized Canada-U.S. relations.

I. CONTEXT: THE U.S.-CANADA RELATIONSHIP

Given the trade and economic integration between Canada and the United States, transboundary environmental disputes are hardly surprising. Until recently, however, Canada and the United States have been particularly effective at resolving these disputes diplomatically or through international or bilateral dispute resolution processes. But the once unparalleled cooperation between the two nations—although still strong—appears to be on a decline. A context exists where Canadians are willing more than ever to explore unilateral, extraterritorial solutions.

A. *A History of Dispute Avoidance and Peaceful Resolution*

The United States and Canada's ability to cooperate and peacefully resolve differences has been unique. Internationally, the partnership between the two countries is admired: "[I]t has neither precedent nor equal in the international system today."²⁴ So strong has been the cooperation that the relationship is often described in romantic terms:

24. KARI ROBERTS, A CONTINENTAL DIVIDE? RETHINKING THE CANADA-U.S. BORDER

[I]n a world in which it sometimes seems that each country is at odds with every other, the Canada-U.S. relationship has sometimes looked like an island of tranquility in a sea of conflict...the idea that Canada and the U.S. had somehow developed a magic formula for achieving a happy international marriage....²⁵

Traditionally then, a strong preference has existed for the two neighbors to resolve their differences through diplomacy rather than through formal legal action.²⁶

Cooperation has been, in many ways, essential because Canada and the United States are strikingly interdependent. U.S.-Canada trade in services, cross-border investments, and tourism surpasses \$42 billion yearly.²⁷ In fact, the trading relationship represents the largest flow of income, goods, and services in the history of the world: a staggering \$1.2 billion U.S. dollars *daily*.²⁸ The United States exports more to Can-

RELATIONSHIP 3 (Canada West Foundation 2006), available at <http://www.cwf.ca/files/A%20continental%20Divide.pdf>.

25. Richard B. Bilder, *When Neighbors Quarrel: Canada-U.S. Dispute-Settlement Experience* 3-4 (Inst. for Legal Studies, Working Paper No. 8:4, May 1987); see also Michael Hart, *Disarming the "Undefended Border": Reflections on the Rationale for a Canada-U.S. Customs Union*, in BUILDING A PARTNERSHIP: THE CANADA-UNITED STATES FREE TRADE AGREEMENT 126 (Mordechai Kreinin ed., 2000) (quoting James Eayres that "[n]atural frontiers exist between nations, but the border between Canada and the United States is not one of them," and Sir Winston Churchill that the Canada-U.S. border is "guarded only by neighbourly respect and honorable obligations").

26. See, e.g., Erik B. Wang, *Adjudication of Canada-United States Disputes*, 19 CAN. Y.B. INT'L L. 158, 159 (1981) (citing Marcel Cadieux, former Ambassador of Canada to the United States); *Sixth Annual Conference of the Canadian Council on International Law, Ottawa, October 21, 1977*, 1 CAN.-U.S. L.J. 19 (1978); see also Richard B. Bilder, *Controlling Great Lakes Pollution: A Study in United States-Canadian Environmental Cooperation*, 70 MICH. L. REV. 469, 480-84 (1971-1972) (describing the history of cooperation in context of the Great Lakes).

27. See Roger F. Noriega, Assistant Sec'y of State for W. Hemisphere Affairs, Remarks to the Economic Club of Toronto about Trade and the Canada-U.S. Border (Mar. 29, 2004), available at <http://www.state.gov/p/wha/rls/rm/31949.htm> (describing the trade partnership); see also The Embassy of the United States of America, Ottawa, Canada, *Canada-United States Relations* (Jan. 2007), http://ottawa.usembassy.gov/content/content.asp?section=can_usa&subsection1=general&document=canusarelations (explaining that Canada and the United States have the world's largest bilateral trading relationship and that Canada is the leading export market for 39 of the 50 U.S. states).

28. See Press Release, Washington Canadian Embassy, *Canada Largest Supplier of Oil to the U.S.: Canada Leads Saudi Arabia and Mexico* (Mar. 28, 2005), available at http://geo.international.gc.ca/can-am/Washington/trade_and_investment/energy_rel050328-en.asp ("Two-way trade between Canada and the United States has more than doubled in value since the signing of the NAFTA in 1994. We are each other's largest trading partner, with US \$1.2 billion in trade now crossing the Canada-US border every single day."); see also Robert Hage, *The New Reality in Canada/U.S. Relations: Reconciling Security and Economic Interests and the "Smart Border Declaration"*, 29 CAN.-U.S. L.J. 21, 24 (2003) (explaining that over two billion Canadian

ada than it does to Britain, France, Germany, Japan, and China, combined.²⁹ But the interdependence is not limited to trade. More than 200 million border crossings each year occur between the two countries,³⁰ and ninety percent of all Canadians live within a hundred miles of the U.S. border.³¹ The countries also share numerous environmental challenges.³² These challenges include maintaining air and water quality, and the management of other shared resources, such as migratory birds and wildlife.³³ Along the almost 5,000 mile border are also hundreds of

dollars in trade crosses the border daily). For popular perceptions of the amount of trade between the two countries, see WIKIPEDIA: THE FREE ENCYCLOPEDIA, *Canada-United States Free Trade Agreement*, http://en.wikipedia.org/wiki/Canada-United_States_Free_Trade_Agreement (last visited Apr. 10, 2007).

29. See Washington Canadian Embassy, *The Canada-U.S. Trade and Investment Partnership*, http://geo.international.gc.ca/can-am/washington/trade_and_investment/trade_partnership-en.asp (last visited Apr. 10, 2007).

30. See Noriega, *supra* note 27; see also MICHAEL HART & WILLIAM DYMOND, *COMMON BORDERS, SHARED DESTINIES: CANADA, THE UNITED STATES AND DEEPENING INTEGRATION* 7 (2001), available at <http://www.carleton.ca/ctpl/pdf/papers/cdaus.pdf> (noting the degree of integration, including that some 200 million individual border crossings occur each year); Hage, *supra* note 28, at 24 (“Fifty thousand peoples cross the border every day; and this is the statistic that I find so overwhelming, 200 million border crossings by people every year.”); cf. COUNCIL ON FOREIGN RELATIONS, *CREATING A NORTH AMERICAN COMMUNITY: CHAIRMEN’S STATEMENT* 5 (2005), available at http://www.cfr.org/content/publications/attachments/NorthAmerica_TF_eng.pdf (describing the degree of integration and noting that “[i]n 2005, the borders between Canada, Mexico, and the United States [were] crossed almost 400 million times”).

31. See CIA, *THE WORLD FACT BOOK*, available at <https://www.cia.gov/library/publications/the-world-factbook/geos/ca.html>; see also STATISTICS CAN., *2001 CENSUS ANALYSIS SERIES: A PROFILE OF CANADIAN POPULATION—WHERE WE LIVE* 1 (2001) (charting Canadian population trends).

32. See, e.g., COMM’N FOR ENVTL. COOPERATION, *THE NORTH AMERICAN MOSAIC: A STATE OF THE ENVIRONMENT REPORT* 2–4 (2002), available at http://www.cec.org/files/PDF/soe_en.pdf (describing the many North American transboundary environmental challenges). From a Canadian perspective, having a much smaller economy means that U.S. environmental laws impact Canadians significantly. As Pierre Elliot Trudeau colorfully described it over thirty years ago, living next to the United States is “like sleeping with an elephant. No matter how friendly and even-tempered is the beast...one is affected by every twitch and grunt.” Pierre Elliot Trudeau, then-Prime Minister of Can., address to the National Press Club (Mar. 26, 1969) (quotation available at <http://www.bartleby.com/63/84/384.html>) (last visited Apr. 10, 2007); see also Jutta Brunnée, *The United States and International Environmental Law: Living with an Elephant*, 15 EUR. J. INT’L L. 617, 618 (2004) (noting that when it comes to environmental concerns, “the United States is the elephant next door”).

33. See Alan Nymark, *Canada-U.S. Environmental Cooperation*, 28 CAN.-U.S. L.J. 27 (2002) (Canadian Deputy Minister of Environment describing shared environmental challenges facing the two countries); Barry Sadler, *Shared Resources, Common Future: Sustainable Management of Canada-United States Border Waters*, 33 NAT. RESOURCES J. 375, 376 (1993) (describing shared water resource challenges).

shared rivers and lakes,³⁴ including the Great Lakes, which is the world's large surface freshwater system (twenty percent of the world's supply).³⁵ With such a large number of shared resources and high level of integration, the two countries can hardly avoid sporadic disputes.³⁶

The reasons for the countries' willingness to resolve disputes cooperatively are open to debate. On the one hand, the historic cooperation may be nothing more than the result of close cultural ties and a common history. Canada "share[s] a common law heritage in private law and in liberal democratic and federal structures of government" with the United States and the countries have other historical, societal, and legal similarities.³⁷ Contact between the two nations is significant. For instance, over "2.4 billion phone calls took place between [the] two countries in 2002."³⁸ Also, over 250,000 people living in Canada are Americans or were born in the United States, while in the United States there are over 630,000 people with Canadian ancestry.³⁹ And the majority of Canadians and Americans share a common language. Not surprisingly then,

34. See Catherine A. Cooper, *The Management of International Environmental Disputes in the Context of Canada-United States Relations: A Survey and Evaluation of Techniques and Mechanisms*, 24 CAN. Y.B. INT'L L. 247, 249 (1986); see also Gallob, *supra* note 17, at 112.

35. J. David Prince, *State Control of Great Lakes Water Diversion*, 16 WM. MITCHELL L. REV. 107, 108 (1990).

36. Lynton K. Caldwell, *Transboundary Conflicts: Resources and Environment*, in THE CANADA-UNITED STATES RELATIONSHIP: THE POLITICS OF ENERGY AND ENVIRONMENTAL COOPERATION 15 (Jonathan Lemco ed., 1992) ("The topography and hydrology bisected by the political boundary dividing Canada and the United States makes binational environmental policy problems inevitable."); see also Cooper, *supra* note 34, at 249 (explaining that the geographic setting between the U.S. and Canada provides "ample opportunity for the generation of international environmental disputes"); John N. Hanson et al., *The Application of the United States Hazardous Waste Cleanup Laws in the Canada-U.S. Context*, 18 CAN.-U.S. L.J. 137, 137-38 (1992) ("[I]ncreasing integration of the Canadian and United States economies, a process accelerated by the Canada/United States Free Trade Agreement, and the tightening of environmental standards on both sides of the border, is likely to result in increased environmental litigation between Canadian and United States parties."); David G. Lemarquand, *Preconditions to Cooperation in Canada-United States Boundary Waters*, 26 NAT. RESOURCES J. 221, 221-23 (1986) (describing the risk of transboundary water pollution and disputes between the two nations).

37. Gérard V. La Forest, *The Use of American Precedents in Canadian Courts*, 46 ME. L. REV. 211, 212-13 (1994). La Forest also notes that there are "commercial and other forces peculiar to North American legal and societal development." *Id.* at 213; see also Sarah K. Harding, *Comparative Reasoning and Judicial Review*, 28 YALE J. INT'L L. 409, 411, 412 (2003) ("As followers of the common law tradition, [Canada and the United States] adhere to similar interpretations of the rule of law, follow similar procedural and evidentiary rules, and believe strongly in the concept of stare decisis.").

38. Hon. Marlene Jennings, *Session 12: The Future of the Evolving, Special Canada-U.S. Relationship: New Dimensions and Possible Future Progress and Concerns*, 31 CAN.-U.S. L.J. 385, 385-86 (2005) (citing U.S. and Canadian census data).

39. *Id.*

Canadians and Americans “tend to have closely similar attitudes, interests, and, arguably, a uniquely North American perspective and approach to problems.”⁴⁰

On the other hand, the existence of international agreements and bilateral institutions has contributed to the historic success in the countries’ cooperative approach to transboundary disputes.⁴¹ Bilateral treaties are one part of the equation. Almost a century ago, the two countries “established the foundation for their bilateral relationship on environmental matters with the Boundary Waters Treaty of 1909....”⁴² The treaty provides several means of addressing transboundary disputes,⁴³ and it imposes obligations on the countries not to pollute boundary waters.⁴⁴ The two countries subsequently have entered into literally hundreds of treaties that address a wide range of trade and environmental issues.⁴⁵

Cooperation and bi-national management of shared resources has not been limited in form to treaties. One of the lasting contributions to the

40. Bilder, *supra* note 25, at 13; *see also* John F. Helliwell, *Canada: Life Beyond the Looking Glass*, 15 J. OF ECON. PERSP. 107, 108 (2001) (arguing that the “United States is of far more importance to Canadian life and attitudes than the strength of the bilateral economic ties would suggest”). Differences, of course, do exist. *See, e.g.*, VOLKER THOMSEN, *CANADA ENROUTE TO PROSPERITY* 18 (2004) (noting that despite “Canada’s dependence on the U.S. market[,]...Canadian values [are] so different from U.S. values” and Canadian “ambitions are different from U.S. ambitions”).

41. *See* Kal J. Holsti & Thomas Allen Levy, *Bilateral Institutions and Transgovernmental Relations Between Canada and the United States*, in *CANADA AND THE UNITED STATES: TRANSNATIONAL AND TRANSGOVERNMENTAL RELATIONS* 281, 285–86 (Annette Baker Fox et al. eds., 1976).

42. Hall, *supra* note 17, at 19; *see also* Treaty Between the United States and Great Britain Relating to the Boundary Waters Between the United States and Canada, U.S.-U.K., Jan. 11, 1909, 36 Stat. 2448 [hereinafter *Boundary Waters Treaty*].

43. *Boundary Waters Treaty*, *supra* note 42, pmbl. (noting that the Treaty’s purpose was to “prevent disputes regarding the use of boundary waters and to settle all questions which are now pending... involving the rights, obligations, or interests [of Canada and the United States]”); *see also* F.J.E. Jordan, *Great Lakes Pollution: A Framework for Action*, 5 OTTAWA L. REV. 65, 66 (1971–1972) (describing the purpose of the *Boundary Waters Treaty*).

44. *Boundary Waters Treaty*, *supra* note 42, art. IV; *see also* Jordan, *supra* note 43, at 67–68 (describing Canada’s insistence that a provision prohibiting pollution be included in the *Boundary Waters Treaty*).

45. Canada is party to over 680 bilateral treaties with the United States. Department of Foreign Affairs and International Trade, Government of Canada, *Canada Treaty Information*, <http://www.treaty-accord.gc.ca> (last visited August 24, 2006). *See generally* M. Grace Giorgio, *Transboundary Pollution Disputes Under the North American Free Trade Agreement*, 3 S.C. ENVTL. L.J. 166, 174–78 (1994) (detailing the agreements and treaties between the United States and Canada relating to water, air, and hazardous waste). Another environmental area where the United States and Canada have a long history of cooperation is in the protection of migratory birds and animals. *See, e.g.*, *Convention on the Protection of Migratory Birds in the United States and Canada*, U.S.-U.K., Aug. 16, 1916, 39 Stat. 1702.

Canadian-U.S. relationship made by the Boundary Waters Treaty was its creation of the International Joint Commission (IJC). Composed of six members (three from each country), the IJC was the first permanent U.S.-Canadian institution⁴⁶ and was intended to be nonpolitical and impartial.⁴⁷ The IJC “provides transboundary oversight, research, and fact-finding for the two governments....”⁴⁸ It has the ability both to issue binding arbitral decisions, and to conduct nonbinding investigative reports.⁴⁹ While the binding procedures have not been utilized,⁵⁰ dozens of issues have been referred to the IJC for nonbinding recommendations⁵¹ and the IJC has handled well over a hundred cases.⁵² Until recently, the IJC has received high grades for its ability to work quiet diplomacy as a gentle persuader,⁵³ and has “been praised as a low-key,

46. See Holsti & Levy, *supra* note 41, at 284.

47. International Joint Commission, Who We Are, http://www.ijc.org/en/background/biogr_commiss.htm (last visited Jan. 31, 2006); see also P.W. BERNIE & A.E. BOYLE, INTERNATIONAL LAW AND THE ENVIRONMENT 326 (2002) (praising the IJC’s “independence [from] both governments” as an “important and unusual characteristic[.]”); L.H. Legault, *The Roles of Law and Diplomacy in Dispute Resolution: The IJC as a Possible Model*, 26 CAN.-U.S. L.J. 47, 49–50 (2000) (describing the Commissioner’s independence). For a recent discussion of the Commission and its powers, see Herb Gray, *Session 8: Canada and U.S. Approaches to Health Care: How the Canadian and U.S. Political, Regulatory, and Legal Systems Impact Health Care*, 31 CAN.-U.S. L.J. 287, 290–94 (2005).

48. Caldwell, *supra* note 36, at 15. See generally J. Stephen Toope & Jutta Brunnée, *Freshwater Regimes: The Mandate of the International Joint Commission*, 15 ARIZ. J. INT’L & COMP. L. 273, 276 (1998).

49. Boundary Waters Treaty, *supra* note 42, art. IX (referral procedures); *id.*, art. X (binding arbitration procedure); see also James G. Chandler & Michael J. Vechslor, *The Great Lakes-St. Lawrence River Basin from an IJC Perspective*, 18 CAN.-U.S. L.J. 261, 265–67 (1992) (describing the procedure for referring matters to the IJC for investigation and for binding arbitration).

50. See Chandler & Vechslor, *supra* note 49, at 263, 267 (explaining that the IJC has “never been asked to undertake [its binding arbitration role]”).

51. See, e.g., Wang, *supra* note 26, at 165 (stating that the IJC “has played an important role in the settlement” of transboundary water disputes and that “[i]n over one hundred cases referred to it from 1912 to [1981] it has produced unanimous reports in all but four cases”); Jennifer Woodward, Note, *International Pollution Control: The United States and Canada—The International Joint Commission*, 9 N.Y.L. SCH. J. INT’L & COMP. L. 325, 329 (1988) (noting that from 1909 to 1972, thirty-six references were sent to the IJC for nonbinding recommendations).

52. See, e.g., INT’L JOINT COMM’N, THE IJC AND THE 21ST CENTURY 10 (1997), available at <http://www.ijc.org/php/publications/pdf/ID1011.pdf> (describing the more than one hundred cases referred to the IJC from 1912 through 1977); Richard Kyle Paisley et al., *Transboundary Water Management: An Institutional Comparison Among Canada, the United States and Mexico*, 9 OCEAN & COASTAL L.J. 177, 181–87 (2004) (explaining how the IJC has reconciled or averted more than 130 disputes).

53. See, e.g., Leonard W. Dworsky & Albert E. Utton, *Assessing North America’s Management of its Transboundary Waters*, 33 NAT. RESOURCES J. 413, 416 (1993) (describing the IJC as a “model[] of success in many ways”); Gregory Wetston & Armin Rosencranz, *Transboundary Air Pollution: The Search for an International Response*, 8 HARV. ENVTL. L. REV. 89, 134 (1984)

behind the scenes actor that helps move governments to solutions the governments are prepared to accept.”⁵⁴ One would find it “hard to quarrel with [the IJC’s] long record of success” as a “truly one of a kind system for the settlement of disputes.”⁵⁵

Of course, the IJC is not the only established institution between the two countries. A more recent institution for resolving transboundary disputes developed from the environmental side agreement to NAFTA—the North American Agreement on Environmental Cooperation (the Side Agreement).⁵⁶ The Side Agreement’s purpose was to address regional environmental concerns⁵⁷ and to promote the effective enforcement of environmental laws, while preventing potential trade and environmental conflicts.⁵⁸ To accomplish this, the Side Agreement established the North American Commission on Environmental Cooperation (CEC). Three entities compose the CEC: “the Council (made up of cabinet-level environment ministers from the three countries); the Joint Public Advisory Committee (made up of fifteen appointed members, five from each of the three countries), and the Secretariat (a professional staff).”⁵⁹ In addition to government-to-government claims,

(“[T]he IJC is highly respected and its recommendations are very influential in both the United States and Canada.”); see also INT’L JOINT COMM’N, CANADA AND THE UNITED STATES 2005 ANNUAL REPORT (2005), available at <http://www.ijc.org/php/publications/pdf/ID1591.pdf> (summarizing IJC activities).

54. Alan M. Schwartz, *Great Lakes: Great Rhetoric*, in TENSIONS AT THE BORDER: ENERGY AND ENVIRONMENTAL CONCERNS IN CANADA AND THE UNITED STATES 4, 70 (Jonathan Lemco ed., 1992); see also John E. Carroll, *Patterns Old and New*, in THE INTERNATIONAL JOINT COMMISSION SEVENTY YEARS ON 43 (Robert Spencer et al. eds., 1981) (noting the history of the IJC’s success). For a discussion of the IJC’s influence in Canadian and U.S. relations, see Parrish, *supra* note 15.

55. Legault, *supra* note 47, at 54; see also Timothy M. Gulden, *Transfrontier Pollution and the International Joint Commission: A Superior Means of Dispute Resolution*, 17 SW. U. L. REV. 43, 57–63 (1987–1988) (explaining the value of the IJC as an institution for resolving cross-border disputes).

56. North American Agreement on Environmental Cooperation, U.S.-Mex.-Can., art. 14, Sept. 8–14, 1993, 32 I.L.M. 1480.

57. For a summary of the environmental criticisms of NAFTA, see Halil Hasic, *Article 1110 of NAFTA: Investment Barriers to “Upward Harmonization” of Environmental Standards*, 12 SW. J. L. & TRADE AM. 137 (2005).

58. See, e.g., John H. Knox & David L. Markell, *The Innovative North American Commission for Environmental Cooperation*, in GREENING NAFTA: THE NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION 1, 9–12 (David L. Markell & John H. Knox eds., 2003) (describing CEC’s development from NAFTA); Kal Raustiala, *The Political Implications of the Enforcement Provisions of the NAFTA Environmental Side Agreement: The CEC as a Model for Future Accords*, 25 ENVTL. L. 31 (1995) (describing the enforcement provisions of the CEC and the CEC’s development from NAFTA).

59. Robinson-Dorn, *supra* note 17, at 306 (citing COMM’N FOR ENVTL. COOPERATION,

private actors are permitted to make submissions to the CEC if any of the state parties fail to effectively enforce their environmental laws.⁶⁰ The CEC is also empowered to investigate, develop factual records, and make nonbinding recommendations.⁶¹ Until recently, the CEC had taken an increasingly important role in resolving cross-border disagreements.⁶²

B. *The Retreat from Bilateralism*

The unparalleled cooperation between the two countries, however, may be cycling downward. Notably, the countries in recent years have been hesitant to use traditional transboundary dispute mechanisms. The countries have bypassed treaty processes,⁶³ have stopped using the IJC on important matters,⁶⁴ and have limited the CEC's influence.⁶⁵ Dis-

LOOKING TO THE FUTURE: STRATEGIC PLAN OF THE COMMISSION FOR ENVIRONMENTAL COOPERATION 2005–2010, at 5 (2005), available at http://www.cec.org/files/pdf/publications/2005-2010-Strategic-plan_en.pdf.

60. See John H. Knox, *The 2005 Activity of the NAFTA Tribunals*, 100 AM. J. INT'L L. 429, 429, 438–40 (2006) (describing submissions by private parties under the NAFTA side agreements and the intergovernmental procedures).

61. See Daniel C. Esty, *Good Governance at the Supranational Scale: Globalizing Administrative Law*, 115 YALE L.J. 1490, 1558–60 (2006) (describing the CEC and its operations).

62. GARY CLYDE HUFBAUER & JEFFREY J. SCHOTT, NAFTA REVISITED: ACHIEVEMENTS AND CHALLENGES 157–62 (2005) (describing work the CEC has accomplished); see also Edit Antal, *Lessons from NAFTA: The Role of the North American Commission for Environmental Cooperation in Conciliating Trade and the Environment*, 14 MICH. ST. J. INT'L L. 167 (2006) (describing mechanisms that CEC has established for resolving disputes); Carolyn L. Deere & Daniel C. Esty, *Trade and the Environment in the Americas: Overview of Key Issues*, in GREENING THE AMERICAS: NAFTA'S LESSONS FOR HEMISPHERIC TRADE 1, 2, 15 (Carolyn L. Deere & Daniel C. Esty eds., 2002) (describing the CEC's role in addressing environmental and trade issues); David L. Markell, *The North American Commission for Environmental Cooperation After Ten Years: Lessons About Institutional Structure and Public Participation in Governance*, 26 LOY. L.A. INT'L & COMP. L. REV. 341 (2004) (reviewing CEC's performance after ten years).

63. The Great Lakes provide one example. See, e.g., Dan Tarlock, *Five Views of the Great Lakes and Why They Might Matter*, 15 MINN. J. INT'L L. 21, 25–26 (2006) (“Canada and the United States have been trying to develop an effective binational regulatory regime for the lakes despite the fact that a functioning regulatory regime already exists—the 1909 Boundary Waters Treaty, administered by the IJC.”); Marcia Valiante, *Harmonization of Great Lakes Water Management in the Shadow of NAFTA*, 81 U. DET. MERCY L. REV. 525, 529 (2004) (“What was unique [about events leading up to the Compact and Agreement] is that they were first steps in a governance regime for the a Great Lakes region” at the sub-national level despite the existence of the Boundary Waters Treaty.).

64. See Parrish, *supra* note 15; see also David Lemarquand, *The International Joint Commission and Changing Canada-United States Boundary Relations*, 33 NAT. RESOURCES J. 59, 76–77 (1993) (describing how recourse to the “historic International Joint Commission declined significantly,” how Canada “lost confidence in bilateral institutional mechanisms,” and how in the early 1990s, the governments had “little interest in seeing the IJC regain the profile it used to have in

putes that once seemed temporary and easily resolved have become “increasingly protracted and difficult.”⁶⁶ “From the closing of the U.S. border to Canadian beef and the softwood lumber impasse, to U.S. allegations of lax Canadian immigration laws and security at airports and other points of entry, the disputes over cross border waterways, navigating the border relationship has become more complicated.”⁶⁷ Some commentators have “decried the end of an era, arguing that the Canada-U.S. relationship has been irrevocably changed.”⁶⁸

Three recent landmark, but contentious, disputes underscore the extent of the changed state of relations. First was Devils Lake.⁶⁹ Several

bilateral relations or take on any of the new environmental challenges facing the two countries”); Toope & Brunnée, *supra* note 48, at 282 (explaining how in the 1980s and 1990s, the countries “drastically reduced their reliance upon the IJC’s reference function”).

65. See Knox, *supra* note 60, at 439–40 (describing the low number of submissions related to the United States).

66. W.R. Derrick Sewell & Albert E. Utton, “Getting to Yes” in *United States-Canadian Water Disputes*, 26 NAT. RESOURCES J. 201, 201–03 (1986); see also ROBERTS, *supra* note 24, at 3; cf. Deborah L. Vannijnatten, *Canadian-American Environmental Relations: Interoperability and Politics*, 34 AM. REV. CAN. STUD. 649 (2004) (describing the “serious tensions” between the United States and Canada, but arguing that environmental policy “has been minimally affected by such friction”).

67. ROBERTS, *supra* note 24, at 3; see also Joseph L. Sax & Robert B. Keiter, *The Realities of Regional Resource Management: Glacier National Park and its Neighbors Revisited*, 33 ECOLOGY L.Q. 233, 298 (2006) (describing how “current relations between the United States and Canada are at a low ebb”); Press Release, Council on Hemispheric Aff., Rocky Road: U.S.-Canadian Relations in Need of Further Repair, Now That Both Sides Make Concessions on Devils Lake Dispute (Aug. 8, 2005), <http://www.coha.org/2005/08/08/rocky-road-us-canadian-relations-in-need-of-further-repair-now-that-both-sides-make-concessions-on-devils-lake-dispute/>.

68. ROBERTS, *supra* note 24, at 3; see also Sax & Keiter, *supra* note 67, at 297–98; cf. COUNCIL ON FOREIGN RELATIONS, BUILDING A NORTH AMERICAN COMMUNITY: REPORT OF AN INDEPENDENT TASK FORCE 1 (2005) (noting that Canada, Mexico, and the United States “face a historic challenge: Do they continue on the path of cooperation in promoting more secure and more prosperous North American societies, or do they pursue divergent and ultimately less secure and less prosperous courses?,” but concluding that governments are still committed to cooperation). See generally TENSIONS AT THE BORDER, *supra* note 54 (describing tensions over climate change, acid rain, energy, and transboundary pollution). This is not the first time for such pessimism. In the 1980s, several scholars argued that the “vision of a unique Canadian-U.S. talent for dispute-settlement” was “more rhetoric than reality—a tinsel romance under only a paper moon.” Bilder, *supra* note 25, at 6.

69. See Hall, *supra* note 14, at 721 (describing the Devils Lake dispute); Joseph M. Flanders, Note, *Transboundary Water Disputes on an International and State Platform: A Controversial Resolution to North Dakota’s Devils Lake Dilemma*, 82 N.D. L. REV. 997, 1002–04 (2007) (describing dispute); see also *People to Save the Sheyenne River, Inc. v. N.D. Dep’t of Health*, 697 N.W.2d 319 (N.D. 2005) (Canadian environmentalist and Manitoba challenge to the North Dakota Department of Health’s grant of a permit for diversion). For a related dispute where Canadians have turned to litigation in a U.S. court when diplomacy was ineffective, see *Manitoba v. Norton*, 398 F. Supp. 2d 41 (D.D.C. 2005) (dispute over the U.S. Bureau of Reclamation’s “NorthWest

years ago, the State of North Dakota embarked upon a plan to solve a drainage problem that Devils Lake causes. Devils Lake has no natural outlets; when it expands (as it has been), it causes substantial harm and dislocation.⁷⁰ Working with the U.S. federal government, North Dakota developed a plan to build a drainage canal that would feed into the Sheyenne River.⁷¹ The Sheyenne River, however, flows into the Red River, which forms the border between North Dakota and Minnesota before crossing the U.S.-Canadian border into the province of Manitoba and eventually flowing into Lake Winnipeg.⁷² Concerned about the environmental impacts of this plan (in particular the introduction of invasive species), Manitoba and various other groups objected.⁷³ North Dakota ignored these objections, despite urging from the U.S. federal government.⁷⁴ The dispute has been “nasty,” and has caused “political turmoil.”⁷⁵ Although an agreement was reached eventually, the terms of

Area Water Supply Project” in North Dakota).

70. See Duncan Hollis, *Disaggregating the Devils Lake: Can Non-State Actors, Hegemony, or Principal Agent Theory Explain the Boundary Waters Treaty?* (Temple Univ. Legal Studies Res. Paper No. 2007-05, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=976829.

71. See Abate, *supra* note 18, at 132; Hall, *supra* note 14, at 721.

72. *People to Save the Sheyenne River, Inc.*, 697 N.W.2d at 323; see also Nicole Shalla, *People To Save The Sheyenne River, Inc. v. North Dakota Department of Health: Setting A Permit Precedent, While Allowing Pollution To Transcend International Borders*, 10 GREAT PLAINS NAT. RESOURCES J. 73, 74–78 (2006) (summarizing the *Sheyenne River* case and describing the background of dispute).

73. See generally DeNeen L. Brown, ‘Sacred’ Waters, *Unholy Controversy; Dakota Tribe Fights Plan to Drain Lake*, WASH. POST, June 25, 2004, at A14 (describing Canada-U.S. dispute over Devils Lake); *Devils Lake Too ‘Sacred’ for Drainage: Elder from North Dakota Tribe Opposed to Controversial Project*, WINNIPEG FREE PRESS, June 30, 2004, at B10 (“Canadian officials have joined with environmental groups and native Americans to raise concerns about plans by the federal and state governments to build drainage outlets, intended to reduce the lake’s flooding.”).

74. See John Knox, *Environment: Garrison Dam, the Columbia River, the IJC, and NGOs*, 30 CAN.-U.S. L.J. 129, 133–34 (2004); see also Hollis, *supra* note 70, at 4; Sheryl A. Rosenberg, *A Canadian Perspective on the Devils Lake Outlet: Towards an Environmental Assessment Model for Management of Transboundary Disputes*, 76 N.D. L. REV. 817, 839–40 (2000).

75. *Devils Lake Dilemma*, CBC NEWS, Aug. 5, 2005, <http://www.cbc.ca/news/background/water/devilslake.html>; see also Wil Burns et al., *International Environmental Law*, 40 INT’L LAW. 197, 208 (2006) (describing the “intense dispute”); *It’s Getting Hard to Be Pal of U.S.*, KITCHENER REC. (Ont.), Aug. 17, 2005, available at 2005 WLNR 12925589 (describing tensions); Paul Samyn, *PM Plans to Battle Water Diversion Promising to Fight N.D. on Devils Lake Project*, WINNIPEG FREE PRESS, May 20, 2005, at A3 (quoting then-Prime Minister Paul Martin as saying that “Americans are wrong to think they can get away with polluting Canadian waters”); *Is Water Treaty Enforceable in the U.S.? Questions Arise About International Deal*, WINNIPEG FREE PRESS, Sept. 7, 2006, at A1 (describing Devils Lake dispute, deploring U.S. unilateral action, and quoting one politician as saying that “[o]ur ambassador should be screaming

the agreement required North Dakota to concede very little.⁷⁶ Demonstrating the distrust for bilateral institutions, both countries were unwilling to submit the matter to the International Joint Commission⁷⁷ and the CEC was unwilling to hear the dispute.⁷⁸

Second, on the heels of Devils Lake came the Trail Smelter controversy. In *Pakootas v. Teck Cominco Metals, Ltd.*,⁷⁹ the State of Washington and members of an Indian tribe sued Teck Cominco, the Canadian mining giant, for hazardous water pollution emanating from Teck's smelter. The smelter is located on the Columbia River in Trail, British Columbia, just ten kilometers upstream from the U.S. border.⁸⁰ The plaintiffs sought to apply the U.S. Superfund law extraterritorially.⁸¹ If successful, Teck faces billions of dollars in liability. Again the countries did not attempt to head off private litigation through submission to the IJC, even though the IJC had successfully adjudicated a transboundary controversy involving the very same smelter seventy years earlier.⁸²

bloody murder").

76. See John R. Crook, *United States and Canada Agree on Measures To Address Devils Lake Flooding and Ecological Protection*, 99 AM. J. INT'L L. 909 (2005); see also Hollis, *supra* note 70, at 7.

77. See Knox, *supra* note 74, at 138 ("[The] U.S. was temporarily willing to send Devil's Lake to the IJC, but the Canadians objected, so it did not go. Now, the U.S. is not willing to go even though the Canadians are, so it is not going to go."); see also Burns, *supra* note 75, at 208 (noting that "attempts by the Canadian government to deal with the problem diplomatically, directly and through the International Joint Commission" were unsuccessful); Sax & Keiter, *supra* note 67, at 297-98 (describing the reluctance to use the IJC in the Devil's Lake and other disputes).

78. See Hall, *supra* note 14, at 722 (describing how the CEC dismissed petitions on grounds that the Boundary Waters Treaty is not enforceable under U.S. law).

79. 35 ENVTL. L. REP. 20,083 (E.D. Wash. 2004) (order denying motion to dismiss on jurisdictional grounds), *aff'd*, 452 F.3d 1066 (9th Cir. 2005). See generally Parrish, *supra* note 14, at 363. Academics from both sides of the border have commented on the case. See, e.g., Brunée, *supra* note 32, at 628; Neil Craik, *Transboundary Pollution, Unilateralism and the Limits of Extraterritorial Jurisdiction: The Second Trail Smelter Dispute*, in TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE TRAIL SMELTER ARBITRATION, *supra* note 11, at 109; Gerald F. Hess, *The Trail Smelter, the Columbia River, and the Extraterritorial Application of CERCLA*, 18 GEO. INT'L ENVTL. L. REV. 1 (2005); Robinson-Dorn, *supra* note 17.

80. U.S. ENVTL. PROT. AGENCY, UPPER COLUMBIA RIVER EXPANDED SITE INSPECTION REPORT NORTHEAST WASHINGTON 2-10 (2003); see also EDITH BROWN WEISS ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 246 (1998) (explaining that the Trail Smelter is "just north of the international boundary, about seven miles as the crow flies, or about eleven miles along the course of the [Columbia] river").

81. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C.A. §§ 9601 et seq. (2002).

82. Trail Smelter Arbitration, 3 R.I.A.A. 1905 (1938) (requiring that Canadian company operating smelter cease causing damage in the State of Washington), *further proceedings* 3 R.I.A.A. 1938 (1941) (holding Canada responsible for transboundary pollution). See generally John E.

Teck has asked the U.S. Supreme Court to review the Ninth Circuit's decision, which upheld the district court's refusal to dismiss on jurisdictional grounds.⁸³ The Trail Smelter dispute has significantly increased border tensions,⁸⁴ and may be the most important transboundary environmental case in decades.⁸⁵

Finally, there was the Softwood Lumber impasse: a decades-long trade dispute over the Canadian export of softwood lumber.⁸⁶ A "major irritant in U.S.-Canadian relations,"⁸⁷ the dispute boiled over in 2002 when the United States imposed countervailing and antidumping duties on Canadian lumber, claiming that Canada was impermissibly subsidizing timber harvesting.⁸⁸ Over the last four years, Canada repeatedly has won rulings in NAFTA panels, but the United States has ignored them.⁸⁹ In turn, the United States has collected a total of \$5 billion in duties, and relies on favorable rulings in the World Trade Organization to resist Canadian entreaties to remove the duties and return the mon-

Read, *The Trail Smelter Dispute*, 1 CAN. Y.B. INT'L L. 213 (1963) (describing the famous *Trail Smelter* Arbitration).

83. Teck Cominco had asked for and was granted an extension to file for a writ of certiorari, which was granted by Justice Kennedy on January 12, 2007. The Supreme Court docket information is online at <http://www.supremecourtus.gov/docket/06a686.htm>.

84. See *EPA Battles Canadian Company over Columbia River*, U.S. WATER NEWS ONLINE, Dec. 2003, available at <http://www.uswaternews.com/archives/arcquality/3epabat12.html> ("Not since the Pig War of 1859 between the United States and Great Britain has there been such an international brouhaha in the Pacific Northwest.").

85. For a description of its importance, see Parrish, *supra* note 14.

86. For an overview of the various WTO and NAFTA cases that comprise this dispute, see Chi Carmody, *Softwood Lumber Dispute (2001-2006)*, 100 AM. J. INT'L L. 664 (2006) (describing the Softwood Lumber controversy in detail).

87. John R. Crook, *Preliminary Settlement of Softwood Lumber Dispute*, 100 AM. J. INT'L L. 702, 702 (2006); see also John Bohn, *Softwood Lumber Dispute with Canada Nears Climax*, 21 NAT. RESOURCES & ENV'T 24 (2006) ("The dispute with Canada regarding softwood lumber ranks as the largest and longest-lasting trade dispute involving the United States."); Martin Crutinger, *Hard Feelings up North over Softwood Trade Pact*, SEATTLE TIMES, Apr. 28, 2006, at D1 (describing the Softwood Lumber dispute as a "long, bitter fight").

88. The United States' demands that Canadians change their logging practices have resonated with at least some Canadian environmentalists. *Renegotiate NAFTA, New Green Party Leader Says*, CBC NEWS, Aug. 26, 2006, <http://www.cbc.ca/canada/story/2006/08/26/greens.html>. But most environmental organizations in Canada, even if in favor of forestry reform, have been wary of appearing to be too supportive of U.S. demands for fear of being labeled "treasonous." *Canadian Environmentalists Deny Accusations of Treason*, CBC NEWS, Mar. 20, 2001, http://www.cbc.ca/world/story/2001/03/20/softwood_010320.html#skip300x250.

89. In fairness to the United States, seeking parallel redress in WTO and NAFTA panels is not usual. See Raj Bhala & David A. Gantz, *WTO Case Review 2004*, 22 ARIZ. J. INT'L & COMP. L. 99, 198 (2005). But the total U.S. rejection of NAFTA panel decisions in a trade dispute with Canada was striking, as was the ineffectiveness of NAFTA in playing any kind of dispute resolution role.

ey.⁹⁰ Recently, an agreement between Canadian Prime Minister Stephen Harper and President Bush has stipulated to the return of \$4 billion in collected duties.⁹¹ Although the agreement seems to have temporarily quelled the dispute, the controversy has continued to simmer and tensions build on a number of fronts.⁹² The Softwood Lumber dispute “has led some Canadians to question whether the United States will comply with NAFTA if decisions by the dispute-settlement mechanism run counter to private American interests.”⁹³ Unfortunately, these three high-profile cross-border disputes do not stand alone. Numerous other tensions loom on the horizon.⁹⁴

90. For a pre-agreement review of the legal wrangling, see Bhala & Gantz, *supra* note 89, at 178–200.

91. See, e.g., Crook, *supra* note 87, at 702.

92. See, e.g., *Lumber Deal Jeopardized by Opposition from BC, Timber Groups*, 24 INSIDE U.S. TRADE 27 (2006) (“The British Columbia provincial government and producers...are opposing a final softwood lumber deal..., casting doubt on the agreement’s survival.”); Alan M. Field, *Timber!*, J. COM., Sept. 25, 2006 (arguing that even though the dispute is coming to an end with the agreement, many believe the agreement to be a “giant step in the wrong direction” and “exactly the opposite of the approach [one] would need to forge a continental economy for global competition”); Kelly Louiseize, *Not Everyone Happy with Softwood Deal*, 26 N. ONT. BUS. 28, 28–29 (2006) (describing how the agreement has been forced on the Ontario Forest Industry and that “Canadian mills will be shut down in a bad market”); see also *Softwood Lumber Dispute*, CBC NEWS, Aug. 23, 2006, http://www.cbc.ca/news/background/softwood_lumber/ (describing the resistance to the initial agreement from British Columbia, Quebec, and Alberta and a subsequent renegotiation of the agreement to address their concerns).

93. COUNCIL ON FOREIGN RELATIONS, BUILDING A NORTH AMERICAN COMMUNITY: REPORT OF AN INDEPENDENT TASK FORCE 16 (2005).

94. See Crook, *supra* note 87, at 702–03; see also Hanson et al., *supra* note 36, at 137–38 (predicting an increase in transboundary disputes); Parrish, *supra* note 14, at 380–82 (listing other cross-border disputes ongoing between Canada and the United States); cf. Wendy Stueck, *Water Tension Rising Between Canada and the U.S.—Issues Surfacing as Population Growth Puts More Pressure on Shared Lakes and Rivers*, GLOBE & MAIL (Toronto), May 17, 2005, at B7 (describing current transboundary water disputes). Two of the biggest disagreements are about borders themselves. See, e.g., Sheldon Alberts, *Warming Stirs Arctic Feud, Congress Told—Retired U.S. Brass Warn Melting Makes Northwest Passage a Worry*, WINNIPEG FREE PRESS, May 11, 2007, at A18 (describing a dispute over Canadian claims to arctic sovereignty in the Northwest Passage as a “future flashpoint between the two long-standing allies”); Shawn McCarthy, *U.S. Says Canada Blocking Review of Maine LNG Projects*, GLOBE & MAIL (Toronto), Mar. 9, 2007, at B3 (“The proposals to build liquefied natural gas receiving terminals on Passamaquoddy Bay, off the Bay of Fundy, have become a major irritant between Washington and the [Canadian Government].”); Barrie McKenna, *Canada to Deny LNG Passage: Ottawa Tells U.S. That Access to Sites on Maritime Border Poses Many Risks*, GLOBE & MAIL (Toronto), Feb. 16, 2007, at B3 (describing sovereignty dispute where the United States claims passage is in international waters, while Canada insists it is in Canadian territory). Other suits involving cross-border environmental harm exist. See, e.g., Michael T. Delcomyn, *Arctic National Wildlife Refuge Oil: Canadian and Gwich’in Indian Legal Responses to 1002 Area Development*, 24 N. ILL. U. L. REV. 789 (2004) (describing possible lawsuits over ANWR oil drilling); Donald Goldberg & Martin Wagner, *Human Rights Litigation to Protect the Peoples of the Arctic*, 98 AM. SOC’Y INT’L L. PROC. 227

To some extent, the reason for this changed state of North American cooperation is symptomatic of the U.S. federal government's approach to international law and environmental policy more broadly, rather than any particular hostility towards Canada. The American withdrawal from cooperative institutions such as the IJC and the CEC appears part of a larger trend.⁹⁵ In recent years, the United States has rejected or retreated from all kinds of international institutions, agreements, and bilateral treaties.⁹⁶ Academics often have encouraged the disengagement, asserting that international institutions like the IJC and CEC threaten democratic sovereignty.⁹⁷ And in the last two decades, Americans have had

(2004) (discussing the human rights petition with the Inter-American Commission on Human Rights for damages to the Arctic, impacting the Inuit, as a result of U.S. greenhouse gas emissions).

95. For a discussion of this trend, see Bryant G. Garth, *Rebuilding International Law After the September 11th Attack: Contrasting Agendas of High Priests and Legal Realists*, 4 LOY. U. CHIC. INT'L L.J. 101, 101-02 (2007) (explaining how the Bush Administration believed after 9/11 that "[i]nternational law needed to be put in the service of the War on Terror or ignored" and detailing a "series of anti-international law decisions"). See generally PHILIPPE SANDS, *LAWLESS WORLD: AMERICA AND THE MAKING AND BREAKING OF GLOBAL RULES FROM FDR'S ATLANTIC CHARTER TO GEORGE W. BUSH'S ILLEGAL WAR* (2005) (criticizing the United States for its withdrawal from international norms).

96. See, e.g., David D. Caron, *Between Empire and Community: The United States and Multilateralism 2001-2003: A Mid-Term Assessment*, 21 BERKELEY J. INT'L L. 395, 395 (2003) ("The basic underlying assertion in this muddled torrent is that the United States has changed its attitude and practice toward multilateralism dramatically...."); Anupam Chandler, *Globalization and Distrust*, 114 YALE L.J. 1193, 1197 (2005) (describing U.S. opposition to a "dazzling[ly] broad" range of international laws and institutions, including the ICC, the Kyoto Protocol, United Nations agencies, the Convention on the Law of the Sea, and the Comprehensive Test Ban Treaty); Jeffrey L. Dunoff, *Constitutional Conceits: The WTO's 'Constitution' and the Discipline of International Law*, 17 EUR. J. INT'L L. 647, 670 (2006) (describing the United States' "decidedly uneasy relationship with international legal norms and institutions" and listing examples of U.S. withdrawal); Esty, *supra* note 61, at 1493-94, 1562 n.3 (2006) (describing how both the political left and right distrust international institutions and law, and noting the U.S. withdrawal from the Protocol on the Vienna Convention to Consular Relations, refusal to ratify treaties on a global landmine ban, and obstruction of the World Health Organization's public campaign aimed at smoking); Giulio M. Gallarotti, *The Limits of International Organization: Systematic Failure in the Management of International Relations*, in *THE POLITICS OF GLOBAL GOVERNANCE* 375, 379 (Paul F. Diehl ed., 1997) (explaining how international organizations "ha[ve] been attacked both from the right and the left....").

97. See, e.g., JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005) (presenting a critical, negative view of international law and a disdain for international institutions); John R. Bolton, *Should We Take Global Governance Seriously?*, 1 CHI. J. INT'L L. 205 (2000); Paul B. Stephan, *International Governance and American Democracy*, 1 CHI. J. INT'L L. 237 (2000); Paul B. Stephan, *Sheriff or Prisoner? The United States and the World Trade Organization*, 1 CHI. J. INT'L L. 49, 73 (2000). See generally Oona A. Hathaway & Ariel N. Lavinbul, *Rationalism and Revisionism in International Law*, 119 HARV. L. REV. 1404 (2006) (reviewing JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005)) (describing the revisionist movement to undermine the use of international law because of its per-

an increasingly uneasy relationship with international law and institutions generally.⁹⁸ Certainly, policy-makers have focused on the importance of local and regional actors in U.S.-Canada transboundary relations, and have downplayed federal cooperation and bilateralism.⁹⁹ Nowhere is the disengagement with international law more evident than with treaties involving environmental issues.¹⁰⁰ In the international environmental context, some scholars have described how the U.S. has turned increasingly to unilateralism and away from traditional international cooperation.¹⁰¹ For environmental issues, the reluctance to cooperate, however, is also symptomatic of the federal government's environmental agenda.¹⁰² Since 2000, the Bush Administration has presided

ceived threat to democratic governance).

98. Peter Spiro, *The New Sovereignists: American Exceptionalism and its False Prophets*, FOREIGN AFF., Nov.-Dec. 2000, at 9, 9 (describing how "anti-internationalism runs deep in the American political tradition"). See generally INSTITUTE FOR AGRICULTURE AND TRADE POLICY, THE TREATY DATABASE: A MONITOR OF U.S. PARTICIPATION IN GLOBAL AFFAIRS iv (2004) (describing how the United States has lost enthusiasm for international agreements, and that this retreat from international law began before the Bush Administration).

99. Allen L. Springer, *From Trail Smelter to Devils Lake: The Need for Effective Federal Involvement in Canadian-American Environmental Disputes*, 37 AM. REV. OF CAN. STUD. 77 (2007) (criticizing the singular focus on local and regional actors and the "view that national governments should be kept at arm's length, at least until the problems faced become so intractable that only federal intervention can break the deadlock").

100. See, e.g., J. William Futrell, *Multilateral Environmental Agreements*, SL098 A.L.I.-A.B.A. 1, 9 (2006) (listing ten international environmental agreements that the United States negotiated but to which the United States is not a party, and describing the "ill will" the United States has created globally by imposing a perceived double standard).

101. Brunnée, *supra* note 32, at 624 (describing the U.S. withdrawal from international environmental treaties); see also Daniel Bodansky, *The Legitimacy of International Governance: A Coming Challenge for International Environmental Law?*, 93 AM. J. INT'L L. 596 (1999) (discussing concerns over loss of democratic sovereignty through use of international treaty regimes).

102. See, e.g., Robert L. Glicksman, *From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy*, 41 WAKE FOREST L. REV. 719, 777 (2006) ("The Bush Administration has pursued a series of initiatives, in both the pollution and federal lands contexts, that make it more difficult for the federal government to prevent environmental harm, including the adoption of weaker regulations, the reduction of funds for environmental protection purposes, and a failure to enforce environmental laws and regulations against alleged violators."). These feelings are widespread among academics. See, e.g., ROBERT PERKS ET AL., *REWRITING THE RULES: THE BUSH ADMINISTRATION'S ASSAULT ON THE ENVIRONMENT* (2002); John M. Carter et al., *Cutting Science, Ecology, and Transparency Out of National Forest Management: How the Bush Administration Uses the Judicial System to Weaken Environmental Laws*, 33 ENVTL. L. REP. 10,959 (2003); Patrick Parenteau, *Anything Industry Wants: Environmental Policy Under Bush II*, 14 DUKE ENVTL. L. & POL'Y F. 363, 364 (2004) (arguing that the Bush Administration is making damaging changes to the environmental law in a deceptive way). The sentiments are also described in the popular press. See, e.g., Mark Grossi, *Norton Stops by Yosemite; Interior Secretary Defends Restoration*, FRESNO BEE, Apr. 23, 2004, at A1 ("Environmentalists, who say Bush is attempting to dismantle decades of environmental law, also attended the

over an almost complete stalemate in terms of environmental law and policy.¹⁰³

The blame, however, does not lie solely with the United States. Although Canadians usually pride themselves as being a team player on the international stage,¹⁰⁴ in the changed state of U.S.-Canada relations, Canada seems to have demonstrated a less cooperative spirit. Former Prime Minister Paul Martin, fighting for his political life in 2005, loudly refused to support President Bush's proposed missile defense system.¹⁰⁵ Continuing Canadian military support for the U.S.-led mission to rebuild Afghanistan has met with intense Canadian criticism.¹⁰⁶ The newly elected leader of Canada's Green Party has called for renegotiating NAFTA, saying that "it works for the U.S., but not for Canada."¹⁰⁷ Even the softwood lumber deal that Prime Minister Harper negotiated seemed uncertain because two key Canadian firms were reluctant to withdraw their own lawsuits against the United States for imposing the countervailing and antidumping duties.¹⁰⁸

Earth Day event.").

103. See, e.g., Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 NOTRE DAME L. REV. 699, 749–50 (2006) ("[T]oday we find ourselves in an era where there is significant public concern over the failure of the federal executive and legislative branches to take strong action on today's environmental challenges, whether they are automobile emissions, global warming, water pollution, or regulation of toxic substances."); Richard J. Lazarus, *Congressional Descent: The Demise of Deliberative Democracy in Environmental Law*, 94 GEO. L.J. 619, 619, 629–33 (2006) (describing how "[i]n recent years, the formal environmental lawmaking dimension of Congress has become effectively moribund").

104. For example, Canadian armed forces have taken part in virtually every major world conflict since its confederation in 1867, playing disproportionately large, important, and costly (from a Canadian perspective) roles in World Wars I and II. Canada's only Nobel Peace Prize winner, former Prime Minister Lester B. Pearson, earned his international renown for helping to resolve the 1956 Suez crisis by introducing the idea of a United Nations peacekeeping force, a quintessentially Canadian solution of cooperative mediation in military conflicts. DESMOND MORTON, *A SHORT HISTORY OF CANADA* 240–42 (2000).

105. See *Martin, Bush Discuss Canada's Pass on Missile Defence*, CBC NEWS, Mar. 5, 2005, <http://www.cbc.ca/canada/story/2005/03/05/martin-missile050305.html>.

106. See Alexander Panetta, *Opposition Threatens To Topple Harper Government over Afghanistan*, CBC NEWS, Dec. 11, 2006, <http://www.cbc.ca/cp/national/061211/n121191A.html>.

107. *Renegotiate NAFTA, New Green Party Leader Says*, CBC NEWS, Aug. 26, 2006, <http://www.cbc.ca/canada/story/2006/08/26/greens.html>.

108. See Steve Mertl, *Ottawa Sets Oct. 12 as New Date for Implementing Softwood Lumber Deal with U.S.*, CANADIAN PRESS, Oct. 9, 2006 (describing how "a substantial number of lumber exporters refused to withdraw legal actions against the United States over punitive softwood duties, a key U.S. requirement for it to revoke the duties"); see also Josie Newman, *Timber Accord Rankles Canadian Firms: Many Charge That Agreement To Pay Taxes on a Sliding Scale on Exports to U.S. Violates Free Trade*, CHRISTIAN SCI. MONITOR, Oct. 18, 2006 (explaining timber producers opposition to the agreement); U.S., *Canadian Lumber Groups Oppose Dismissal of NAFTA Case*, INSIDE U.S. TRADE, Dec. 1, 2006 (describing attempts to keep NAFTA challenges

The most telling change in the Canadian approach, however, may be the seminal 2005 Canadian Supreme Court decision in *British Columbia v. Imperial Tobacco*.¹⁰⁹ In that case, the Court upheld British Columbia's recovery of damages from twelve tobacco manufacturers (nine of them non-Canadian)¹¹⁰ for health care costs associated with tobacco use.¹¹¹ What is extraordinary about the *Imperial Tobacco* case is that it not only applied British Columbia law to American defendants that had no presence in Canada (except for tobacco sales), but it involved a newly-enacted provincial statute¹¹² that reversed the burden of proof with respect to whether a patient's illness actually resulted from tobacco use.¹¹³ British Columbia's willingness to enact, and the Canadian Supreme Court's willingness to uphold, such a significant departure from the usual norms of litigation¹¹⁴ may signal an erosion of Canada's traditionally cooperative spirit (if not a blueprint for future litigation).¹¹⁵

The reason for Canada's retreat from bilateralism with the U.S. is open to speculation. In part, Canada may have few options when faced with American intransigence. But with more nationalist moods at home, Canada too has become concerned over the loss of its sovereignty.¹¹⁶ Al-

alive).

109. [2005] 2 S.C.R. 473 (Can.).

110. The appellants before the Canadian Supreme Court included: Imperial Tobacco Canada Ltd., Rothmans, Benson & Hedges, Inc., JTI-MacDonald Corp., Canadian Tobacco Manufacturers' Council, Philip Morris Inc., Philip Morris International Inc., and British American Tobacco (Investments) Ltd. Some were Canadian corporations, others were incorporated under the laws of Virginia and Delaware, and the remainder were incorporated in the United Kingdom. *Id.*

111. *Id.*

112. Tobacco Damages and Health Care Costs Recovery Act, 2005 S.C., ch. 46 (Can.).

113. [2005] 2 S.C.R. 473 (Can.); see also Devrin Froese, *Professor Raz, the Rule of Law, and the Tobacco Act*, 19 CAN. J.L. & JURIS. 161, 161 (2006) (describing the Tobacco Damages and Health Care Costs Recovery Act as altering the rules of civil procedure and evidence "to allow the government to overcome difficulties in proving causation").

114. See, e.g., David R. Wooley, *Acid Rain: Canadian Litigation Options in U.S. Court and Agency Proceedings*, 17 U. TOL. L. REV. 139, 140 (1985) (describing how the "official position" of the Canadian federal government has been historically not to initiate or encourage litigation over transboundary air pollution).

115. For a general discussion of the case, see Michael Hall, *The Imperial Tobacco Approach to Territorial Limitations on Provincial Legislative Jurisdiction*, 20 NAT'L J. CONST. L. 47 (2006) (describing traditional territorial limitations on jurisdiction under Canadian law). For criticism, see F.C. DeCoste, *Smoked: Tradition and Rule of Law in British Columbia v. Imperial Tobacco, Ltd.*, 24 WINDSOR Y.B. ACCESS JUST. 327, 329 (2006) (criticizing the case for upholding a statute that "targeted certain, known defendants (tobacco companies one and all) and no one else; permitted the state to recover from them the cost of health care benefits without proving loss; imposed this liability retroactively without limit in time; abolished accrued limitations defenses; and established a special regime of procedural law, which impaired the ability of defendants to maintain any defense not otherwise legislated away").

116. Arthur T. Downey, *Extraterritorial Sanctions in the Canada/U.S. Context – A U.S.*

though supportive of international institutions, Canadians are increasingly less enthusiastic, if not distrustful, of bilateralism¹¹⁷ and U.S.-Canadian institutions, believing them unfairly to favor American interests.¹¹⁸

II. CANADA'S TRANSBOUNDARY POLLUTION PROBLEM

The real issue is whether the changed state of cooperation will spill over into other areas and upset the Canadian distrust of lawsuits as a way to remedy transboundary harm.¹¹⁹ Will Canadians follow the American trend and embrace extraterritoriality as a way to solve transboundary problems? One of the most intractable challenges facing Canada is transboundary air pollution—usually in the form of smog—originating from the United States and causing the brunt of its harm in

Perspective, 24 CAN.-U.S. L.J. 215, 215 (1998) (noting how Canada has always been sensitive to being overtaken by American law and culture, and “sometimes suffers nightmares about the firmness and durability of its own sovereignty”).

117. See Derek H. Burney, *Time for Courage on Foreign Policy*, THE GAZETTE (Montreal), Feb. 13, 2005, at A13 (advocating for increased bilateralism and noting Canada's recent policy of keeping “a safe distance” from the United States); John Ivison, *An Olive Branch PM Should Grab: Bush Eager to Use Ottawa Visit to 'Mend Fences,'* NAT. POST, Nov. 11, 2004, at A6 (describing chill in U.S.-Canada relations under Prime Minister Chretien's leadership); Christina Spencer, *Fumbling for Foothold: Why Bother with Foreign Policy? A Canadian at Oxford Considers What Canada Could Be*, OTTAWA CITIZEN, Sept. 12, 2004, at C8 (reviewing book and describing “Canadian exceptionalism” – “the tendency to assume the worst about Americans while always attributing the noblest motives to [Canadians]”).

118. One good example of this is the Canadian approach to the IJC. In the 1980s and 1990s, Canada came to view the IJC as a threat to domestic sovereignty that illegitimately favored American interests. Kim Richard Nossal, *The IJC in Retrospect*, in THE INTERNATIONAL JOINT COMMISSION SEVENTY YEARS ON 124, 129 (Robert Spencer et al. eds., 1981) (“To surrender – even willingly – a modicum of national sovereignty [to IJC-type institutions] would be disadvantageous to both sides, but to Canadians in particular.”); see also Kal J. Holsti & Thomas Allen Levy, *Bilateral Institutions and Transgovernmental Relations Between Canada and the United States*, in CANADA AND THE UNITED STATES: TRANSNATIONAL AND TRANSGOVERNMENTAL RELATIONS 875, 879 n.2 (Annette Baker Fox et al. eds., 1974) (noting comments of a Canadian official “who suggested that more bodies of the IJC type would not be welcome [in the late 1970s] because they are difficult to control by the central governments”); David Lemarquand, *The International Joint Commission and Changing Canada-United States Boundary Relations*, 33 NAT. RESOURCES J. 59, 76 (1993) (“Although Canada, as the smaller power, had traditionally found the IJC a useful balancing mechanism, the Canadian government confidence in the IJC was on increasingly shaky ground as Canada lost confidence in bilateral institutional mechanisms as the best means of dealing with the United States.”); Joseph L. Sax & Robert B. Keiter, *The Realities of Regional Resource Management: Glacier National Park and its Neighbors Revisited*, 33 ECOLOGY L.Q. 233, 295–98 (2006) (describing the unlikelihood that Canada would agree to an IJC referral on transboundary disputes).

119. See Hall, *supra* note 14, at 738 n.338 (noting that “Canada does not have the same tradition of citizen enforcement [as the United States]”); see also Valiante, *supra* note 21, at 81.

Ontario.¹²⁰ Unfortunately, despite various attempts over decades, Canada has had little success in solving this problem using traditional diplomacy. Ontario pollution is fast becoming one of the more pressing irritants in U.S.-Canadian relations. As described below, Canadians may no longer be content to ignore the problem.

A. *A History of Transboundary Air Pollution*

Although a detailed discussion is beyond the scope of this Article, a little history places the current disagreement in context. For decades, transboundary air pollution, including SO₂ emissions from coal-fired power plants, and NO_x emissions from a variety of combustion sources, has been the primary cause of acid rain in Southern Ontario and Quebec.¹²¹ Bilateral efforts to curb transboundary emissions of SO₂ and NO_x began in earnest in 1966, when the IJC established a sub-body called the International Air Quality Advisory Board to advise both national governments on transboundary air issues.¹²² The problem became significant in the early 1980s: the United States “was emitting approximately 25.7 million tons of sulphur dioxide and 23 million tons of nitrogen dioxide annually, while Canada’s annual emissions totaled 5.2 million tons and 2 million tons, respectively.”¹²³ In 1980, the United

120. See, e.g., HUNTER ET AL., *supra* note 16, at 552–59 (describing history of long-range transboundary air pollution disputes); Jon Ricci, *Transboundary Air Pollution Between Canada and the United States: Paper Solutions to a Real Problem*, 5 J. INT’L L. & PRAC. 305, 305 (1996) (“Transboundary air pollution has long plagued relations between the United States and Canada.”); see also ACID RAIN AND FRIENDLY NEIGHBORS: THE POLICY DISPUTE BETWEEN CANADA AND THE UNITED STATES (Junger Schmandt et al. eds., 1988).

121. For a good short description of Canada-United States acid rain issues, see WEISS ET AL., *supra* note 80, at 577–86; see also Shawn M. Rosso, *Acid Rain: The Use of Diplomacy, Policy and the Courts To Solve a Transboundary Pollution Problem*, 8 J. NAT. RES. & ENVTL. L. 421, 425–27 (1992) (describing diplomatic attempts to solve the transboundary acid rain problem in the 1970s through 1990s). See generally GREGORY S. WETSTONE & ARMIN ROSENCRANZ, *ACID RAIN IN EUROPE AND NORTH AMERICA: NATIONAL RESPONSES TO AN INTERNATIONAL PROBLEM* (1983). For information of particular relevance to private litigation to resolve acid rain problems, see James M. Fischer, *The Availability of Private Remedies for Acid Rain Damage*, 9 *ECOLOGICAL L.Q.* 429 (1981).

122. International Joint Commission, *What Is the International Air Quality Advisory Board?*, http://www.ijc.org/conseil_board/air_quality_board/en/iaqab_home_accueil.htm.

123. WEISS ET AL., *supra* note 80, at 579. For a description of the environmental and health damages caused by acid rain in the 1980s, see Elizabeth Knapp, *Our Neighbor’s Keeper? The United States and Canada: Coping with Transboundary Air Pollution*, 9 *FORDHAM INT’L L.J.* 159, 166–72 (1985–1986); Erik K. Moller, Comment, *The United States-Canadian Acid Rain Crisis: Proposal for an International Agreement*, 36 *UCLA L. REV.* 1207, 1212 (1989) (citing studies showing that “50% of the acid rain falling in Canada originate[s] in the United States”). For more recent figures, see Tony Van Alphen, *N.Y. Sick of Breathing Our Smoke: State Going to*

States and Canada signed a Memorandum of Intent regarding Transboundary Air Pollution, aspiring to jointly solve the problem.¹²⁴ At times, the negotiations “were acrimonious, particularly during the Reagan Presidency when the United States would only agree to study the problem more.”¹²⁵ For “over a decade following the signing of the Memorandum of Intent in 1980, the countries failed to achieve significant progress in negotiating a bilateral agreement.”¹²⁶ Not until 1991 did President George H.W. Bush and Prime Minister Brian Mulroney sign the Air Quality Agreement, which temporarily resolved the dispute.¹²⁷

Although the Air Quality Agreement was an advancement in many respects,¹²⁸ it was another decade until the countries took significant further steps. In 2000, the countries signed Annex 3. Known as the ozone protocol or ozone annex, Annex 3 to the Air Quality Agreement contained specific obligations for both countries to reduce emissions of NOx and volatile organic compounds.¹²⁹ Canada, for example, agreed to work towards aligning its motor-vehicle-emission regulations with U.S. standards, cap NOx emissions from Ontario power plants, and reduce

NAFTA Panel over Ontario Power Plants' 'Clean Air Initiative' Being Announced Today in Buffalo, TORONTO STAR, May 1, 2003, at C1, available at 2003 WLNR 5982008 (quoting Ontario Environment Minister Chris Stockwell as saying that the United States has “200 coal-fired plants in the northeast spewing coal-fired pollution into Ontario,” compared to three Canadian plants).

124. See, e.g., WEISS ET AL., *supra* note 80, at 579.

125. HUNTER ET AL., *supra* note 16, at 555; see also Peter Ballantyne, *International Liability for Acid Rain*, 41 U. TORONTO FAC. L. REV. 63, 63 (1983) (describing how negotiations between the two countries reached an impasse in the early 1980s amidst claims of bad faith); Alastair R. Lucas, *Acid Rain: The Canadian Position*, 32 U. KAN. L. REV. 165 (1983–1984) (describing differences in how U.S. and Canadian scientists analyze the acid rain problem); Jeffrey L. Roelofs, *United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems*, 26 CORNELL INT'L L.J. 421, 440–42 (1993) (describing stalemate and U.S. refusal to do more than study the problem—described as “research before action”); Gregory Wetstone & Armin Rosencranz, *Transboundary Air Pollution: The Search for an International Response*, 8 HARV. ENVTL. L. REV. 89, 111–12 (1984) (describing the history of the negotiations and the reluctance of the United States to recognize an environmental problem).

126. Roelofs, *supra* note 125, at 440.

127. Agreement on Air Quality, U.S.-Can., Mar. 13, 1991, 30 I.L.M. 676 (1991); see also *Bush Says U.S.-Canada Air Quality Agreement Signifies “Extraordinarily Strong” Relations*, 14 INT'L ENV'T REP. (BNA) 174 (1991) (citing agreement as evidence that Canada and the United States have the “world’s most successful environmental relationship”). For a discussion of the U.S. approach to acid rain under the Clean Air Act Amendments of 1990, see Roelofs, *supra* note 125, at 442–44.

128. See Roelofs, *supra* note 125, at 444–51.

129. See HUNTER ET AL., *supra* note 16, at 556 (describing how the parties added Annex 3 in 2000); see also Jonathan Iversen, *Transboundary Air Pollution: Moving Toward International Consensus*, 2001 COLO. J. INT'L ENVTL. L. & POL'Y 161, 165–69 (2001) (providing an overview of the agreement).

emissions from a variety of coating and refinishing operations, among other things.¹³⁰ In a similar vein, the United States agreed to call for new state implementation plans under the Clean Air Act, requiring states to submit new plans to reduce NO_x emissions in a regulatory action known as the NO_x SIP Call.¹³¹ The United States also obligated itself to implement VOC emissions reductions from a list of forty-one types of emitters and implement performance standards for new emissions sources in thirty-five categories.¹³² The 2000 Ozone Annex reads like a highly-detailed and ambitious recipe for harmonizing standards on both sides of the U.S.-Canada border. Most recently, Canadian Environment Minister John Baird and U.S. Environmental Protection Agency Administrator Stephen Johnson announced that they would begin negotiating an annex for particulate matter pollution.¹³³ Given the "withering criticism" leveled at Johnson and the EPA over a recent decision to let stand a ten-year-old standard for fine particulate matter however,¹³⁴ the United States is extremely unlikely—having passed on

130. Protocol Between the Government of the United States of America and the Government of Canada Amending the "Agreement Between the Government of the United States of America and the Government of Canada on Air Quality", U.S.-Can., Dec. 7, 2000, http://www.ec.gc.ca/cleanair-airpur/caol/air/can_usa_e.html [hereinafter Ozone Annex]; see, e.g., Dan McDermott, Editorial, *Make Power Plants Coal-Free in 2007*, HAMILTON SPECTATOR, Sept. 15, 2003, at A11 (describing the benefits of complying with the Ozone Annex). At the time, U.S. citizens complained loudly about the harm caused south of the border by Canadian transboundary pollution. See, e.g., Tom Cohen, *Power Plants: Canadian Pollution Sickens Americans*, GRAND FORKS HERALD, Feb. 6, 2001, at A3 (describing complaints by New York and Connecticut over transboundary pollution flowing south); *N.Y., Conn. AGs Charge Ontario Power's Plans for Coal Plants Are Inadequate*, UTIL. ENV'T REP., Feb. 9, 2001, at 6 (describing a joint letter from New York Attorney General Elliot Spitzer and Connecticut Attorney General Richard Blumenthal to Canadian Environment Minister David Anderson to establish a review panel to examine plans to reduce coal plant emissions).

131. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57,356 (Oct. 27, 1998) (to be codified at 40 C.F.R. pts. 51, 72, 75, and 96).

132. Ozone Annex, *supra* note 130.

133. Press Release, Env't Can., Canada and U.S. Move Forward to Reducing Air Pollution (Apr. 13, 2007), available at <http://www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=1204208C-4F8B-45F8-A6C5-2BEA279D51D5>.

134. Clean Air Fine Particle Implementation Rule, 72 Fed. Reg. 20,586-01 (Apr. 25, 2007) (to be codified at 40 C.F.R. pt. 51). The EPA tightened a 24-hour ambient air quality standard but let stand an annual standard, drawing criticism from a wide variety of groups and Northeastern states suffering downwind fine particulate matter pollution from Midwestern States. Daniel Cusick, *U.S., Canada Agreement Will Target Transborder Soot*, GREENWIRE, Apr. 13, 2007 (on file with author).

protecting American populations—to engage with the problem of improving Canadian air quality.¹³⁵

Despite early cheers of success, progress under the Air Quality Agreement and the companion Annex 3 has occurred only in fits and starts. Due in large part to the 1990 Clean Air Act Amendments, which imposed an emissions trading program for power plant emissions of SO₂, transboundary transport of SO₂ declined substantially in the 1990s.¹³⁶ Momentum from Clinton Administration initiatives reduced emissions well into the Bush Administration, but progress on the legal and regulatory front has stalled since 2000.¹³⁷ Although NO_x emissions have continued a downward decline that began in 1997,¹³⁸ sulfur dioxide emissions from electric generating plants have plateaued since 2000.¹³⁹

One need not look far to uncover the reason for the recent stall in progress. Since 2000, the U.S. federal government has not made environmental issues a top priority.¹⁴⁰ Although President Bush has proposed a further tightening of the original SO₂ cap under his “Clear Skies Initiative,” he has been unable to push that initiative through Congress, due to opposition from Democrats.¹⁴¹ The Democrats, offering competing air pollution proposals which are more ambitious than the Clear

135. Given the divergent interests of the Ontario provincial government and the Canadian federal government, it would likely be of little interest to the former that the much more conservative federal government has commenced negotiations with U.S. environmental officials.

136. U.S. ENVTL. PROTECTION AGENCY, NATIONAL AIR QUALITY AND EMISSIONS TRENDS REPORT, 45 fig.2-56 (2003); see also Jennifer Yelin-Kefer, *Warming Up to an International Greenhouse Gas Market: Lessons from the U.S. Acid Rain Experience*, 20 STAN. ENVTL. L.J. 221, 224–41 (2001) (describing market mechanisms for controlling acid rain).

137. See *supra* notes 102–103 and accompanying text.

138. INT’L JOINT COMM’N, UNITED STATES CANADA AIR QUALITY AGREEMENT, PROGRESS REPORT 2004, 4 fig.3, 20 fig.12 (2004), available at <http://www.epa.gov/AIRMARKET/progsregs/usca/docs/airus04.pdf>.

139. *Id.* at 2 fig.2; see *supra* note 136.

140. See *supra* note 102 and accompanying text.

141. President George W. Bush signed the Clear Skies Initiative in 2002. The initiative called for emission reductions through voluntary programs. See *The Clear Skies Initiative*, Executive Summary (Feb. 14, 2004), available at <http://www.whitehouse.gov/news/releases/2002/02/clearskies.html>; cf. Michael Traynor, *Citizenship in a Time of Repression*, 35 STETSON L. REV. 775, 778 (2006) (complaining about the government’s use of terminology and finding it “appall[ing]...that...a measure that would increase pollution” is described as the “Clear Skies Initiative”). For a general discussion, see Ronald P. Jackson, Jr., *Extending the Success of the Acid Rain Provisions of the Clean Air Act: An Analysis of the Clear Skies Initiative and Other Proposed Legislative and Regulatory Schemes To Curb Multi-Pollutant Emissions from Fossil Fueled Electric Generating Plants*, 12 U. BALT. J. ENVTL. L. 91 (2005) (analyzing and describing the Clear Skies Initiative).

Skies Initiative and also address greenhouse gas regulation, have stalemated Congress.¹⁴² The reduction of SO₂ emissions has thus become a hostage to partisan wrangling and has been shelved in favor of more politically salient issues such as terrorism.

B. *The Makings of a Transboundary Air Pollution Lawsuit*

From a Canadian perspective, the time appears ripe for a lawsuit over the continuing transboundary air pollution affecting Ontario. Every year, fine particulate matter¹⁴³ and ozone air pollution annually cause almost 5,000 premature deaths, over 18,000 hospital admissions, over 21,000 emergency room visits, and over four million minor illnesses.¹⁴⁴ These adverse health outcomes impose substantial costs in the form of direct and indirect health care costs, loss of productivity and tax revenue, and the imputed value of loss of life.¹⁴⁵ Last year, Ontario estimated that yearly air pollution related health costs were more than \$6.6 billion. The amount is sobering: \$600 for every man, woman and child in Ontario, or \$1,000 for every man, woman, and child in the Toronto metro area, where most of the health effects are concentrated.¹⁴⁶ Air pollution causes a variety of other environmental damages too—including loss of visibility and damage to buildings, outdoor structures, crops, and forests—costing yearly an additional \$3 billion annually.¹⁴⁷

142. See *supra* note 103.

143. Fine particulate matter (PM_{2.5}), which consists of microscopic airborne solid or liquid particles, is the by-product of virtually any combustion process. The “2.5” subscript denotes the maximum diameter, in microns, of particulate matter that is considered “fine.” Particulate matter, denoted PM₁₀, is smaller than ten microns in diameter, but larger than 2.5 microns in diameter. Fine particulate matter is microscopic and thus small enough to be inhaled and lodge in lung tissue, where it can become carcinogenic or aggravate other lung diseases. A number of epidemiological studies have recently identified fine particulate matter, and ground-level ozone to a lesser degree, as the most important pollution contributors to premature deaths and other illnesses. See generally U.S. Environmental Protection Agency, Particulate Matter, <http://www.epa.gov/particles/> (last visited Sept. 16, 2007).

144. ONT. MINISTRY OF THE ENV'T, TRANSBOUNDARY AIR POLLUTION IN ONTARIO 59 (June 2005), available at <http://www.ene.gov.on.ca/envision/techdocs/5158e.pdf>.

145. *Id.* at 59; see also ONT. MED. ASS'N, THE ILLNESS COSTS OF AIR POLLUTION IN ONTARIO: A SUMMARY OF FINDING (2000), available at <http://www.oma.org/phealth/icap.htm>. Of course, the health impacts of pollution are well understood and nothing new. See, e.g., David V. Bates & Ronnie Sitzo, *Air Pollution and Hospital Admissions in Southern Ontario: The Acid Summer Haze Effect*, 43 ENVTL. RES. 317, 328 (1987); Jonathan M. Samet et al., *The Relationship Between Air Pollution and Emergency Room Visits in an Industrial Community*, 31 J. AIR POLLUTION CONTROL ASS'N 236 (1981).

146. ONT. MINISTRY OF THE ENV'T, *supra* note 144, at 61 tbl.4.5.

147. *Id.*

The international nature of the problem renders air pollution particularly difficult to tackle. More than half of Ontario's harmful air pollution originates in the United States¹⁴⁸ In terms of cost, transboundary pollution accounts for \$3.7 billion of the \$6.6 billion in health costs, and half of the \$3 billion of other environmental damages.¹⁴⁹ Table 1 below shows the Canadian estimates for the total incidents of adverse health outcomes and the costs of those outcomes for particulate matter and ozone pollution in Ontario.

Table 1¹⁵⁰

	Incidents from Ontario pollution	Incidents from transboundary pollution
Premature deaths	2,130	2,751
Hospital admissions	6,541	11,939
Emergency room visits	7,950	13,925
Minor illnesses	2,119,608	2,682,437

Certainly, Ontario has its own housecleaning to do. Canadian environmental organizations have often criticized Ontario's smog plan as insufficient, and even a bit misleading.¹⁵¹ Ontario recently shelved a plan to retire all of its coal-fired power plants by 2007.¹⁵² First, the Ontario government admitted that it did not have the means to replace the electricity generating capacity of those plants until 2009, and then, under pressure, it conceded that even 2009 might be too ambitious.¹⁵³

148. *Id.* at 54.

149. *Id.* at 53–64 tbl.4.1; see also Stewart Elgie, *Federal, State and Provincial Interplay Regarding Cross-Border Environmental Pollution*, 27 CAN.-U.S. L.J. 205, 215 (2001) (describing the environmental interdependence between the United States and Canada and stating that “[f]ifty percent of Ontario’s air pollution comes from the U.S., [and] about eighty percent of the pollution of the Great Lakes comes from the U.S....”).

150. ONT. MINISTRY OF THE ENV'T, *supra* note 144, at 59 tbl.4.3.

151. See, e.g., INT'L JOINT COMM'N, SYNTHESIS OF PUBLIC COMMENT ON THE 2004 PROGRESS REPORT UNDER THE CANADA/UNITED STATES AIR QUALITY AGREEMENT (2005), available at <http://www.ijc.org/php/publications/pdf/ID1585.pdf>.

152. In a 2003 campaign promise, Ontario Liberal Party leader Dalton McGuinty promised to close all coal-fired power plants by 2007. McGuinty, now Ontario's Premier, admits that the province will not be able to get by without those power plants in 2007 and that it must delay that shutdown date to 2009, another target date that has been called into question. See *Liberals Take Heat over Coal Power Plants on Day of Record May Consumption*, CBC NEWS, May 30, 2006, http://www.cbc.ca/canada/toronto/story/2006/05/30/tocoalplants_20060530.html; *Liberals Will Delay Closing Two Coal Plants Past 2009*, CBC NEWS, June 9, 2006, <http://www.cbc.ca/canada/toronto/story/2006/06/09/topower20060609.html>.

153. See, e.g., *Liberals Take Heat*, *supra* note 152.

There are signs, however, that Canada is now taking the air pollution problem seriously. Canadian Prime Minister Harper recently introduced a federal Clean Air Act, which he has sent to committee in the House of Commons.¹⁵⁴ Ontario also has moved ahead, albeit slowly, with finding alternative sources of energy to replace the coal-fired capacity that it plans to mothball, including a newfound interest in nuclear energy.¹⁵⁵ The Canadian Broadcasting Company has reported that the Ontario government announced its plans to refurbish old nuclear power plants despite “raising the ire of environmentalists....”¹⁵⁶

Assuming that Ontario is willing and able to undertake its own house-cleaning, and perhaps *because* Ontario is willing to clean house, finding a way to make the United States take Ontario’s environmental concerns seriously becomes a high priority. Laurel Broten, Ontario’s Minister of the Environment, has missed few opportunities to remind Americans that air pollution emitted in the United States affects Canadians.¹⁵⁷ Through U.S. counsel, the Minister submitted comments to the Bush Administration’s proposed New Source Review reforms.¹⁵⁸ Those

154. Bill C-30, An Act To Amend the Canadian Environmental Protection Act, 1999, the Energy Efficiency Act, and the Motor Vehicle Fuel Consumption Standards Act (Canada’s Clean Air Act), was introduced on October 19, 2006, referred to Committee on December 4, 2006, and reported out of Committee with substantial amendments on March 30, 2007. See Bill C-30, An Act To Amend the Canadian Environmental Protection Act, 1999, the Energy Efficiency Act and the Motor Vehicle Fuel Consumption Standards Act (Canada’s Clean Air Act), 2006 Parl., 1st Sess. (2006), available at <http://www.parl.gc.ca/legisinfo/index.asp?Language=E&Chamber=N&StartList=A&EndList=Z&Session=14&Type=0&Scope=1&query=4842&List=stat>.

155. See, e.g., Steve Erwin, *Six Ontario Sites To Be Considered for New Nuclear Reactors*, CAN. PRESS, June 13, 2006 (describing efforts to build nuclear power plants in Ontario); Luann LaSalle, *Nuclear Division of SNC-Lavalin Aiming To Help Build Ontario Power Plants*, CAN. PRESS, Nov. 20, 2006 (describing the move to build nuclear power plants and how environmental concerns over nuclear power decrease when balanced against concerns regarding greenhouse gas emissions by coal, gas, and oil-fueled power plants); *Ontario Power Authority Report Eyeing Three Sites for New Nuclear Plant*, CAN. PRESS, Nov. 10, 2006 (describing the possibility of a new nuclear power plant on shores of Lake Erie).

156. *Ontario Will Build New, Refurbish Old, Nuclear Plants*, CBC NEWS, June 14, 2006, <http://www.cbc.ca/canada/toronto/story/2006/06/14/to-nuclear20060614.html>.

157. The Minister has addressed the National Press Club in Washington, D.C., Hon. Laurel Broten, Minister of the Env’t, Media Briefing on Transboundary Air (May 10, 2006), available at <http://www.ene.gov.on.ca/envision/news/speeches/051006.htm>; filed an amicus brief in the case of *United States v. Cinergy Corp.*, Brief of Amicus Curiae Province of Ontario in Support of Plaintiff-Appellee and Plaintiffs-Intervenors-Appellees and Supporting Affirmance, *United States v. Cinergy Corp.*, 458 F.3d 705 (7th Cir. 2006) (No. 06-1224), available at <http://www.ene.gov.on.ca/envision/air/transboundary/CinergyAppeal.pdf>; and convened a special executive committee on transboundary air pollution.

158. See Press Release, Ont. Ministry of the Env’t, *Ontario Challenges U.S. To Protect Air Quality: Reducing Transboundary Air Pollution Will Benefit All Ontarians* (Feb. 17, 2006),

reforms, if adopted, would have weakened the Clean Air Act regulations mandating the upgrade of pollution control equipment whenever a new pollution source is constructed or substantially modified.¹⁵⁹ The Minister's comments, however, fell on deaf ears. At the very least, as far as environmental policy is concerned, the Minister's input was less influential than that of many other stakeholders in the Bush Administration. Ontario officials may have to confront the uncomfortable and un-Canadian reality that filing a transnational civil lawsuit may be the only way to secure American engagement on the problem of transboundary air pollution.

III. EXPLORING DOMESTIC SOLUTIONS: THE POSSIBILITIES OF LEGISLATION AND LITIGATION

For the first time, domestic litigation may be a reasonable alternative for Canadians when diplomatic and bilateral dispute resolution procedures have failed.¹⁶⁰ Two landmark cases may allow Ontario to recover damages for transboundary air pollution: *Pakootas v. Teck Cominco*, a U.S. case, and *British Columbia v. Imperial Tobacco*, a Canadian case. Together with significant advances in air quality modeling and in epidemiological research that link certain types of air pollution with specific health effects, Ontario may have a unique opportunity to forge a legislative and litigation strategy for recovery against responsible parties in the United States. It may now be quite possible for Ontario to use domestic law to remedy harms from transboundary pollution.

available at <http://www.ene.gov.on.ca/envision/news/2006/021701.htm> (reproducing comments filed with the EPA by Canadian Environment Minister Laurel Broten regarding Ontario's concerns with EPA plans to allow higher emissions from coal-burning power plants); see also Press Release, Ont. Ministry of the Env't, Background: Support for Ontario Filing Comments with the United States Environmental Protection Agency (Feb. 17, 2006) available at <http://www.ene.gov.on.ca/envision/news/2006/021701mb2.htm> (listing environmentalists and politicians who support Ontario's position to encourage the United States to reduce smog emissions).

159. See LAUREN BROTEN & MICHAEL BRYANT, PREVENTION OF SIGNIFICANT DETERIORATION, NONATTAINMENT NEW SOURCE GENERATING UNITS, AND NEW SOURCE PERFORMANCE STANDARDS: EMISSIONS TEST FOR ELECTRIC GENERATING UNITS (Feb. 17, 2006) (comments filed with U.S. Env't. Protection Agency, Docket No. OAR-2005-0163), available at <http://www.ene.gov.on.ca/envision/air/transboundary/fullnsrcomments.pdf>.

160. For literature exploring lawsuits by Canadians against U.S. polluters in U.S. courts (not Canadian courts as discussed here), see Fischer, *supra* note 121; see also John Benham, *Acid Rain: The Limitations of Private Remedies*, 8 S. ILL. U. L.J. 515 (1983); Wooley, *supra* note 114, at 139.

A. *The Jurisdictional Barriers*

For a long time, jurisdictional obstacles prevented Canadians from suing Americans for environmental damage caused by pollution originating in the United States.¹⁶¹ The first barrier to relief was subject matter jurisdiction, in the form of the local action rule. That long-standing common law rule provided, in broad terms, that “an action in tort for damage to real property must be brought where the property is located.”¹⁶² Although courts applied the local action rule more liberally in the United States,¹⁶³ the English common law from which the Canadian and U.S. rule derived¹⁶⁴ excluded “all types of trespass to foreign...land....”¹⁶⁵ As Chief Justice Baxter of the New Brunswick Supreme Court once explained: “[A]n action founded on trespass to realty in a foreign country whether the title does or does not come into question can[not] be tried here.”¹⁶⁶ The rule thus prevented Canadian citizens

161. See Michael I. Jeffery, *Transboundary Pollution and Cross-Border Remedies*, 18 CAN.-U.S. L.J. 173, 173–74 (1992) (“Until recently, most plaintiffs in both the U.S. and Canada who suffered damage from a source of pollution originating outside the jurisdiction in which the damage occurred, faced formidable obstacles in obtaining redress.”); see also Stephen McCaffrey, *Private Remedies for Transfrontier Pollution Damage in Canada and the United States: A Comparative Survey*, 19 U. W. ONT. L. REV. 35 (1981) (describing access problems for private suits). Indeed, the local action rule prevented private lawsuits against the Trail Smelter, leading to the famous Trail Smelter Arbitration. WEISS ET AL., *supra* note 80, at 262.

162. Gallob, *supra* note 17, at 96; see also *British South Africa Co. v. Companhia de Moçambique* [1893] A.C. 602 (H.L.), *rev'g* [1892] 2 Q.B. 358 (C.A.). The *Moçambique* case was the seminal case that established the local action rule.

163. See, e.g., Gerald F. FitzGerald, Note, *The Proposed Canada-United States Transboundary Air Pollution Agreement: The Legal Background*, 20 CAN. Y.B. INT'L L. 219, 238 (1982) (describing the U.S. approach); H. Scott Fairley, *Private Remedies for Transboundary Injury in Canada and the United States: Constraints Upon Having to Sue Where You Can Collect*, 10 OTTAWA L. REV. 253, 264–67 (1978) (describing the broader traditional approach of U.S. courts to the local action rule); Jeffery, *supra* note 161, at 174–76 (explaining how U.S. courts interpreted the local action rule more broadly than their Canadian counterparts); Stephen C. McCaffrey, *Transboundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States*, 3 CAL. W. INT'L L.J. 191, 221–24 (1973) (describing the “American courts’ disenchantment with the local action rule”).

164. English courts had “no jurisdiction to entertain actions where the facts occurred abroad,” because of the “ancient common law practice whereby juries were chosen from persons acquainted with the facts of a case, who therefore decided questions of fact from their own knowledge and not from evidence of witnesses.” Fairley, *supra* note 163, at 258 (1978) (quoting J. MORRIS, *THE CONFLICT OF LAWS* 293 (1971)).

165. Gallob, *supra* note 17, at 96–97; see also William K. King, *Transboundary Pollution: Canadian Jurisdiction*, 1 CAN.-AM. L.J. 1, 9–14 (1982) (describing the Canadian approach to the local action rule in detail); McCaffrey, *supra* note 163, at 218–19 (describing the local action rule and why it presented a barrier to suit); *Rylands v. Fletcher*, (1868) 3 L.R.E. & I. App. 330.

166. *Albert v. Fraser Companies Ltd.*, [1937] 1 D.L.R. 39, 46; see also *Boslund v. Abbotsford Lumber, Mining & Dev. Co.*, [1925] 1 D.L.R. 978; *Brereton v. Canadian Pacific Ry.*, [1898]

from filing suits in the United States against Americans for harm felt in Canada. Cases where Canadian residents have successfully sued U.S. corporations for pollution originating from the United States, therefore, have been rare.¹⁶⁷ In fact, until the mid-1970s, no recorded decision existed involving Canadians suing Americans in a U.S. court for transboundary pollution.¹⁶⁸ Unfamiliarity with the legal system, the costs of bringing suit abroad, and the perception of bias (real or imagined)¹⁶⁹ also practically discouraged Canadians from suing in U.S. courts.¹⁷⁰

Not only were Canadians unlikely to succeed if they filed an action in the United States, they were also unlikely to sue successfully in a Canadian court. In Canada, a court could overcome the local action rule,¹⁷¹ but personal jurisdiction often would be lacking. Indeed, traditional concepts of personal jurisdiction—derived from international law concepts of territorial sovereignty—prevented lawsuits where the defendant was not present.¹⁷² “Extraterritorial service of process was unknown at

29 O.R. 57.

167. For a notable exception, see *Michie v. Great Lakes Steel Div., Nat'l Steel Corp.*, 495 F.2d 213 (1974) (thirty-seven Canadian residents sued three Michigan corporations for nuisance arising from the discharge of air pollutants, but ultimately settled out of court); see also Ricci, *supra* note 120, at 308–09 (describing the *Michie* case and settlement). See generally McCaffrey, *supra* note 161, at 36 (noting that “[i]n view of the seriousness of the [transboundary pollution] problem, it is somewhat surprising that there are not more reported lawsuits”).

168. See McCaffrey, *supra* note 163, at 220.

169. See Kevin M. Clermont & Theodore Eisenberg, *Xenophilia in American Courts*, 109 HARV. L. REV. 1120, 1121–22, 1143 (1996) (exploring reasons why foreigners fear U.S. courts, and concluding that foreigners do not fare badly in U.S. litigation and that bias does not exist). But see Kevin R. Johnson, *Why Alienage Jurisdiction? Historical Foundations and Modern Justification for Federal Jurisdictions over Disputes Involving Noncitizens*, 21 YALE J. INT'L L. 1, 35 (1996) (describing the current bias that exists against foreign citizens). See generally Parrish, *supra* note 14, at 405–06 nn.221–22 (describing the debate over whether bias exists against foreign citizens).

170. See Austen L. Parrish, *Sovereignty, Not Due Process: Personal Jurisdiction over Nonresident Alien Defendants*, 41 WAKE FOREST L. REV. 1, 42–50 (2006) (describing the unique burdens for foreigners litigating in U.S. courts); see also Parrish, *supra* note 14, at 408–09 (describing the perception of bias by Canadians that U.S. courts will favor U.S. interests in transboundary pollution disputes).

171. *Phillips v. Eyre*, [1870] 6 Q.B. 1 (finding that suit may be brought in England for a wrongful act committed abroad if: (1) the wrong is of a character that it would have been actionable if committed in England; and (2) the act could not be justified by the law of the place where it occurred). See generally McCaffrey, *supra* note 163, at 240 (explaining why subject matter jurisdiction would not be an obstacle to suit in Canada for transboundary harm originating in the United States).

172. See Parrish, *supra* note 170, at 8–10; see also McCaffrey, *supra* note 163, at 217, 239–42 (“In some transnational pollution actions it will be impossible to bring defendant [sic] before a court at the place of the injury since the conditions necessary for assertion of personal jurisdiction will not be present.”); Roger H. Transgrud, *The Federal Common Law of Personal Jurisdiction*,

common law,¹⁷³ and jurisdiction ended at the border.¹⁷⁴ Although Canadian courts have now recognized the effects test¹⁷⁵—permitting jurisdiction when effects are felt within the province—courts have been hesitant to exercise personal jurisdiction over foreign defendants “with respect to the pursuit of transboundary mischief matters.”¹⁷⁶ Even in the late 1970s, “judicial minds remain[ed] very sensitive [in Canada] to any modality which [might] be considered as constituting inappropriate interference with another jurisdiction.”¹⁷⁷ Traditionally then, the local action rule, combined with the personal jurisdiction doctrine, prevented private lawsuits for transboundary harms.¹⁷⁸ The famous *Trail Smelter* Arbitration has often been cited as an example where these two rules combined to prevent domestic litigation.¹⁷⁹ In fact, the 1909 Boundary Waters Treaty was drafted precisely because at the time there existed “no remedies or redress” for transboundary harms.¹⁸⁰

57 GEO. WASH. L. REV. 849, 871–72, 872 nn.116–20 (1989) (describing how the original rules of jurisdiction were based on rules of territorial sovereignty, and listing early cases that approached jurisdiction based on the Law of Nations).

173. McCaffrey, *supra* note 163, at 241; *see also* *Pennoyer v. Neff*, 95 U.S. 714 (1877).

174. *See generally* Max Rheinstein, *The Constitutional Bases of Jurisdiction*, 22 U. CHI. L. REV. 775, 796–808 (1955) (describing how the American colonies inherited jurisdictional principles from international law that recognized territorial borders as the key limitation on a sovereign’s authority and jurisdiction); James Weinstein, *The Dutch Influence on the Conception of Judicial Jurisdiction in 19th Century America*, 38 AM. J. COMP. L. 73, 74–85 (1990) (describing early American jurisdictional theories based on international territoriality principles developed by Dutch theorists).

175. *Moran v. Pyle Nat’l (Can.) Ltd.*, [1973] 43 D.L.R. (3d) 239, 250–51 (Can.) (finding personal jurisdiction when foreseeable harm could be caused in another province); *Jenner v. Sun Oil Co.*, [1952] 2 D.L.R. 526, 526 (Ont. High Ct.) (finding jurisdiction over the American defendant in a defamation case, even though the defamatory words were not written or uttered in the jurisdiction when “they were so transmitted as to be published within the jurisdiction” in such a manner as to be likely to “cause the plaintiff to suffer substantially in his reputation” in Ontario).

176. Fairley, *supra* note 163, at 268.

177. *Id.* at 268–69 (citing *Interprovincial Coops. Ltd. v. Manitoba* [1976] 1 S.C.R. 477 (Can.)).

178. *See id.* at 271 (noting that “Canadian legal precedents tend to be unnecessarily restrictive in respect” to transboundary pollution claims).

179. *See HUNTER ET AL.*, *supra* note 16, at 511; *WEISS ET AL.*, *supra* note 80, at 262 (describing the traditional jurisdictional hurdles to private litigation in the context of the *Trail Smelter* Arbitration). For the most comprehensive analysis of the case and its impact on modern international environmental law, *see* TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE TRAIL SMELTER ARBITRATION, *supra* note 11.

180. Robert Day Scott, *The Canadian-American Boundary Waters Treaty: Why Article II?*, 36 CAN. B. REV. 511, 518 n.15 (1958) (quoting the Draft Press Release, prepared for Secretary Knox, in Chandler P. Anderson Papers, Manuscript Division, Library of Congress) (“[T]he treaty proceeds to establish a new rule for the benefit and protection of those interests, on either side of the boundary...there being, under existing conditions no remedies or redress in such cases.”); *see*

Jurisdictional barriers were not the only barriers to relief. Firstly, in Canada the statutory authority defense also often prevented litigation. “[I]f properly invoked, [the statutory authority defense] may provide a complete defense.”¹⁸¹ The defense applied in “most Canadian jurisdictions, [because] many activities which cause pollution in one form or another are permitted by statute.”¹⁸² The seminal case, *Manchester v. Farnworth*, explains it well: “[w]hen Parliament has authorized a certain thing to be made or done in a certain place, there can be no action for nuisance caused by the making or doing...so authorized.”¹⁸³ Even if federal or provincial environmental legislation existed, it was limited and “not as prevalent in Canada as it [was] in the United States.”¹⁸⁴ Secondly, standing doctrines, as interpreted in Canada, also at one time created practical problems to redress.¹⁸⁵ Even modern environmental legislation—such as Ontario’s Environmental Protection Act—was assumed to apply only to conduct occurring within the province.¹⁸⁶ Lastly, even if a judgment could be secured, enforcing the judgment against a defendant without assets in the jurisdiction could well be futile.¹⁸⁷ More practically, the relatively small size of damage awards, the lack of contingency fees, the unavailability of jury trials, and the reality that the losing parties usually pay attorneys fees have made Canadian litigation less attractive.¹⁸⁸

also McCaffrey, *supra* note 163, at 196 (discussing reasons for 1909 Boundary Waters Treaty and quoting Chandler P. Anderson).

181. Jeffery, *supra* note 161, at 175.

182. *Id.* (citing as examples, *Smiley v. Ottawa*, 2 D.L.R. 390 (1941) (Ont.); *B.C. Pea Growers Ltd. v. Portage La Prairie*, 43 D.L.R.2d 713 (1963) (Man.); *N. Vancouver v. McKenzie Barge & Marine Ways Ltd.*, S.C. 377 (1965) (Can.)).

183. *Manchester v. Farnworth*, [1930] A.C. 171, 183 (H.L. U.K.).

184. Jeffery, *supra* note 161, at 182–83.

185. *Id.* at 179.

186. See McCaffrey, *supra* note 163, at 195 (describing the traditional “reluctan[ce] to grant injunctive relief because of the possibility that such would be viewed as an attempt to impose regulations on a foreign activity and as an improper interference with the economic affairs of the foreign state”). See generally Allan E. Gotlieb, *Extraterritoriality: A Canadian Perspective*, 5 N.W. J. INT’L L. & BUS. 449, 457–59 (1983) (describing the Canadian approach to extraterritoriality, Canadian concern over U.S. extraterritorial application of laws, and the enactment of defensive legislation); David Leyton-Brown, *Extraterritoriality in Canadian-American Relations*, 36 INT’L J. 185, 205–06 (1980) (describing instances of extraterritorial U.S. laws impacting Canada).

187. See McCaffrey, *supra* note 163, at 217 (“Further, if defendant has no assets within the jurisdiction in which the injury occurred, he might simply disregard any proceedings there, forcing plaintiff to obtain a default judgment of uncertain enforceability in defendant’s country.”).

188. See McCaffrey, *supra* note 161, at 62–63; cf. John S. Willems, *Shutting the U.S. Court-house Door? Forum Non Conveniens in International Arbitration*, DISP. RESOL. J., Aug./Oct.

Times have changed. The legal impediments to Canadians suing Americans for U.S.-originated pollution “are being removed gradually by many jurisdictions in what may be characterized as a more focused attempt to prevent or curtail polluting activities and to ensure that those responsible bear the costs....”¹⁸⁹ By the 1970s, personal jurisdiction law had developed in Canada to permit suit “in transboundary pollution cases founded on nuisance or trespass theories....”¹⁹⁰ In a seminal article in 1973, Stephen McCaffrey concluded that although transboundary pollution cases might be difficult to prosecute, at least “the courts’ doors are open.”¹⁹¹ And in 1986, several American states and Canadian provinces—including Ontario¹⁹²—signed the Uniform Transboundary Reciprocal Access Act. That Act, originating from the Canadian and American Bar Associations, “provides a remedy to actual or potential victims of transboundary pollution in the courts of the polluter’s residence if a victim residing within the country of origin would have had a remedy for that same pollution harm.”¹⁹³ Although the two nations have not accepted the Draft Treaty,¹⁹⁴ and it has not been widely adopted by the states and provinces,¹⁹⁵ Americans and Canadians are nevertheless now “accustomed to asserting their rights and seeking redress for wrongs in each other’s courts.”¹⁹⁶

The *Pakootas v. Teck Cominco*¹⁹⁷ case, involving an application of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),¹⁹⁸ is a major reason that the legal landscape is changing. *Pakootas* symbolizes many of the forces that have appeared to make litigation more palatable, and bilateralism less palatable. First,

2003, at 54, 56 (“Litigants are attracted to the high quality of U.S. courts, the willingness of U.S. courts to exercise jurisdiction over international disputes, and, rightly or wrongly, the belief that U.S. courts are ready to award large sums of damages.”).

189. Jeffery, *supra* note 161, at 194.

190. McCaffrey, *supra* note 163, at 249.

191. *Id.* at 259; *cf.* Fischer, *supra* note 121.

192. Transboundary Pollution Reciprocal Access Act, R.S.O. ch. T.18 (1990) (Can.).

193. Gallob, *supra* note 17, at 92.

194. *Id.*

195. See John H. Knox, *The CEC and Transboundary Pollution*, in GREENING NAFTA: THE NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION 80, 87–88 (David L. Markell & John H. Knox eds., 2003).

196. Wang, *supra* note 26, at 182 (describing the reliance on domestic law in U.S. and Canadian disputes).

197. 35 ENVTL. L. REP. 20,083 (E.D. Wash. 2004) (order denying motion to dismiss on jurisdictional grounds), *aff’d*, 452 F.3d 1066 (9th Cir. 2005).

198. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (2007).

the plaintiffs in *Pakootas* sought to leapfrog federal efforts to settle the dispute. Relatively soon after the filing of the complaint, Canadian defendant *Teck Cominco* reached a settlement agreement with the EPA staying the cleanup order. But the *Pakootas* suit, unaffected by the settlement agreement, nevertheless sought to enforce the cleanup order.¹⁹⁹ Second, from the other side of the border, the case also offers a potentially important lesson in drafting self-serving statutes. In upholding the District Court's refusal to grant *Teck*'s motion to dismiss, the Ninth Circuit reached the surprising conclusion that "the suit involve[d] a domestic application of CERCLA,"²⁰⁰ even when regulating conduct occurring solely outside U.S. borders. The Ninth Circuit broadly interpreted the term "facility" in CERCLA as including the site where the hazardous waste that *Teck* discharged came to rest (i.e., on the banks of Lake Roosevelt in the United States). Hence, according to the Ninth Circuit, the suit did not involve an extraterritorial application of law.²⁰¹

Whether or not this surprising ruling withstands Supreme Court review²⁰² is beside the point; as a matter of statutory interpretation, Ontario *could* enact a statute that explicitly predicated liability on an event that takes place on Canadian soil—such as the receipt of air pollution on Canadian soil and by Canadian citizens—then liability, even if imposed upon U.S. polluters, would not be considered an extraterritorial exercise of jurisdiction. Or even if extraterritorial, the application would be permissible because significant effects are felt in Canada.²⁰³

Ultimately, whether the jurisdictional barriers are entirely gone, however, may not be the right question to ask; perceptions may be more important than reality. Potential American defendants believe the barriers are lower, and are deeply concerned. In the earlier stages of the ongoing

199. See *Pakootas*, 452 F.3d at 1071 n.10.

200. *Id.* at 1069.

201. *Id.* at 1074. The point is not that the Ninth Circuit's reasoning was sound; it was not. The court's reasoning and analysis is flawed in several respects. Rather the point is that what is good for the goose is good for the gander. If U.S. law permits such suits, then Canadian legislatures and courts may well be inclined to find that Canadian law permits the same kinds of suits.

202. The U.S. Supreme Court is considering *Teck Cominco*'s appeal and has invited the Solicitor General to file a brief representing the views of the United States. 127 S. Ct. 2930 (2007).

203. For a discussion of the "effects test" as an exception to a general presumption against extraterritoriality, see Parrish, *supra* note 14, at 387–99. The effects doctrine is a controversial exception to the usual limits of territorial jurisdiction. Joseph J. Norton, *The European Court of Justice Judgment in United Brands: Extraterritorial Jurisdiction and Abuse of Dominant Position*, 8 DENV. J. INT'L L. & POL'Y 379, 385 (1979). For an in-depth discussion of extraterritorial jurisdiction under international law and its prevalence, see U.N. Int'l Law Comm'n, *Report of the International Law Commission, 58th Session, Annex E – Extraterritorial Jurisdiction* 516, U.N. Doc. A/61/10 (2006), available at <http://untreaty.un.org/ilc/reports/2006/english/annexes.pdf>.

Trail Smelter case, the National Mining Association and the Edison Electric Institute lobbied EPA Administrator Michael Leavitt, Secretary of State Colin Powell, and Attorney General John Ashcroft to stop the EPA from enforcing administrative orders against Teck.²⁰⁴ Member firms of the Edison Electric Institute—electricity generation companies that have coal-fired power plants that emit the pollutants that flow north and foul Ontario's air—saw themselves as standing in Teck's shoes.²⁰⁵ The National Mining Association and the U.S. Chamber of Commerce also filed amicus briefs in the Ninth Circuit.²⁰⁶ Both groups were concerned with the possibility of Canadians extraterritorially applying their own law, and argued against the U.S. court setting a precedent by permitting the case to go forward.

B. Causation—Identifying the Defendants

Historically, if a plaintiff was able to navigate the various jurisdictional barriers to suit, proving that the defendant caused the transboundary harm was another challenge. The common law was not receptive to recovery when several possible defendants existed, let alone thousands.²⁰⁷ Where a discrete and identifiable source of pollution from a single defendant imposed measurable harm, an action in nuisance would lie to abate the environmental harm,²⁰⁸ or, in a modern case, provide for

204. See Parrish, *supra* note 14, at 411 (describing the “glass house” concern that “Canada might successfully use legal rather than diplomatic means to punish U.S. polluters”); see also Letter from Jack N. Gerard, President & CEO of the Nat'l Mining Ass'n, to Colin L. Powell, U.S. Sec'y of State, John Ashcroft, U.S. Attorney Gen., & Michael O. Leavitt, Adm'r, U.S. EPA (Apr. 22, 2004) (on file with author) [hereinafter Gerard Letter] (arguing that the effects would be “devastating” if U.S. companies had to defend against allegation that their facilities and activities violated Canadian environmental laws).

205. See, e.g., Letter from Thomas R. Kuhn, President of Edison Elec. Instit. to Colin L. Powell, U.S. Sec'y of State, & Thomas L. Sansonetti, Assistant Attorney Gen. for the Env't & Natural Res. Div. (June 2, 2004) (“The unilateral EPA action raises the possibility of Canadian retaliation against our member companies and other U.S. industries whose emissions may cross the international border.”); Gerard Letter, *supra* note 204 (questioning the wisdom of pursuing a Canadian company under U.S. environmental laws and addressing the possibility that Canada and Mexico may pursue similar actions under their own respective domestic laws against U.S. companies).

206. Brief of Amicus Curiae Chamber of Commerce of the United States of America in Support of Defendant-Appellant Supporting Reversal, *Pakootas v. Teck Cominco Metals*, 452 F.3d 1066 (9th Cir. 2005); Brief for Amici Curiae the National Mining Ass'n & the National Ass'n of Manufacturers Supporting Appellant & Reversal, *Pakootas v. Teck Cominco Metals*, 452 F.3d 1066 (9th Cir. 2005).

207. See WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS § 45 (1955). For a discussion of the problem in a related context, see Benham, *supra* note 160, at 540–46.

208. See, e.g., JAMIE CASSELS, THE UNCERTAIN PROMISE OF LAW: LESSONS FROM BHOPAL

a damages remedy.²⁰⁹ But modern pollution problems involving less discernible pollutants from multiple sources—such as the SO₂, VOCs, NO_x, and PM_{2.5} that literally millions of polluters emit—are ill-fitted for traditional tort remedies.²¹⁰

A comparison of two cases, decided almost a century apart, underscores the problem. In *Missouri v. Illinois*,²¹¹ the State of Missouri unsuccessfully sought to enjoin Chicago from flushing its untreated sewage into the Des Plaines River.²¹² The Des Plaines River feeds into the Illinois River, which empties into the Mississippi River just forty-three miles upstream of St. Louis.²¹³ A credible case was made that Chicago's sewage contributed to a second typhoid outbreak in St. Louis.²¹⁴ But the Court denied relief, noting that several other plausible explanations existed for the outbreak, and that therefore the plaintiff had failed to prove causation. This multiple-cause problem continues to create problems for recovery a hundred years later. Recently, the House of Lords grappled with the same sort of multiple cause issue in *Fairchild v. Glenhaven Funeral Services*.²¹⁵ There, the court found it necessary to explain (in a long and convoluted way) why an asbestos worker, who died from the asbestos-related disease mesothelioma, was entitled to recover in tort against firms that had employed him in asbestos-related occupations. Incredibly, the United Kingdom's highest court—some 40 years after the establishment of a link between asbestos and the lung disease mesothelioma²¹⁶—had to overrule a lower court, which remarkably held that neither firm could be found liable.²¹⁷

Given the common law hurdles in recovering against multiple defendants, modern environmental statutes have partially solved the problem. Those statutes imposed regulations that attempted, *ex ante*, to prevent

69 (1993).

209. *Id.*

210. *Id.* at 78. For a discussion of these problems in the climate change context, see David A. Grossman, *Warming up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1, 22–33 (2003). For a similar discussion in the acid rain context, see Fischer, *supra* note 121, at 449–50; Curtis Webb, *Causation in Acid Rain Litigation: Facilitating Proof with Joint Liability Theories*, 1983 BYU L. REV. 657, 657 (1983).

211. 200 U.S. 496 (1906).

212. *Id.* at 517.

213. *Id.*

214. *Id.* at 524–25.

215. [2002] U.K. H.L. 22.

216. *Id.* at 43, para. 7.

217. *Id.* at 40, para. 2.

harm, and also in some cases to provide an *ex post* remedy.²¹⁸ In fact, modern environmental statutes emerged precisely because of the common law's inability to deal with certain kinds of environmental harms. But, of course, these statutes only provided relief when legislatures specifically created a remedy. In the absence of a legislative response, recovery against multiple defendants—all of which could have but might not have caused the harm—has remained unlikely.²¹⁹

Yet a modern trend is emerging to counter this traditional bias against recovery from inchoate defendants.²²⁰ The increased use of statistical inferences in court proceedings and legislation suggest that courts are more receptive to finding causation than they once were. Again, two recent cases are instructive. *Agency for Health Care Administration v. Associated Industries of Florida*²²¹ involved the application of a Florida statute, which enabled Florida to recover tobacco-related health care costs from tobacco manufacturers. The Florida Supreme Court upheld the use of a “market-share” theory of liability,²²² permitting the plaintiffs to recover against the defendants based on the defendant's market share in the tobacco products that likely led to illness.²²³ It further held that the use of statistical evidence in finding liability did not violate Florida's constitution.²²⁴ A similar approach was also used recently by the province of British Columbia, which copied aspects of the Florida statute and then sought recovery against several foreign and Canadian tobacco makers. The British Columbia statute contained the same provi-

218. For example, the most comprehensive environmental statute in the world, the U.S. Clean Air Act, 42 U.S.C. §§ 7401 et seq., provides a myriad of interconnected programs aimed at reducing air pollution with the hope that it will obviate the need for litigation to solve air pollution disputes. An *ex post* remedy exists in the Clean Air Act in the form of a citizen suit provision. See 42 U.S.C. § 7604.

219. The common law of nuisance, for example, one of the favored theories of environmental liability in the pre-statute era of environmental law, has not generally yielded success for environmental plaintiffs. See, e.g., *Georgia v. Tenn. Copper*, 206 U.S. 230 (1907); *Missouri v. Illinois*, 200 U.S. 496 (1906).

220. Courts traditionally have been reluctant to accept statistical associations that epidemiological studies produce as adequate evidence of specific causation. See generally Tom Christoffel & Stephen P. Teret, *Epidemiology and the Law: Courts and Confidence Intervals*, 81 AM. J. PUB. HEALTH 1661 (1991).

221. 678 So. 2d 1239 (Fla. 1996). Significantly, the court stated in dicta that joint and several liability was also possible, although not as a concurrent theory with market-share liability. *Id.* at 1255.

222. *Id.* The seminal case upholding the theory of market share liability was *Sindell v. Abbott Laboratories*, 26 Cal. 3d. 588 (1980).

223. *Agency for Health Care Admin.*, 678 So. 2d at 1255–56.

224. *Id.* at 1256.

sions for market-share liability and statistical evidence that were in the Florida statute. The British Columbia statute also had a provision that reversed the burden of proof in favor of the province.²²⁵ In *British Columbia v. Imperial Tobacco*, the Supreme Court of Canada upheld the statute in all respects, including its extraterritorial application to the nonresident tobacco manufacturers.²²⁶

This emerging trend in the use of statistical evidence—a key to the continued rise of market-share liability—comes just in time to support a theory of liability based on pollution contribution, or pollution share, which may be invoked to support a Canadian cause of action. Epidemiological research over the past twenty years has yielded strong statistical links between certain types of air pollution and certain types of adverse human health effects (including premature death).²²⁷ As a result, Canadian plaintiffs can now credibly argue that U.S. pollution emissions has led to some statistical “harm,” even if it those plaintiffs cannot show it was the specific U.S. defendant’s pollution that led to illness or death.²²⁸ Air pollution modeling, monitoring, and reporting technologies probably are accurate enough to be admitted as evidence in court.²²⁹ At the very least, the science has advanced enough to serve as a legitimate basis for legislative and regulatory action.²³⁰ While the causal chain from

225. Tobacco Damages and Health Care Costs Recovery Act, 2000 S.B.C. ch. 30, § 3(2) (Can.). The government must first prove, however, “on a balance of probabilities,” that the defendant breached a common law duty to persons exposed to tobacco products, that exposure can cause or contribute to the disease, and that the tobacco product involved was sold in British Columbia by the defendant. *Id.* at § 3(1)(a)–(c).

226. [2005] 2 S.C.R. 473 (Can.).

227. Air pollution modeling has become sophisticated. Robert San Jose et al., *Air Quality Modelling: State-of-the-Art* (2006), available at <http://www.iemss.org/iemss2006/papers/w17/pp.pdf> (providing a general discussion on current air quality modeling).

228. For a discussion on the nature of harm in tort law and environmental law, see Albert C. Lin, *The Unifying Role of Harm in Environmental Law*, 2006 WIS. L. REV. 897 (2006).

229. Certainly, monitoring and reporting technology, in place since the advent of the Acid Rain Program, has withstood any scrutiny without any substantial complaints of error. Modeling results, as well, satisfying the traditional statistical burden of a 90 or 95 percent level of confidence, should not be a cause of concern for a fact-finder. See, e.g., ABT ASSOCIATES ET AL., THE PARTICULATE-RELATED HEALTH BENEFITS OF REDUCING POWER PLANT EMISSIONS, exhibits E-1–E-3 (October 2000), available at <http://cta.policy.net/fact/mortality/mortalityabt.pdf> (showing the 5, 50, and 95 percentiles); ABT ASSOCIATES ET AL., POWER PLANT EMISSIONS: PARTICULATE MATTER-RELATED HEALTH DAMAGES AND THE BENEFITS OF ALTERNATIVE EMISSION REDUCTION SCENARIOS, app. B (June 2004), available at http://www.cleartheair.org/dirtypower/docs/abt_powerplant_whitepaper.pdf, (indicating that tables show 5 and 95 percentile estimates) [hereinafter ABT ASSOCIATES ET AL., POWER PLANT EMISSIONS]. The results reported by Abt Associates indicate that there is a 90 percent chance that the “true” mean is between the 5 and 95 percentile estimates.

230. See discussion of air quality modeling in EPA rulemakings, *infra* notes 236–44 and ac-

pollution to adverse health outcome is not yet as firmly established as that for tobacco and lung diseases, conceptually, the differences between a tobacco lawsuit and an air pollution lawsuit have disappeared.

Advances in pollution modeling sufficiently link pollution to health harms in several ways to overcome the traditional difficulties in proving causation. First, measuring the amount of pollution that a power plant emits has become relatively simple. Aided by reporting requirements, the EPA maintains a database that allows any user to find out how much pollution was emitted by a specific power plant emitted in a given year. The EPA's eGRID database allows users to run individualized search queries by power plant, power plant owner, location, fuel type, and over a hundred other characteristics. Most importantly, the eGRID database provides information on emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon dioxide, and mercury.²³¹

Second, air quality models can now link pollution at the smokestack to pollution where the alleged health and environmental damages occur. Drawing largely on modeling efforts headed up by the EPA, Ontario agencies have developed a three-dimensional model that uses climatological sub-models to track the movement of pollution for thousands of miles.²³² In measuring pollution levels at the endpoint, these models incorporate the effects of a variety of meteorological data, such as clouds, seasonal variations in temperature and precipitation, and a variety of other factors.²³³ The Ontario Environment Ministry used the model to measure the effect of transboundary pollution by zeroing out pollution from Ontario sources and natural sources and imputing the rest to pollution emanating from the United States.²³⁴

This linking is particularly robust with respect to SO₂ and NO_x emissions from coal-fired power plants, which account for two-thirds of the total SO₂ emissions and a quarter of the total NO_x emissions in the United States.²³⁵ SO₂ and NO_x are particularly important not only as ac-

companying text.

231. eGRID is available online at <http://www.epa.gov/cleanenergy/egrid/index.htm>.

232. A description of the model used by the EPA, the Community Multiscale Air Quality (CMAQ) Model, is available on the EPA website at http://www.epa.gov/asmdnerl/CMAQ/cmaq_model.html.

233. *Modeling Efforts To Evaluate Transboundary Influences and the Effects of Natural Sources on Ozone and PM_{2.5} Levels in Ontario*, in PRELIMINARY APPLICATION AND EVALUATION OF THE PROVISIONS OF THE GUIDANCE DOCUMENT ON ACHIEVEMENT DETERMINATION FOR THE PM_{2.5} AND OZONE CANADA-WIDE STANDARDS 76-77 (2005).

234. *Id.* at 77.

235. This assertion is derived from data from the EPA's annual National Emissions Inventory (NEI) Air Pollutant Emissions Trends Data reports on the emissions of the six criteria air pollu-

id rain precursors, but also as precursors to the formation of deadly fine particulate matter,²³⁶ the air pollutant most responsible for premature deaths.²³⁷ Imputing a specific amount of pollution to certain specific coal-fired power plants, or to other polluting facilities, would now be a very feasible task for air quality modelers. Zeroing out the contributions of selected power plants and other emitters would produce estimates of the transboundary air pollution attributable to these facilities. The result would be the basis for Ontario's health and environmental damage claims. Coal-fired power plants present a particularly easy mark because the ten largest parent company electricity generating companies emit fully half of the SO₂ pollution.²³⁸

One might wonder if such modeling results would constitute evidence that is robust enough to be admissible in a court of law, and to form the basis for billions of dollars of damages. For the answer, one need look no further than EPA rulemakings. EPA's highly controversial Clean Air Interstate Rule (CAIR)²³⁹ requires upwind polluting states (mostly Midwestern and Southern) to reduce their emissions of SO₂ and NO_x in order to help downwind states (mostly Northeastern) reduce their ambient levels of ozone and particulate matter pollution. EPA originally announced the final rulemaking for CAIR on May 12, 2005,²⁴⁰ following a public consultation period that spanned seventeen months from the original notice of proposed rulemaking,²⁴¹ to the announcement of the final rule. This consultation period involved the somewhat

tants, which are available at <http://www.epa.gov/ttn/chief/trends/>.

236. See, e.g., Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule): Reconsideration, 71 Fed. Reg. 25,304 (Apr. 28, 2006) (to be codified at 40 C.F.R. pts. 51, 96) [hereinafter Clean Air Interstate Rule]; ABT ASSOCIATES ET AL., POWER PLANT EMISSIONS, *supra* note 229, at 3-1; INDUSTRIAL ECONOMICS, INC., EXPANDED EXPERT JUDGMENT ASSESSMENT OF THE CONCENTRATION-RESPONSE RELATIONSHIP BETWEEN PM_{2.5} EXPOSURE AND MORTALITY 3-14 to 3-15, 3-18 (Sept. 2006), available at http://www.epa.gov/tth/ecas/regdata/uncertainty/pm_ee_report.pdf.

237. See Ontario Ministry of the Environment, What Are the Effects of Fine Particulate Matter?, <http://www.airqualityontario.com/science/pollutants/particulates.cfm> (last visited Sept. 1, 2007) ("The greatest effect on health is from particles 2.5 microns or less in diameter. Exposure to fine particulate matter has been associated with hospital admissions and several serious health effects, including premature death.").

238. This assertion is derived from data from the eGrid database. See *supra* note 231 and accompanying text.

239. Clean Air Interstate Rule, *supra* note 236.

240. Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule): Revisions to Acid Rain Program; Revisions to NO_x SIP Call, 70 Fed. Reg. 25,162 (May 12, 2005) (to be codified at 40 C.F.R. pts. 51, 72, 73, 74, 77, 78, 96).

241. Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule), 69 Fed. Reg. 4,566 (Jan. 30, 2004) (to be codified at 40 C.F.R. pts. 51, 72, 75, 96).

unusual step of EPA's making available the data, air quality model (CMAQ), and modeling results that formed the basis of the CAIR.²⁴² After receiving twelve petitions for reconsideration,²⁴³ however, EPA relented and emerged with the final rule in April 2006.²⁴⁴ Notably, EPA did not receive objections specific to the CMAQ model. CMAQ has been used in six other rulemakings.²⁴⁵

Granted, the standards of evidence in a rulemaking are, in theory, supposed to be less stringent than the evidentiary standard in a court of law.²⁴⁶ In practice, however, given the high stakes involved in some rulemakings, the burden placed on administrative agencies is often as great, and perhaps *greater*, than that placed on a party to litigation. In *Industrial Union Department v. American Petroleum Institute*,²⁴⁷ the Court overturned a proposed Occupational Safety and Health Administration (OSHA) standard for benzene exposure, and held that "the burden was on the Agency to show, on the basis of *substantial evidence*, that it is *at least more likely than not* that the long-term exposure to 10

242. Availability of Additional Information Supporting the Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule), 69 Fed. Reg. 47,828 (Aug. 6, 2004) (to be codified at 40 C.F.R. pts. 51, 72, 73, 74, 77, 78, 96).

243. Clean Air Interstate Rule, *supra* note 236, at 25,305.

244. *Id.*

245. Proposed Rule, Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder, 72 Fed. Reg. 15938-01 (April 3, 2007) (to be codified at 40 C.F.R. pts. 92, 94, 1033, 1039, 1042, 1065, 1068); Control of Hazardous Air Pollutants from Mobile Sources, 71 Fed. Reg. 15,804 (Mar. 29, 2006) (to be codified at 40 C.F.R. pts. 59, 80, 85, 86); Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants from Electric Utility Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units from the Section 112(c) List: Reconsideration, 70 Fed. Reg. 62,200, 62,204 (Oct. 28, 2005) (to be codified at 40 C.F.R. pt. 63); Approval and Promulgation of Air Quality Implementation Plans; South Carolina and Georgia; Attainment Demonstration for the Appalachian, Catawba, Pee Dee, Waccamaw, Santee Lynches, Berkeley-Charleston-Dorchester, Low Country, Lower Savannah, Central Midlands, and Upper Savannah Early Action Compact Areas, 70 Fed. Reg. 30,396, 30,401 (May 26, 2005) (to be codified at 40 C.F.R. pt. 52); Approval and Promulgation of Air Quality Implementation Plans; Tennessee and Georgia; Attainment Demonstrations for the Chattanooga, Nashville, and Tri-Cities Early Action Compact Areas, 70 Fed. Reg. 30,382, 30,385 (May 26, 2005) (to be codified at 40 C.F.R. pt. 52); Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources, Electric Utility Steam Generating Units: Notice of Data Availability, 69 Fed. Reg. 69,864, 69,873 (Dec. 1, 2004) (to be codified at 40 C.F.R. pts. 60, 63).

246. RICHARD J. PIERCE, ADMINISTRATIVE LAW TREATISE § 7.5, at 464 (4th ed. 2002) ("Courts often require agencies to provide some evidentiary support for the legislative facts that provide the predicates for agency rules, but courts should recognize that legislative facts are not susceptible to the kind of evidentiary proof routinely required to support findings of adjudicative facts.").

247. 448 U.S. 607 (1980).

ppm of benzene presents a significant risk of material health impairment.”²⁴⁸ It is now well-known history that this holding sent OSHA back to the drawing board for ten years, forced it to prepare a 36,000-page record to support its benzene rule, and has profoundly changed administrative rulemaking.²⁴⁹ The CAIR, with its seventeen-month run-up (not counting the previous Clinton administration attempts to ratchet down the standard), impacting the electric utility industry as much as it does, and pushing over 450 counties into non-attainment status,²⁵⁰ has been at least as hard-fought, not to mention the other rulemakings that have relied upon CMAQ, which have affected the electric utility industry, the petroleum industry, the automotive and truck industries, the trucking industry, and the locomotive and marine industries.²⁵¹ CMAQ has even supported a new rule limiting motor vehicle emissions of, of all things, benzene.²⁵²

Appropriately, CMAQ remains under development. Since its introduction in 1999, six new releases have been rolled out.²⁵³ A complex model that combines meteorological, emissions, physical, chemical, and even land use data and models, and provides interfaces for the several dozen submodels, is bound to be in a constant state of development. So, EPA has recognized that not only is waiting for the “kinks to be worked out” futile, but also that it would frustrate air quality objectives. As a peer review panel noted, “[t]he scientific content and performance of the CMAQ modeling system continues to improve with each release due to the excellent efforts of AMD staff. CMAQ...represents the state-of-the-science of widely used models, particularly models that are used in a regulatory context.”²⁵⁴ CMAQ has already formed the basis for the formulation of rules that will carry with them many billions of dollars of

248. *See Indus. Union Dep't v. Am. Petroleum Inst.*, 448 U.S. at 653 (emphasis added).

249. ROBERT V. PERCIVAL, ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 377-78 (4th ed. 2003).

250. *See* Press Release, Nat'l Conference of State Legislatures, EPA Finalize Clean Air Interstate Rule (Mar. 16, 2005), available at <http://www.ncsl.org/programs/enviro/air/EPAairrule.htm>.

251. *See supra* note 245.

252. *See* Control of Hazardous Air Pollutants from Mobile Sources, 71 Fed. Reg. 15,804 (Mar. 29, 2006) (to be codified at 40 C.F.R. pts. 59, 80, 85, 86).

253. The Community Modeling and Analysis System website, maintained as a resource for modelers using CMAQ, contains documentation for CMAQ model versions 4.0 through 4.6., and is available at http://www.cmascenter.org/help/documentation.cfm?temp_id=99999.

254. PRAVEEN AMAR ET AL., FINAL REPORT: SECOND PEER REVIEW OF THE CMAQ MODEL 27 (July 2005), available at http://www.cmascenter.org/PDF/CMAQ_Scd_Peer_Rev_July_5.pdf.

compliance costs. CMAQ already has endured the most vigorous industry challenges.

C. Causation—Identifying the Plaintiffs

The final traditional hurdle faced in attempting to hold U.S. polluters liable for transboundary pollution is for Ontario to identify the injured parties. Jurisprudential considerations generally require that a party alleging harm appear before the court. Among other reasons, knowing the plaintiff's identity typically is essential to determine whether standing requirements have been met.

Exceptions exist. Class action lawsuits permit the possibility of recovery when, prior to the initiation of the suit, there is known harm but not all of the harmed individuals can be identified.²⁵⁵ Indeed, the class action lawsuit is in part aimed at discovering the identity of the harmed individuals. While the notion of a class action lawsuit infringes upon some procedural norms, it is a mechanism that has been developed to address widespread harms that may not be easily remedied in a traditional model of litigation.²⁵⁶ For example, a large class of victims may suffer so small an injury that individual victims are unlikely to absorb the transaction costs of stepping forward to make a claim. Yet if the harm is serious enough, adjudication is considered appropriate, even if additional work is necessary to identify the victims.²⁵⁷ Thus, an effort to broadly notify possible plaintiffs of potential claims seems reasonable enough, along with a process to make claim filing relatively simple by opt-in. In such cases, the class action approach is necessary and worthwhile to provide a pared-down remedy, the alternative being no recovery at all. Moreover, even if individual plaintiffs recover small amounts, the class action lawsuit recognizes that the aggregate harm can be quite large, and the importance of deterring future malfeasance great.²⁵⁸

255. See, e.g., Deborah R. Hensler, *Bringing Shutts into the Future: Rethinking Protection of Future Claimants in Mass Tort Class Actions*, 74 UMKC L. REV. 585, 597–99 (2006); see also FED. R. CIV. P. 23. For comparisons between U.S. and Canadian class action procedures, see Vince Morabito, *Defendant Class Actions and the Right To Opt Out: Lessons for Canada from the United States*, 14 DUKE J. COMP. & INT'L L. 197 (2004).

256. Among other issues, there is the collective action problem faced by potential class action litigants: that one's persons efforts to bring a suit produces positive externalities for other similarly-situated litigants and therefore produces a free-rider problem. See, e.g., William B. Rubinstein, *Why Enable Litigation?: A Positive Externalities Theory of the Small Claims Class Action*, 74 UMKC L. REV. 709, 710–12 (2006).

257. *Id.*

258. *Id.*

Similar considerations militate in favor of recovery for damages from air pollution. Unlike a class action lawsuit, however, the hypothetical Ontario lawsuit actually presents a clear plaintiff—the province of Ontario, which has spent its health care resources caring for individuals harmed by air pollution, and has also suffered economic damages unrelated to adverse health outcomes. But Ontario would not be able to identify specific individuals that were harmed by air pollution. Rather, Ontario would rely upon epidemiological evidence showing that a certain number of individuals *in their population* die from air pollution in any given period of time. In fact, an air pollution damages lawsuit presents questions very similar to lawsuits by states and provinces to recover damages suffered by its citizens in using tobacco products. In *Agency for Health Care Administration v. Associated Industries of Florida*²⁵⁹ and *British Columbia v. Imperial Tobacco*,²⁶⁰ the plaintiffs Florida and British Columbia alleged that *some people*, not necessarily named persons, were harmed, sometimes fatally, by their use of tobacco products, and that the respective governments were also harmed in caring for or compensating these individuals.

While such a cause of action may not exist in common law, Florida and many other U.S. states enacted state statutes to *create* a cause of action and a remedy.²⁶¹ In particular, U.S. states that made extensive Medicare payments drafted state statutes that explicitly provided a right of action for the state attorney general or some other official or agency to recover for the Medicare payments.²⁶² It was thus Florida's lead that British Columbia followed when its provincial parliament drafted a statute that explicitly provided a cause of action and a remedy for the province for the health care costs the province absorbed in caring for those suffering from tobacco-related illness.²⁶³

Certainly, creating a new cause of action by statute raised eyebrows. But it is important to draw upon the lessons of the round of tobacco litigation: that new causes of action have often filled in the gaps in the law

259. 678 So. 2d 1239, 1257 (Fla. 1994).

260. [2005] 2 S.C.R. 473 (Can.).

261. TEX. HUM. RES. CODE ANN. § 32.033(d) (Vernon 2005); MASS. GEN. LAWS ANN. ch. 118E, § 22 (2003); MINN. STAT. § 256B.37(1) (1993); COLO. REV. STAT. ANN. § 26-4-112(3) (West 1973).

262. The theory is one of subrogation, in which the state steps into the shoes of one having a cause of action which, in the tobacco context, means tobacco victims seeking to recover Medicaid payments. See *supra* note 261.

263. *Id.*; see also Hall, *supra* note 115, at 68-72 (describing case); DeCoste, *supra* note 115, at 329-30 (describing case).

that have left very large and important harms unremedied. With the U.S. Congress failing abysmally to address perhaps the number one public health issue of this generation, litigation stepped in. Just as class action lawsuits represent an evolution in the law to deal with harms that the traditional model of litigation failed to remedy, the creation of causes of action to remedy tobacco-related harms and air pollution harms become viewed as not only acceptable fixes, but natural progressions of the law in adapting to the ever-changing nature of information.

Solving the identifiable victim problem will require the marshalling of statistical evidence. In *Associated Industries of Florida* and *Imperial Tobacco*, statistical evidence was presented as to the number of victims of tobacco use for whom health care costs were incurred by Florida and British Columbia, respectively. In *Associated Industries of Florida*, the Florida Supreme Court, while upholding most aspects of the statute giving rise to the cause of action, struck down the provision that allowed Florida to only provide statistical evidence of the cost of making Medicare payments, and avoid identifying each individual recipient for whom recovery is sought.²⁶⁴ To do so, the court held, would violate due process guarantees under the Florida Constitution, by preventing defendants from rebutting the statutorily-created presumption, and contesting the propriety of individual Medicare payments.²⁶⁵

Canadian courts had no such trouble in *Imperial Tobacco*. The British Columbia statute provides, in language similar to the Florida statute, that “[i]f the government seeks in an action under subsection (1) to recover the cost of health care benefits on an aggregate basis...it is not necessary...to identify particular individual insured persons...to prove the cause of tobacco related disease in any particular individual insured person, or...to prove the cost of health care benefits for any particular individual insured person....”²⁶⁶ The British Columbia statute does provide that the court “may order discovery of a statistically meaningful sample of the documents [that identify recipients]....”²⁶⁷ Finally, the statute provides that “[s]tatistical information and information derived from epidemiological, sociological and other relevant studies, including information derived from sampling, is admissible as evidence for the

264. 678 So. 2d at 1253–54.

265. *Id.*

266. Tobacco Damages and Health Care Costs Recovery Act, 2000 S.B.C. ch. 30, § 2(5) (Can.).

267. *Id.* at § 2(5)(d).

purposes of establishing causation and quantifying damages or the cost of health care benefits....”²⁶⁸

The victim identifiability issue was briefed and argued at the trial court level, which held that the provision did not interfere with the independence of the judiciary, and would not necessarily prevent the defendant from rebutting the statutory presumption.²⁶⁹ The Supreme Court of Canada, in upholding the British Columbia statute in all respects, did not even address the issue of identifying the victims of tobacco use, despite an extended discussion of judicial independence and the “rule of law.”²⁷⁰ Whether this was a conscious or inadvertent omission on the part of the Court, it appears that the law of Canada would not preclude recovery on the basis of a statistical presentation of the victims of air pollution.

Will a court have an open mind in hearing a transboundary air pollution case and grappling with the issue of the quality of statistical evidence? Air pollution data, because of the nature of the statistical evidence, cannot *possibly* identify the specific victims of air pollution. All that is known is that of a population dying prematurely from some lung ailment or cardiopulmonary disease, a certain percentage of those cases are likely to be due to air pollution, rather than smoking, hereditary reasons, or other causes. And admittedly, the statistical case that air pollution leads to adverse health outcomes does not enjoy as long of a history of research as that linking tobacco use to lung disease. But if the *Imperial Tobacco* case is any indication, then Canadian courts are unlikely to be terribly concerned with the identifiability of victims of air pollution.

Are these estimates ready for the rigor and scrutiny of litigation? Only the courts can say for sure, but the epidemiological research linking adverse health outcomes to ambient concentrations of various pollutants has become highly credible science. By now, scores of studies have tracked fluctuations in pollution, primarily particulate matter, with health outcomes. Changes in health outcomes have been studied in the presence of events that change pollution levels, such as a strike at a local steel mill,²⁷¹ a ban on coal sales,²⁷² and new restrictions on the sulfur content of fuel oil.²⁷³

268. *Id.* at § 5.

269. *British Columbia v. Imperial Tobacco Ltd.*, [2003] 227 D.L.R. (4th) 323 para. 27–90.

270. *Id.* at para. 57–68.

271. C. Arden Pope III et al., *Daily Mortality and PM₁₀ Pollution in Utah Valley*, 47 ARCHIVES ENVTL. HEALTH 211 (1992).

More significantly, epidemiologists also have conducted other, more reliable, long-term time series studies, and even more reliable “cohort,” or panel data studies, which track the health outcomes of large groups of individuals over long time periods. Researchers carefully have scrutinized two studies in particular—one tracking over 500,000 people over seven years,²⁷⁴ and one tracking over 8000 people in six cities over fourteen to sixteen years (known as the “Harvard Six Cities Study”).²⁷⁵ These studies found and measured a statistically significant relationship between long-term levels of particulate matter pollution and premature mortality. Because of their crucial findings, and because of the statistical issues involved, a third-party consultant vetted the studies and subjected them to a “reanalysis.” The independent consultant then published a ninety-seven-page “condensed” report,²⁷⁶ which essentially corroborated the original researchers’ findings. The conclusions were compelling enough that the EPA in 1997 relied upon them heavily in setting a National Ambient Air Quality Standard for fine particulate matter.²⁷⁷

The original Harvard Six Cities Study does not stand alone. Since the mid-1990s, dozens of new studies and follow-ups have been conducted—including a follow-up to the Harvard Six Cities Study—further solidifying and quantifying the link between particulate matter and adverse health outcomes.²⁷⁸ Of course, these studies statistically separated

272. Luke Clancy et al., *Effect of Air-Pollution Control on Death Rates in Dublin, Ireland: An Intervention Study*, 360 LANCET 1210 (2002).

273. Anthony Johnson Hedley et al., *Cardiorespiratory and All-Cause Mortality After Restrictions on Sulphur Content of Fuel in Hong Kong: An Intervention Study*, 360 LANCET 1646 (2002).

274. C. Arden Pope III et al., *Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults*, 151 AM. J. RESPIRATORY & CRITICAL CARE MED. 669 (1995).

275. Douglas W. Dockery et al., *An Association Between Air Pollution and Mortality in Six U.S. Cities*, 329 NEW ENG. J. MED. 1753 (1993).

276. HEALTH EFFECTS INSTITUTE, SPECIAL REPORT: REANALYSIS OF THE HARVARD SIX CITIES STUDY AND THE AMERICAN CANCER SOCIETY STUDY OF PARTICULATE AIR POLLUTION AND MORTALITY (July 2000), available at <http://pubs.healtheffects.org/view.php?id=6>. The Public Statement to the Report stated that the “reanalyses assured the quality of the original data, replicated the original results, and tested those results against alternative risk models and analytic approaches without substantively altering the original findings of an association between indicators of particulate matter air pollution and mortality.” HEALTH EFFECTS INSTITUTE, SYNOPSIS OF THE PARTICULATE EPIDEMIOLOGY REANALYSIS PROJECT iii-iv (2000), available at <http://pubs.healtheffects.org/view.php?id=6>. In other words, the Health Effects Institute found the study to be accurate and reliable.

277. National Ambient Air Quality Standards for Particulate Matter: Proposed Decision, 61 Fed. Reg. 65,638 (Dec. 13, 1996) (to be codified at 40 C.F.R. pt. 50).

278. See, e.g., Francine Laden et al., *Reduction in Fine Particulate Air Pollution and Mortali-*

out the effects of air pollution from other potential causes, such as smoking, diet, exercise, and a variety of other factors that affect health outcomes.

This epidemiological evidence is of a significantly higher quality than that which previously has been found wanting in litigation contexts. In *General Electric v. Joiner*,²⁷⁹ the Supreme Court upheld a district court's exclusion of expert testimony on the harmful effects of polychlorinated biphenyls, or PCBs, which the plaintiff contended led to his lung cancer.²⁸⁰ In so doing, the Court applied a deferential "abuse of discretion" standard,²⁸¹ but pointedly noted that the evidence (at that time) only involved animal studies, and other epidemiological studies that did not find a statistical link between PCBs and lung cancer.²⁸² By comparison, the epidemiological studies that link particulate matter with adverse health outcomes are based on experiences with *human* subjects – obviously not experimental subjects, but those offering up their life and health as data – and have established highly statistically significant relationships.²⁸³ With statistical significance typically defined as a 95% probability,²⁸⁴ this kind of epidemiological evidence should be more than enough to pass judicial muster.

Reports commissioned by the Ontario Medical Association (OMA) have drawn upon this literature to estimate the effects of air pollution on Ontarians. The OMA developed a special computer model, Illness Costs of Air Pollution (ICAP), which takes as inputs air quality and population data, and calculates, using relationships derived in the air quality modeling and health effects literature, a projected number of premature deaths, hospital admissions, emergency room visits, and minor illnesses.²⁸⁵ Originally developed to help Ontario perform cost-benefit analyses of various air pollution reduction strategies, ICAP has been

ty: Extended Follow-up of the Harvard Six Cities Study, 173 AM. J. RESPIRATORY & CRITICAL CARE MED. 667 (2006); C. Arden Pope III et al., *Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution*, 287 JAMA 1132 (2002). For an extensive list of articles on air pollution and health effects, see DSS MGMT CONSULTANTS, PHASE II: ESTIMATING HEALTH AND ECONOMIC DAMAGES: ILLNESS COSTS OF AIR POLLUTION 54–64 (July 26, 2000) [hereinafter DSS Report].

279. 522 U.S. 136 (1997).

280. *Joiner*, 522 U.S. at 139–40.

281. *Id.* at 141.

282. *Id.* at 143–46.

283. See *supra* notes 274–276, 278.

284. See, e.g., PETER KENNEDY, A GUIDE TO ECONOMETRICS 69 (4th ed., 2003).

285. ONT. MED. ASS'N, ILLNESS COSTS OF AIR POLLUTION, FINDINGS REPORT (June 2000), available at <http://www.oma.org/phealth/icap.htm#intro>.

used more recently to estimate the contribution of different sources of pollution to the overall pollution problem. By varying the amount of pollution amount, different policy scenarios can be evaluated for their pollution effects and resulting costs. Similarly, by using the results of air quality models that measure the contributions of different individual air polluters, ICAP can estimate the damages that individual air polluters cause. ICAP incorporates a wide range of economic costs associated with adverse health outcomes, such as the value of a lost life,²⁸⁶ loss in economic productivity, direct health care costs, loss in quality of life, and risk of death. Despite the many categories of economic cost associated with adverse health outcomes, ICAP seems to err on the side of conservative estimates, going so far as to deduct health care costs for some cases where premature mortality enables Ontario to avoid caring for a person because of her death.²⁸⁷

So are courts ready for epidemiological evidence of the link between air pollution and adverse (and for Ontario, costly) health outcomes? As in the case of evaluating air quality models as evidence, it is certainly noteworthy that this body of epidemiological research has survived the brutal EPA rulemaking process, withstanding the withering scrutiny of polluters that stand to lose billions of dollars from new pollution rules. It is also useful to remember that courts have in the past used statistical evidence to gauge damages. Securities litigation often relies heavily on statistical analysis to bolster assertions that some illicit trade yielded gains to the defendant, from alterations in the price.²⁸⁸ Antitrust litigation also often utilizes statistical analysis to show that market power exists²⁸⁹ or that prices are higher than they otherwise would be,²⁹⁰ thus aiding in the measure of damages.

As for the other economic costs of pollution, such as the environmental costs, they are apt to be far less contentious. Damages due to acid rain are easily distinguishable from other potential damages—the dis-

286. An extensive literature exists on estimating the value of life for policy-making purposes. Often called the “value of a statistical life,” or “VSL,” the dollar value assigned to a life lost to pollution or some other risk is the most controversial aspect of cost-benefit analysis. Some estimates of VSL are based on contingent valuation surveys, which query subjects how much they would be willing to pay to avoid certain risks of death. Other estimates of VSL are based upon risk premiums paid to workers in high-risk professions such as construction.

287. DSS Report, *supra* note 278, at 22.

288. Jonathan R. Macey et al., *Lessons from Financial Economics: Materiality, Reliance, and Extending the Reach of Basic v. Levinson*, 77 VA. L. REV. 1017, 1025–1042 (1991) (describing the need for statistical event studies and how they are conducted).

289. *United States v. Microsoft*, 84 F. Supp. 2d 9, 19 (D.D.C. 1999).

290. *FTC v. Staples*, 970 F. Supp. 1066, 1076–78 (D.D.C. 1997).

tinct washing away and erosion of solid structures caused by acid rain is a unique identifying feature of this form of pollution. The unique blackening and erosion of statues is an unfortunately clear sign of acid rain. The damages of such tangible structures are not trivial to measure, but they suffer no conceptual leaps as statistical analysis does. Similarly, damage to crops and forests by way of lost productivity is not a subject that economists will hotly contest.

D. Other Possible Causes of Action for Ontario

If Ontario chose not to enact a statute, there would be some plausible common law causes of action that could provide a remedy for trans-boundary air pollution. Public nuisance has emerged as one of the more promising theories in “public tort” lawsuits²⁹¹ seeking relief against defendants that are associated with widespread harms, similar to those caused by pollution. Plaintiffs have advanced public nuisance as a theory of recovery in lawsuits against handgun manufacturers and distributors,²⁹² lead paint manufacturers,²⁹³ electric utilities (for carbon dioxide emissions),²⁹⁴ and automobile manufacturers (also for carbon dioxide emissions).²⁹⁵ To date, the results have been mixed, with courts showing some reluctance to impose liability for the manufacture of lawful products,²⁹⁶ and where, in the case of handguns and automobiles, there are intervening third party causes of harm other than the manufacturer.²⁹⁷ At the same time, courts have been willing to move away from traditional doctrinal restrictions that limit recovery to noxious land uses and preclude recovery against activities that are heavily regulated and conducted legally.²⁹⁸

291. Richard C. Ausness, *Public Tort Litigation: Public Benefit or Public Nuisance?*, 77 *TEMPLE L. REV.* 825 (2004).

292. *See, e.g.*, Gary v. Smith & Wesson, 801 N.E.2d 1222, 1232 (Ind. 2003); James v. Arms Tech. Inc., 820 A.2d. 27, 33 (N.J. Super. Ct. App. Div. 2003); Cincinnati v. Beretta USA Corp., 768 N.E. 2d 1136, 1140 (Ohio 2002).

293. *See, e.g.*, Rhode Island v. Lead Indus., No. PB 99-5226, 2004 WL 1542236 (R.I. Super. Ct. July 2, 2004); Milwaukee v. NL Industries, 691 N.W.2d. 888, 890-91 (Wis. Ct. App. 2004); *cf.* Chicago v. Am. Cyanamid, 823 N.E.2d. 126 (Ill. App. Ct. 2005).

294. *See, e.g.*, Complaint, Connecticut v. Am. Elec. Power, 406 F. Supp. 2d 265 (S.D.N.Y. 2004) (No. 04 Civ. 5669).

295. *See, e.g.*, Complaint, California v. Gen. Motors Corp. (N.D. Cal. Sept. 20, 2006) (No. 3:06-CV-05755), available at <http://ag.ca.gov/newsalerts>.

296. *See* Ausness, *supra* note 291, at 871-72.

297. *Id.* at 874-75.

298. *See, e.g., supra* note 292.

Public nuisance, invoked in several early air pollution cases,²⁹⁹ would seem to be a candidate theory for redressing Ontario's transboundary air pollution problem. The *Restatement of Torts* standard for recovery, an intentional and unreasonable interference with the use and enjoyment of land,³⁰⁰ contemplates that some balancing between the gravity of harm and the utility of defendant's conduct determine whether the interference is "unreasonable."³⁰¹ Liability for air pollution almost always has involved activities that are productive and legal, so the legality of defendants' activity, by itself, would not preclude a finding of unreasonableness.³⁰² And the formulation of the balancing test has evolved over time, such that the plethora of pollution reduction measures and alternative electricity generating sources could weigh in favor of a finding of unreasonableness.³⁰³ Modern evidence of the link between air pollution and adverse health outcomes may solidify the finding that the gravity of the harm outweighs the utility of the defendants' conduct.³⁰⁴

One potential problem with utilizing a nuisance theory to recover for this kind of air pollution, however, is that it typically requires that individual defendants to a nuisance suit be *substantial* contributors to the air pollution problem. In a "pollution share" suit similar to the *Sindell v. Abbott* "market share" suit,³⁰⁵ liability would require that enough defendants be bundled together to form a "substantial" contribution, possibly more than 50%, on the theory that recovery requires meeting the "more likely than not" standard.³⁰⁶ This requirement certainly would make it difficult to hold electric utilities liable for greenhouse gas emissions, and for fine particulate matter might complicate a prospective suit by Ontario to recoup air pollution costs.

299. *Int'l Paper Co. v. Ouellette*, 479 U.S. 481 (1987); *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907); *Boomer v. Atl. Cement Co.*, 257 N.E.2d 870 (N.Y. 1970); *Madison v. Ducktown Sulphur, Copper & Iron Co.*, 83 S.W. 658 (Tenn. 1904).

300. RESTATEMENT (SECOND) OF TORTS § 822 (1979).

301. *Id.* at § 826(a).

302. W. PAGE KEETON, ET AL., PROSSER AND KEETON ON TORTS § 88, at 629 (5th ed., 1984) [hereinafter KEETON 1984] ("Thus an industrial enterpriser who properly locates a cement plant or a coal-burning electric generator, who exercises utmost care in the utilization of known scientific techniques for minimizing the harm from the emission of noxious smoke, dust and gas and who is serving society well by engaging in the activity may yet be required to pay for the inevitable harm caused to neighbors."). Even environmental permits may not insulate polluters from a nuisance suit. W. PAGE KEETON, ET AL., PROSSER AND KEETON ON TORTS § 88 A, at 87 (5th ed. Supp. 1988).

303. KEETON 1984, *supra* note 302, § 88, at 627.

304. *Id.* § 88, at 626.

305. *See supra*, notes 222–227 and accompanying text.

306. KEETON 1984, *supra* note 302, § 103, at 714.

What about a theory of *parens patriae*, a suit to protect its citizens, as was done in the landmark air pollution case *Georgia v. Tennessee Copper?*³⁰⁷ *Parens patriae* has often involved “quasi-sovereign” interests,³⁰⁸ so the abatement of air and water pollution that harms a province's citizens, and costs a province money, would seem to call for *parens patriae*.³⁰⁹ The Canadian Supreme Court has looked favorably upon *parens patriae* as a means of sovereigns recovering for the loss of Crown goods and property.³¹⁰ But a traditional limitation on *parens patriae* has been that most cases have targeted behavior that was either tortious or illegal.³¹¹ And a traditional limitation on *parens patriae* is such that it provides a mechanism for standing, but not a new substantive cause of action.³¹²

Common law tort doctrines always have evolved to fit the changing realities of litigation. It is certainly quite possible that a Canadian court would expansively interpret various tort theories to support an Ontario suit over transboundary air pollution. But environmental harms traditionally have found traditional tort suits ill-fitting.³¹³ And the scientific and technical advances that would support a statutorily-created cause of action may or may not solve all of the obstacles to invoking traditional tort causes of action.

Jurisprudential considerations call for some caution when allowing lawsuits to go forward without actually having a named, identified victim or plaintiff in court. But the nature of many modern injuries, especially environmental ones, is such that the harm can be certain although unsusceptible of a precise location or effect in an individual case. Courts have adapted to these modern realities in the past, by allowing class ac-

307. 206 U.S. 230 (1907).

308. See, e.g., *State v. Dover*, 891 A.2d 524, 528–29 (N.H. 2006); cf. *Estados Unidos Mexicanos v. DeCoster*, 229 F.3d 332, 336 (1st Cir. 2000) (“The [U.S.] Supreme Court has never recognized *parens patriae* standing in a foreign nation where only quasi-sovereign interests are at stake. The justifications offered to support *parens patriae* standing in the individual States of the Union are not applicable here.”).

309. See, e.g., *EPA v. Green Forest*, 921 F.2d 1394, 1404 (8th Cir. 1990); *Burch v. Goodyear Tire & Rubber Co.*, 420 F. Supp. 82, 86 (D. Md. 1976) (“The state's interest as *parens patriae* is most evident when it seeks to preserve its natural resources, or when it asks protection for the health of its citizens.”) (citations omitted).

310. *British Columbia v. Canadian Forest Products*, [2004] 2 S.C.R. 74, para. 9, 76 (Can.).

311. See Ausness, *supra* note 291, at 861–62.

312. *Id.*

313. See, e.g., Noah Hall, *Political Externalities, Federalism, and a Proposal for an Interstate Environmental Assessment Policy* (Wayne State Univ. Law Sch. Research Paper No. 07-20, 2000), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=982929.

tion lawsuits, for example. Allowing recovery in environmental cases is a logical continuation of this trend.

Only a short time ago, a domestic solution to a transboundary pollution problem would have seemed problematic from both a jurisprudential and an international perspective. The consciously extraterritorial application of domestic law was, until recently, a relatively rare occurrence. But the pace of globalization seems to be straining the limits of traditional mechanisms of resolving transnational disputes. At the same time, science and technology finally seem to be catching up in terms of monitoring complex environmental harms. While these new tools are applied most often in the regulatory context, they have become robust enough to be applied in a litigation context, and could support a lawsuit that in the past would have been foiled by traditional evidentiary obstacles. As a descriptive matter, the time is ripe for a jurisdiction like Ontario to piece together the various pieces of the puzzle that would form the basis of a domestic lawsuit that remedies transboundary pollution. Whether such an approach is a normatively positive development, we briefly explore below.

IV. THE VALUE OF INTERNATIONAL LAWMAKING THROUGH DOMESTIC LITIGATION

While this Article predicts that Canadians may choose to embrace transnational civil litigation, what are the broader implications for international law? Is the growth of transnational civil litigation, instead of a bilateralism, a positive development?³¹⁴ Consistent with the authors' earlier scholarly work,³¹⁵ transnational litigation is not an ideal solution to transboundary problems—but it may be the only viable option presently available, and does serve some important functions.

Throughout the history of environmental law, litigation has served an important function in terms of animating subsequent negotiations and political developments by potentially changing the baseline rules. By introducing some uncertainty with respect to the default outcome, litiga-

314. Treaties on international civil liability seek to establish tort remedies for international harms, but have suffered chronic weakness due to a number of political and jurisprudential problems. Noah Sachs, *Beyond the Liability Wall: Strengthening Tort Remedies in International Environmental Law* (unpublished manuscript), available at http://works.bepress.com/cgi/viewcontent.cgi?article=1000&context=noah_sachs.

315. See, e.g., Parrish, *supra* note 14; Parrish, *supra* note 15.

tion has often cast a long shadow over post-litigation bargaining. For example, the landmark case *TVA v. Hill*³¹⁶ sent shock waves throughout the environmental community by holding that the Endangered Species Act did, in fact, bar completion of a dam that would wipe out the last known habitat of a fish species listed under the Act. The unexpected ruling plays a central part of the lore of environmental law, as it dramatically changed the landscape of land use regulation, and has played a prominent role in animating subsequent regulatory bargaining situations.³¹⁷ Also, in *City of Chicago v. Environmental Defense Fund*,³¹⁸ the Court held that the ash generated by a waste combustion facility (which the City of Chicago operated), was subject to the Resource Conservation and Recovery Act. The holding led to a "flurry" of activity at EPA and in Congress. The decision also grabbed the attention of municipal waste incinerator operators, who suddenly were facing civil and criminal liability simply for operating their facilities as they always had. Stuck in the middle of hostilities between the municipalities with waste incinerators and environmental organizations, EPA wrote new regulations charting a middle course. Although environmentalists roundly criticized them, there was no doubt that the new regulations would not have been implemented but for the Supreme Court decision.³¹⁹

Transboundary litigation may serve the same purpose in an international context, serving as a catalyst for bilateral negotiations. A Canadian embrace of extraterritorial reciprocity could spur U.S. policymakers to once again meaningfully engage with bilateralism.³²⁰ Even though the Bush Administration's disengagement may have nothing to do with Canada and everything to do with its environmental agenda, a transboundary lawsuit would certainly grab the attention of environmen-

316. 437 U.S. 153 (1978).

317. See, e.g., Shi-Ling Hsu, *A Game-theoretic Approach to Regulatory Negotiation and a Framework for Empirical Analysis*, 26 HARV. ENVTL. L. REV. 33 (2002).

318. 511 U.S. 328 (1994).

319. See Richard J. Lazarus & Claudia M. Newman, *City of Chicago v. Environmental Defense Fund: Searching for Plain Meaning in Unambiguous Ambiguity*, 4 N.Y.U. ENVTL. L.J. 1 (1995).

320. Cf. DANIEL RIESEL, ENVIRONMENTAL ENFORCEMENT: CIVIL AND CRIMINAL § 1.06, at 1-28.9 (2007) (noting how environmental citizen suits in the 1970s and 1980s prompted "an increased sensitivity to enforcement by the various state environmental agencies"); Randall S. Abate, *Kyoto or Not, Here We Come: The Promise and Perils of the Piecemeal Approach to Climate Change Regulation in the United States*, 15 CORNELL J.L. & PUB. POL'Y 369, 398 (2006) (noting that "though the outcomes of [private environmental citizen] suits were often more symbolic than substantive, these court victories prompted state agencies to consider and regulate environmental concerns more actively").

tal policy-makers and cause them to consider re-ordering environmental priorities.

Climate change litigation may well serve this role.³²¹ With the U.S. and Australia refusing to ratify the Kyoto Protocol, with Canada refusing to attempt to meet the Kyoto targets despite having ratified the Protocol, and with China and India, the second- and fourth-largest emitters of carbon dioxide³²² there are mounting doubts that Kyoto will accomplish even its modest goals.³²³ What then? One hopes that efforts on the state and local levels will achieve some measure of success,³²⁴ particu-

321. See, e.g., David A. Grossman, *Warming up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1 (2003) (describing climate change litigation to address certain harms as an alternative when political action fails); Eduardo M. Peñalver, *Acts of God or Toxic Torts? Applying Tort Principles to the Problem of Climate Change*, 38 NAT. RESOURCES J. 563 (1998) (arguing that tort litigation could effectively address climate change harm); see also Abate, *supra* note 320, at 373 (arguing “that climate change litigation is a more effective tool to bring about a mandatory federal regulatory program than are legislative efforts at the state, regional, and city levels, or voluntary initiatives within the regulated community”).

322. Preliminary estimates by the Netherlands Environmental Assessment Agency indicate that China surpassed the United States in total carbon dioxide emissions in 2006, due in large part to China's increase in coal consumption and rapid industrialization. Netherlands Environmental Assessment Agency, *China Now No. 1 in CO₂ Emissions, USA in Second Position*, <http://www.mnp.nl/en/dossiers/Climatechange/moreinfo/Chinanowno1inCO2emissionsUSAinsecondposition.html> (last visited Sept. 6, 2007). Wikipedia contains a list of countries by carbon dioxide emissions, listing India as fourth in 2003 emissions. Wikipedia, *List of Countries by Carbon Dioxide Emissions*, http://en.wikipedia.org/wiki/List_of_countries_by_carbon_dioxide_emissions (last visited Sept. 6, 2007).

323. As a normative matter, most people outside of the Bush Administration and Australia's Howard Administration are certainly hoping for Kyoto to provide effective governance. As the number of countries experiencing difficulty in meeting their targets increase, however, and as Kyoto signatories begin to signal that they have given up hope of meeting their targets, one wonders if there is any hope for Kyoto. See, e.g., *Expectations Low as Kyoto Parties Meet To Chart Long-term Strategy*, GREENWIRE, Nov. 28, 2005 (on file with author). In 2005, New Zealand dropped plans for a carbon tax because it would have increased electricity and fossil fuel prices too much to justify the decrease in emissions. *New Zealand Scraps Kyoto Carbon-Tax Plan*, PLANET ARK, Dec. 22, 2005, available at <http://www.planetark.org/dailynewsstory.cfm/newsid/34180/story.htm>. In the most Kyoto-enthusiastic region of the world, Europe, the majority of EU members failed to submit their greenhouse gas emissions allocation plans on time as required by the EU. See *More Than Half of E.U. Nations Miss Deadline for New Emissions Plans*, GREENWIRE, July 5, 2006 (on file with author); *Netherlands to Cut Emissions Quota; 14 Others Lag Behind*, GREENWIRE, Sept. 6, 2006 (on file with author). Trying to protect the competitiveness of its industries from American competition that does not worry about greenhouse gas regulation, Canada also effectively dropped out of efforts to comply with Kyoto. *Enviros Threaten to Sue Canada to Adhere to Kyoto*, GREENWIRE, Oct. 31, 2006 (on file with author).

324. See *supra* note 13 for an in-depth discussion of these issues; see also Laura Kosloff & Mark Trexler, *State Climate Change Initiatives: Think Locally, Act Globally*, NAT. RESOURCES & ENV'T, Spring 2004, at 46 (2004) (describing state and local attempts to address climate change); Hari M. Osofsky, *Local Approaches to Transnational Corporate Responsibility: Mapping the*

larly given that some scholars believe subnational and nonstate actors are more adept at solving environmental problems than states using traditional sources of international law.³²⁵ But if international climate diplomacy continues to appear cumbersome and feckless, litigation may be an appropriate tool for bringing the parties back to the bargaining table. For example, just starting a conversation about damages³²⁶ for climate change would affect the relative bargaining positions of the many key climate stakeholders.

A second function of litigation may be to focus attention on the transboundary air pollution problem, possibly changing the political dynamics with a view to, again, change the default outcomes.³²⁷ Private party litigation can serve the important function of “focusing attention upon the problem and providing relief to those persons who have suffered.”³²⁸ Even if a judgment proves ultimately uncollectible, the use of Canadian domestic laws to address a transboundary environmental problem may create a mindset, over time, among lawyers and policy-makers that the extraterritorial application of domestic law is an acceptable way of focusing attention on a transboundary problem.³²⁹

Litigation always has filled gaps left open by institutions of first resort.³³⁰ When the executive and legislative branches have dithered and have failed to address significant public health and environmental

Role of Subnational Climate Change Litigation, 20 GLOBAL BUS. & DEV. L.J. (forthcoming 2007), available at <http://papers.ssrn.com/abstract=980105> (listing literature on subnational climate change initiatives); Barry G. Rabe, *North American Federalism and Climate Change Policy: American State and Canadian Provincial Policy Development*, 14 WIDENER L.J. 121 (2004) (describing subnational attempts to address climate change in the U.S.-Canada context).

325. See, e.g., Bradley Karkkainen, *Marine Ecosystem Management & a “Post-Sovereign” Transboundary Governance*, 6 SAN DIEGO INT’L L.J. 113, 114 (2004) (arguing for “novel multi-party regional collaborative governance arrangements that include sub-national and non-state actors”).

326. See, e.g., Daniel A. Farber, *Basic Compensation for Victims of Climate Change* (Univ. of Cal., Berkeley, Public Law Research Paper No. 954357, 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=954357.

327. Cf. Anne-Marie Slaughter & David Bosco, *Plaintiff’s Diplomacy*, FOREIGN AFF. Sept. – Oct. 2000, at 102, 106 (2000) (stating that the principal benefit in human rights litigation under the Alien Tort Claims Act may be “the public attention they generate”).

328. Benham, *supra* note 160, at 546.

329. See, e.g., Paul Schiff Berman, *Dialectical Regulation, Territoriality, and Pluralism*, 38 CONN. L. REV. 929, 945 (2006) (arguing that “the mere assertion of jurisdiction and articulation of a norm (even without literal enforcement power) has such great impact that it effectively alters legal consciousness”) [hereinafter Berman, *Dialectical Regulation*]; Paul Schiff Berman, *Seeing Beyond the Limits of International Law*, 84 TEX. L. REV. 1265 (2006) (reviewing JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005)).

330. See *supra* note 291.

harms, public tort litigation often has stepped into the breach (albeit not always successfully). The very purpose behind environmental citizen suit provisions in domestic law, for example, is to encourage private attorneys general to pursue such actions.³³¹ At the very least, “[I]itigation may provide interim relief until [more] comprehensive solution[s]” to environmental challenges are found.³³² And, from an environmental perspective, doing something is better than doing nothing.³³³

This is not to say that we endorse domestic extraterritorial litigation as a long-term sustainable approach to addressing transboundary problems. For one thing, domestic extraterritorial litigation could lead to a patchwork of inconsistent adjudications as different courts from both sides of the border will approach cross-border issues using different laws.³³⁴ A hodgepodge of different judgments and policies could create unpredictability for businesses and industry.³³⁵ Second, whether the courts are friendly to environmental issues is unclear.³³⁶ Even with the

331. See generally Edward Lloyd, *Citizen Suits and Defenses Against Them*, 101 A.L.I.-A.B.A. 885 (2004) (providing a statistical overview of environmental citizen suits); James R. May, *Now More Than Ever: Trends in Environmental Citizen Suits*, 10 WIDENER L. REV. 1 (2003) (surveying the impact of citizen suits); Kristi M. Smith, *Who's Suing Whom?: A Comparison of Government and Citizen Suit Environmental Enforcement Actions Brought Under EPA-Administered Statutes, 1995-2000*, 29 COLUM. J. ENVTL. L. 359, 395-96 (2004) (arguing that statistics demonstrate that citizen's suits are intended to “spur and supplement government enforcement actions”).

332. Wooley, *supra* note 114, at 139.

333. The Prevention Principle underscores the rationale behind this contention. “Preventing environmental damage is almost always less costly than allowing the damage and incurring the environmental costs and other consequences later.” HUNTER ET AL., *supra* note 16, at 404; see also Declaration of the United Nations Conference on the Human Environment prin. 6, U.N. Doc. A/CONF.48/14/Rev. 1 (June 16, 1972) (declaring that the release of substances that cause serious environmental damage “must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems”).

334. For a discussion of how litigation can lead to patchwork solutions, see Paul L. Langer, *Significant Current Developments in Environmental Insurance Coverage*, 690 PLI/Comm. 129, 131 (1994) (describing how a “litigation explosion” over the insurance coverage aspects of environmental liability has led to a “patchwork of inconsistent and often conflicting decisions”); cf. Abate, *supra* note 320, at 385 (noting that a drawback to climate change litigation may be the patchwork, rather than comprehensive, nature of litigation solutions); Jonathan Turley, *A Crisis of Faith: Tobacco and the Madisonian Democracy*, 37 HARV. J. ON LEGIS. 433, 471-80 (2000) (describing the problems of the patchwork solutions caused by mass tort litigation and calling for national standards).

335. Cf. PEW CENTER ON GLOBAL CLIMATE CHANGE, CLIMATE CHANGE ACTIVITIES IN THE U.S. 2004 UPDATE (2004), available at http://www.pewclimate.org/what_s_being_done/us_activities_2004.cfm (describing how local climate change initiatives could create patchwork regulation leading to inefficiency and unpredictability).

336. See Richard E. Levy & Robert L. Glicksman, *Judicial Activism and Restraint in the Supreme Court's Environmental Law Decisions*, 42 VAND. L. REV. 343, 346 (1989) (describing

changes in law and science described above, litigants might find judges reluctant to hear these kind of cases. Finally, even if the courts are willing to tackle the complex environmental issues, the foreign and political nature of transboundary pollution poses unique challenges— the lawsuits would be complex, time-consuming, and costly both for the litigants and the courts.³³⁷

And these concerns do not even reach the bigger conceptual problems, such as the undemocratic nature of extraterritorially applying domestic laws,³³⁸ or the likely responses, such as diplomatic protests,³³⁹ nonrecognition of judgments,³⁴⁰ or the enactment of blocking³⁴¹ or claw-back statutes.³⁴²

But these issues can be left aside for now. Litigation as a means of settling and resettling default positions currently is an important part of international lawmaking. Just as litigation has been able to change the assumptions regarding the legal order with respect to environmental matters in the United States, it has the potential in the international realm to redeal the hands that have been dealt various stakeholders, and

how the U.S. Supreme Court's decisions are more pro-development than pro-environmental, and at odds with congressional policy). Professor Richard Lazarus, for example, has demonstrated that a significant number of U.S. Supreme Court decisions have anti-environmental results. Richard J. Lazarus, *Thirty Years of Environmental Protection Law in the Supreme Court*, 17 PACE ENVTL. L. REV. 1 (1999); Richard J. Lazarus, *Restoring What's Environmental About Environmental Law in the Supreme Court*, 47 UCLA L. REV. 703 (2000); Richard J. Lazarus, *Environmental Law and the Supreme Court: Three Years Later*, 19 PACE ENVTL. L. REV. 653 (2002).

337. See, e.g., Hall, *supra* note 15, at 449 (noting that the U.S. Supreme Court "has admitted that it is not the ideal forum for addressing transboundary pollution disputes, which tend to involve complex technical and scientific issues with major political and economic ramifications"); cf. Richard B. Bilder, *The Role of States and Cities in Foreign Relations*, 83 AM. J. INT'L L. 821, 830–31 (1989) (noting the problems with domestic courts deciding issues involving foreign affairs); Jack L. Goldsmith, *Federal Courts, Foreign Affairs, and Federalism*, 83 VA. L. REV. 1617, 1668 (1997) (arguing that courts are poorly equipped to address questions involving foreign relations).

338. See, e.g., Mark P. Gibney, *The Extraterritorial Application of U.S. Law: The Perversion of Democratic Governance, the Reversal of Institutional Roles, and the Imperative of Establishing Normative Principles*, 19 B.C. INT'L & COMP. L. REV. 297, 312–13 (1996); Mark Gibney & R. David Emerick, *The Extraterritorial Application of United States Law and the Protection of Human Rights: Holding Multinational Corporations to Domestic and International Standards*, 10 TEMP. INT'L & COMP. L.J. 123, 133 (1996) (arguing that extraterritorial application of the law creates an anomaly that is undemocratic); see also William DuBois, Note, *New Drug Research, the Extraterritorial Application of FDA Regulations, and the Need for International Cooperation*, 36 VAND. J. TRANSNAT'L L. 161, 199–200 (2003) (arguing that the extraterritorial application of law is undemocratic because it violates the principle that government legitimacy rests with the consent of the governed). *But see* Berman, *supra* note 12, at 1125–32 (arguing for a community, as opposed to a territorial, conception of jurisdiction, in part for legitimacy reasons); Parrish, *supra* note 14, at 406–07.

in the end bring about more cooperative outcomes. In the context of the Canada-U.S. relationship, it has the potential to bring the parties back together, hopefully with a renewed focus on bilateral cooperation. Canadians would be wise to consider this litigation option.

CONCLUSION

In recent years, environmental and international legal theorists have cheered the growth of extraterritorial domestic litigation as a method of addressing transboundary disputes. This growth is intimately connected with the changing nature of international law and relations, including the important role that non-state actors now play in the international arena. Largely ignored, however, is how these changes are developing outside the United States, in a way that impact American interests. As a result of America's embrace of extraterritoriality and the United States retreat from bilateralism, Canadians increasingly will explore the use of their own domestic laws to resolve transboundary air pollution emanating from the United States. Changes in law and science make such lawsuits possible, and extraterritorial reciprocity may, for the first time, be a very real threat. By itself, such litigation would be nothing to celebrate, but insofar as it would over time re-engage the parties to this historically harmonious relationship in bilateralism, it would represent a welcome shift in international lawmaking.

339. For example, the European Community and the United Kingdom submitted protests when the United States amended its Export Administration Regulations to prohibit the export of oil or natural gas exploration equipment to the Soviet Union. A.V. LOWE, *EXTRATERRITORIAL JURISDICTION: AN ANNOTATED COLLECTION OF LEGAL MATERIALS* 197, 201 (1983) (quoting diplomatic notes asserting that "[t]he United States measures as they apply in the present case are unacceptable under international law because of their extra-territorial aspects. They seek to regulate companies not of United States nationality in respect of their conduct outside the United States and particularly the handling of property and technical data of these companies not within the United States").

340. See generally ROBERT E. LUTZ, *A LAWYER'S HANDBOOK FOR ENFORCING FOREIGN JUDGMENTS IN THE UNITED STATES AND ABROAD* (2007). For a discussion of extraterritoriality and its connection to judgment enforcement, see Berman, *Dialectical Regulation*, *supra* note 329, at 944-45 (arguing that "it is clear that judgment recognition is increasingly the place where de-territorialized jurisdictional assertions meet the reality of territorial enforcement").

341. See, e.g., Harry L. Clark, *Dealing with U.S. Extraterritorial Sanctions and Foreign Countermeasures*, 20 U. PA. J. INT'L ECON. L. 61, 81-92 (1991) (discussing blocking statutes); William S. Dodge, *Understanding the Presumption Against Extraterritoriality*, 16 BERKELEY J. INT'L L. 85, 117 (1998) ("[I]n the antitrust area...the extraterritorial application of U.S. law has led to retaliatory legislation by other countries...."); William S. Dodge, *Antitrust and the Draft Hague Judgments Convention*, 32 LAW & POL'Y INT'L BUS. 363 (2001) (discussing blocking sta-

tutes); cf. John W. Boscarol, *An Anatomy of a Cuban Pyjama Crisis: Reconsidering Blocking Legislation in Response to Extraterritorial Trade Measures of the United States*, 30 LAW & POL'Y INT'L BUS. 439 (1999) (describing Canadian blocking legislation in response to U.S. extraterritorial measures); Michael A. Gerstenzang, *Insider Trading and the Internationalization of the Securities Markets*, 27 COLUM. J. TRANSNAT'L L. 409, 423 (1989) (explaining that the French blocking law "forbids nationals, and certain others with ties to France, from divulging economic, commercial, industrial, financial or technical matters to foreign authorities except as provided by international agreement").

342. A clawback statute "enables certain defendants who have paid multiple damage judgment in an overseas country to recover the multiple portion of that judgment from the successful plaintiff." Joseph E. Neuhaus, Note, *Power To Reverse Foreign Judgments: The British Clawback Statute Under International Law*, 81 COLUM. L. REV. 1097, 1097-98 (1981). For examples of blocking and clawback statutes in the Canadian context, see Foreign Extraterritorial Measures Act, R.S.C. ch. F-29 (2006), available at <http://laws.justice.gc.ca/en/showtdm/cs/F-29>; cf. Mitsuo Matsushita & Aya Iino, *The Blocking Legislation as a Countermeasure to the US Anti-Dumping Act of 1916: A Comparative Analysis of the EC and Japanese Damage Recovery Legislation*, 40 J. WORLD TRADE 753 (2006). See generally Andrew C. Dekany, *Canada's Foreign Extraterritorial Measures Act: Using Canadian Criminal Sanctions to Block U.S Anti-Cuban Legislation*, 28 CAN. BUS. L.J. 210, 211-12 (1997); William C. Graham, *The Foreign Extraterritorial Measures Act*, 11 CAN. BUS. L.J. 410 (1986).