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THE EU'S ETS AND GLOBAL AVIATION: WHY "LOCAL RULES" STILL MATTER AND MAY MATTER EVEN MORE IN THE FUTURE

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I. OVERVIEW

On January 1, 2012, the European Union ("EU") extended its Emission Trading System ("ETS")[1] to a significant part of the global aviation sector[2] notwithstanding the protests of numerous states[3] and objections from some European businesses.[4] With limited exception, aircraft departing from or landing

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1. *See* Directive 2003/87/EC of the European Parliament and of the Council of 13 Oct. 2003 Establishing a Scheme for Greenhouse Gas Emission Allowance Trading Within the Community and Amending Council Directive 96/61/EC, 2003 O.J. (L 275) 32, 34 [hereinafter ETS Directive].

2. Directive 2008/101/EC of the European Parliament and of the Council of 19 Nov. 2008 Amending Directive 2003/87/EC so as to Include Aviation Activities in the Scheme for Greenhouse Gas Emission Allowance Trading Within the Community, 2009 O.J. (L 8) 3, 3 [hereinafter Aviation Directive].

3. *See, e.g.*, James Kanter, *U.S. Airlines Challenge European Emissions Rule*, N.Y. TIMES (July 3, 2011), http://www.nytimes.com/2011/07/04/business/global/04emissions.html; Manisha Singhal & Anindya Upadhyay, *India to Oppose EU's Emission Trading System for Airlines,* THE ECON. TIMES (Aug. 1, 2011, 4:17 AM), http://articles.economictimes.indiatimes.com/2011-08-01/news/29838536_1_carbon-di33oxide-emission-trading-system-indian-carriers; BLOOMBERG NEWS, *China Bans Airlines From Joining EU Carbon Levies System,* BLOOMBERG (Feb. 6, 2012, 3:23 AM), http://www.bloomberg.com/news/2012-02-06/china-bans-airlines-from-joining-european-union-s-carbon-emissions-system.html; *Carbon-Emission Trading for Aeroflot Could Be Prohibited*, THE MOSCOW TIMES (Feb. 22, 2012), http://www.themoscowtimes.com/business/article/carbon-emission-trading-for-aeroflot-could-be-prohibited/453458.html; *Canada's Transport Minister Firm on Stance Regarding Aviation and Maritime Emissions With the European Commission's Vice-President Responsible for Transport*, CAN. NEWSWIRE (May 3, 2012, 10:48 AM), http://www.newswire.ca/en/story/967261/canada-s-transport-minister-firm-on-stance-regarding-aviation-and-maritime-emissions-with-the-european-commission-s-vice-president-responsible-for-tra.

4. *See, e.g.*, BLOOMBERG NEWS, *European Airlines and Airbus Seek to Ease Emissions Rule,* N.Y. TIMES (Mar. 12, 2012), http://www.nytimes.com/2012/03/13/business/global/airbus-and-european-airlines-seek-deal-on-emissions.html (noting that Airbus and several European airlines urge the EU to compromise on aviation ETS). The requirement that airlines surrender carbon allowance for 2012 emissions was to be effective April 30, 2013. *See* Aviation Directive, *supra* note 2, paras. 10(b)-(c), 14. However, in November 2012 the European Commission proposed deferring the application of the ETS to flights in and out of Europe until after the International Civil Aviation Organisation ("ICAO")

at an aerodrome in an EU Member State, regardless of the state of registry, origin of flight, or actual time spent in EU airspace, will be subject to the ETS for the entire length of the flight.[5] This has become known as the "Aviation Directive" and represents a considerable step in the EU's efforts to promote its robust climate change agenda, efforts that are marked as much by unilateralism and extraterritoriality[6] as they are by multilateral engagement.[7] The EU's unilateral extension of its municipal law[8] to the global aviation sector is unprecedented only

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General Assembly in autumn 2013. *See Proposal for a Decision of the European Parliament and of the Council Derogating Temporarily from Directive 2003/87/EC of the European Parliament and of the Council Establishing a Scheme for Greenhouse Gas Emission Allowance Trading Within the Community*, COM (2012) 697 proposal (Nov. 9, 2012). If the ICAO fails to reach agreement on a greenhouse gas ("GHG") emission reduction scheme the EU will enforce its ETS. *See* Memorandum from the European Comm'n, Stopping the Clock of ETS and Aviation Emissions Following Last Week's Int'l Civil Aviation Org. (ICAO) Council (Nov. 12, 2012), *available at* http://europa.eu/rapid/press-release_MEMO-12-854_en.htm. However, recent developments evidenced by the virtual collapse of European carbon prices and the European Parliament's refusal to intervene by approving a "back-loading" price support scheme may necessitate substantial changes to the ETS. *See Carbon Trading ETS, RIP?* THE ECONOMIST (Apr. 20, 2013), *available at* http://www.economist.com /news/finance-and-economics/21576388-failure-reform-europes-carbon-market-will-reverberate-round-world-ets.

5. Aviation Directive, *supra* note 2, Annex I. The directive applies to the bulk of international and EU passenger and cargo air traffic that depart from or arrive at an aerodrome in a Member State. Exempt activities include: (1) flights performed on an official mission of a reigning Monarch, the immediate family, Heads of State, Heads of Government and Government Ministers of a country other than a Member State; (2) military, customs and police flights; (3) search and rescue, firefighting, humanitarian and emergency medical service flights; (4) flights performed exclusively under visual flight rules as defined in Annex 2 to the Chicago Convention; (5) flights terminating at the aerodrome from which the aircraft has taken off and during which no intermediate landing has been made; (6) training flights performed for the purpose of obtaining a license or a rating provided that the flight does not serve for the transport of passengers and/or cargo or for the positioning or ferrying of aircraft; (7) flights performed for the purpose of scientific research or checking, testing or certifying aircraft or equipment whether airborne or ground-based; (8) flights performed by aircraft with a certified maximum take-off mass of less than 5,700 kg; (9) flights performed in the framework of public service obligations imposed in accordance with Regulation (EEC) No 2408/92 on routes within outermost regions or on routes where the capacity offered does not exceed 30,000 seats per year; and (10) flights performed by a commercial air transport operator operating either (a) fewer than 243 flights per period for three consecutive four-month periods, or (b) flights with total annual emissions lower than 10,000 tons per year.

6. *See, e.g.*, Jeffrey N. Shane, Under Sec'y for Policy, U.S. Dept. of Transp., Address at the American Bar Association Forum on Air & Space Law (Oct. 4, 2007), *in* INTERACTIVE INTELLIGENCE (Oct. 8, 2007), http://callcenterinfo.tmcnet.com/news/2007/10/08/2996105.htm (noting that forty-two of the delegations comprising the EU and European Civil Aviation Conference entered a formal reservation to the 2007 ICAO resolution calling on members to refrain from imposing market-based measures on other members absent consent). *See also* Joanne Scott & Lavanya Rajamani, *EU Climate Change Unilateralism*, 23 EUR. J. INT'L L. 469, 475-76 (2012).

7. *See generally* Elisa Morgera, *Ambition, Complexity and Legitimacy of Pursuing Mutual Supportiveness Through the EU's External Environmental Action* (Univ. of Edinburgh Sch. of Law Research Paper Series, No. 2012/02, 2012), *available at* http://ssrn.com/abstract=1987055.

8. Classifying EU rules as "municipal law" may not be entirely accurate given that its rules arguably occupy a space somewhere between purely "international" and purely "municipal" law. *See, e.g.*, Case C-415/05 P, Yassin Abdullah Kadi & Al Barakaat Int'l Found. v. Council of the European

in scale, not in originality, as other states have acted similarly in other areas of legal life.[9] The ETS has, however, become one of the more aggressive and controversial examples of the unilateral use of municipal lawmaking power to affect a wide-range of activities, peoples, and states across the globe. The rationale for the EU's action is best summed up in the remarks of Climate Commissioner Connie Hedegaard:

> So I agree that we cannot now afford to sit in Europe and just wait for whatever comes next in the international negotiations. That is of course precisely why, over the past [eighteen] months or two years, the Commission has come up with a communication on how to move our targets, with our low-carbon roadmap and the energy roadmap; has proposed an energy efficiency directive; has come up with substantial Multiannual Financial Framework proposals with a substantial climate, environment, energy-efficiency and resource-efficiency component; has come up with a proposal on energy taxation; and has come up, as requested, with tasks and values. . . . *This is very much proof that we in the Commission do not think we should sit idly waiting for the big international agreement. We must continue to move forward in Europe.*[10]

As Commissioner Hedegaard's statement demonstrates, attitudes towards the meaning of the state, the concept of sovereignty,[11] and the traditional mechanisms

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Union, Opinion of Advocate General Poieras Maduro, ¶¶ 21-22, 2008 E.C.R. I-06351(noting that the EU Treaty "created a municipal legal order of trans-national dimensions."). In this article the term "municipal law" includes EU rules and regulations for ease of distinction. For a general discussion on the nature of the EU lawmaking process, *see* JOHN MCCORMICK, ENVIRONMENTAL POLICY IN THE EUROPEAN UNION 71-75 (2001). This rather simple distinction between international law and municipal law as used in this article does not seek to address the more vexing issue of where on the legal spectrum law promulgated by institutions such as the EU should rest.

9. *See, e.g.*, Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub L. 111-203, 124 Stat. 1376 (2010) [hereinafter Dodd-Frank]; The Competition Act, 2002, No. 12, Acts of Parliament, 2003, as amended by the Competition (Amendment) Act, 2007 (India); Marine Mammals Protection Act of 1972, Pub. L. 92-522, 86 Stat. 1027 (1972); Amendment VIII to the Criminal Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Feb. 25, 2011, effective May 1, 2011) arts. 20, 29, 107,164, http://www.high-time.cn/eng/chubshow.asp?bbb=20110513154257&proid=20110520103322 (China). *See also* Charles W. Smitherman III, *The Future of Global Competition Governance: Lessons from the Transatlantic,* 19 AM. U. INT'L L. REV. 769, 818-820 (2004) (discussing extraterritoriality in U.S. and EU competition law). *But see* Appellate Body Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶¶ 1-3, WT/DS381/AB/R (May 16, 2012) [hereinafter Appellate Body Report, *Tuna-Dolphin* (2012)] (holding, in part, that U.S. "dolphin-safe" labeling provisions are inconsistent with TBT Agreement Article 2.1).

10. Remarks of Ms. Connie Hedegaard, 2012 O.J. 122 (Jan. 18, 2012) (European Parliament debates) (emphasis added).

11. *See* STEPHEN D. KRASNER, SOVEREIGNTY: ORGANIZED HYPOCRISY 11-22 (1999). Krasner identifies four types of sovereignty: (1) domestic sovereignty referring to internal organization and effectiveness of state authority; (2) interdependent sovereignty referring to the loss of sovereignty when states cannot control movements of goods and ideas; (3) international legal sovereignty as juridical equality; and (4) Westphalian sovereignty referring to principles of non-interference in internal affairs.

of international lawmaking are undergoing dynamic changes.[12] The advent of the United Nations,[13] the wide acceptance of human rights,[14] the use of powerful trading agreements to break down national barriers,[15] the globalization of judicial power,[16] the rise of institutions such as the EU, the World Trade Organization ("WTO")[17] and non-state actors,[18] multinational humanitarian interventions,[19] the formulation of *jus cogens* principles,[20] and the increasing use of market-based

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See also Case C-154/11, Mahamdia v. Algeria, Opinion of Advocate General Mengozzi, ¶¶ 1-3 (May 24, 2012), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62011CC0154:EN:HTML (explaining that state immunity from jurisdiction of European Courts is relative and that states are subject to jurisdiction in relation to their non-public functions such as employee relations).

12. *See generally* Andrew Halpin & Volker Roeben, *Introduction*, *in* THEORISING THE GLOBAL LEGAL ORDER 1-8 (Andrew Halpin & Volker Roeben, eds. 2009). *See also* Eric C. Ip, *Globalization and the Future of the Law of the Sovereign State*, 8 INT'L J. CONST. L. 636, 641 (2010); David Dyzenhaus, *Positivism and the Pesky Sovereign*, 22 EUR. J. INT'L L. 363, 364 (2011).

13. U.N. Charter art. 1.

14. *See, e.g.*, Universal Declaration of Human Rights, G.A. Res. 217 (III) A, U.N. Doc. A/RES/217(III) (Dec. 10, 1948); International Covenant on Civil and Political Rights, *opened for signature* Dec. 16, 1966, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976); Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, *opened for signature* Dec. 10 1984, 1465 U.N.T.S. 85 (entered into force June 26, 1987); Convention on the Prevention and Punishment of the Crime of Genocide, *opened for signature* Dec. 9, 1948, 78 U.N.T.S. 277 (entered into force Jan. 12, 1951).

15. *See, e.g.*, North American Free Trade Agreement, U.S.-Can.-Mex., Dec. 17, 1992, 32 I.L.M. 289 (1993) [hereinafter NAFTA]; General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT].

16. *See, e.g.*, Rome Statute of the International Criminal Court, U.N. Doc. A/CONF.183/9, July 17, 1998, 2187 U.N.T.S. 90. *See also* C. Neal Tate & Torbjörn Vallinder, *The Global Expansion of Judicial Power: The Judicialization of Politics*, *in* THE GLOBAL EXPANSION OF JUDICIAL POWER 1-10 (C. Neal Tate & Torbjörn Vallinder, eds. 1995); Gary Born, *A New Generation of International Adjudication*, 61 DUKE L. J. 775, 782-783 (2012).

17. *See, e.g.*, Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement]; Statute of the International Atomic Energy Agency, July 27, 1957, 276 U.N.T.S. 3; International Civil Aviation Organization, Chicago Convention on International Civil Aviation, Dec. 7, 1944, 15 U.N.T.S. 295 [hereinafter Chicago Convention]; Convention on the International Maritime Organization, Mar. 6, 1948, 289 U.N.T.S. 48.

18. *See e.g.*, Steven Bernstein & Erin Hannah, *Non-State Global Standard Setting and the WTO: Legitimacy and the Need for Regulatory Space*, 11 J. INT'L ECON. L. 575, 576 (2008) (explaining that "[i]nstitutionally [non-state actors] are notable for establishing their own governing systems, largely independent of state governments, with regulatory capacity to back up those obligations with enforceable rules. Scholars in law, political science, and business have variously labeled them 'transnational regulatory systems,' 'non-state market driven' ("NSMD") governance systems, and 'civil regulation' . . . . The goal for many NSMD governance systems is not simply to create niche markets that apply their standards, *but to promote their standards as appropriate and legitimate across an entire market sector*." (emphasis added)).

19. *See, e.g.*, S.C. Res. 1199, U.N. Doc. S/RES/1199 (Sept. 23, 1998); S.C. Res. 1319, U.N. Doc. S/RES/1319 (Sept. 20, 2000); S.C. Res. 1509, U.N. Doc. S/RES/1509 (Sept. 19, 2003); S.C. Res. 1590, U.N. Doc. S/RES/1590 (Mar. 24, 2005); S.C. Res. 1973, U.N. Doc. S/RES/1973 (Mar. 17, 2011); S.C. Res. 1976, U.N. Doc. S/RES/1976 (Apr. 11, 2011); S.C. Res. 2048, U.N. Doc. S/RES/2048 (May 18, 2012).

20. *See* Paul B. Stephan, *The Political Economy of* Jus Cogens, 44 VAND. J. TRANSNAT'L L. 1073, 1074 (2011) ("In the last two decades, abhorrence of impunity has migrated to the concept of *jus*

measures ("MBMs") to regulate transnational conduct[21] represent emerging forces that challenge the very foundations of the public international law order. Andrew Halpin and Volker Roeben note that, "The broader canvas of globalisation extends greater artistic license to the legal imagination. In part, this is a matter of opportunity. In part, this is a matter of need."[22] The artistic license afforded by rapid globalization has not only affected the types of relationships and behaviors to be regulated, i.e., subjects and subject matters, but perhaps more importantly who decides such issues and in what breadth.

This article examines the EU's extension of its ETS to the global aviation sector as a compelling example of how the most influential states or blocs of states (hereinafter "states"[23]) use their municipal lawmaking powers to manage behavior well beyond their borders.[24] Part I presents some context and examines the ETS, its application to the global aviation sector, and the Court of Justice of the European Union's ("ECJ") analysis of its legality under its view of current principles of international law. Part II discusses the Aviation Directive as an example of the quiet rise of municipal law as a transnational regulatory mechanism that exists independently and apart from traditional multilateral international lawmaking. The Aviation Directive demonstrates that while the last sixty years has witnessed the rise of varied multilateral institutions and efforts, transnational problems can incentivize powerful states to use their municipal lawmaking

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cogens."); Aaron Fichtelberg, *Democratic Legitimacy and the International Criminal Court: A Liberal Defence*, 4 J. INT'L CRIM. JUST. 765, 780 (2006). *But see*, A. Mark Weisburd, *The Emptiness of the Concept of* Jus Cogens, *as Illustrated by the War in Bosnia-Herzegovina*, 17 MICH. J. INT'L L. 1, 32-40 (1995) (discussing the two theories of *jus cogens*, their origins, similarities and differences); Robert Barnidge, Jr., *Questioning the Legitimacy of* Jus Cogens *in the Global Legal Order*, 38 ISRAEL Y.B. ON H.R. 199, 204 (2008) (". . . description can have the effect of 'de-binding' engagements with *jus cogens* from what might otherwise be considered the erstwhile formal textual constraints of article 53.").

21. *See* Stefan Speck, *The Design of Carbon and Broad-Based Energy Taxes in European Countries*, 10 VT. J. ENVTL. L. 31, 31-32 (2008) (noting that Europe's increasing reliance on market-based measures began in the 1990s).

22. Halpin & Roeben, *supra* note 12, at 5.

23. It is important to clarify that the EU is not a state as that term is now understood in international law. Rather, the EU is an entity with separate international legal personality. *See* Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community art. 46A, Dec. 13, 2007, 2007 O.J. (C 306) 1 [hereinafter Lisbon Treaty] ("The Union shall have legal personality."). The EU's legal personality includes (1) an ability to enter into agreements with other states or international organizations and (2) a private legal personality ("legal capacity") that permits the EU to be a party in private legal matters. *See* Stephen C. Sieberson, *Did Symbolism Sink the Constitution? Reflections on the European Union's State-Like Attributes*, 14 U.C. DAVIS J. INT'L L. & POL'Y 1, 18, 19 (2007) (describing states as having "personalities" in the international legal community). Although not technically a state, for ease of use in this article the term "state" is used not only to include the EU given its unique international standing, but also its significant independent legislative and regulatory powers that extend beyond issues normally associated with merely a trading bloc.

24. Sometimes others seek to extend municipal law to regulate transnational conduct even in the face of state resistance to such an extension. *See, e.g.*, Kiobel v. Royal Dutch Petroleum Co., No. 10-1491, slip op. (U.S. April 17, 2013) (seeking to extend the jurisdiction of U.S. courts using the Alien Tort Statute for human rights violations allegedly committed by Shell Oil in the Niger River delta).

machinery aggressively to confront cross-border problems. This takes place even when the international community's conventional lawmaking tools fail to achieve desired results or prove too inexpedient.[25]

II. THE EU'S AVIATION EMISSION TRADING SYSTEM

Both the authority and the source of public international law are challenged by global forces that raise new questions regarding what exactly constitutes the parameters of the "public," the "international" and the "law" aspects of the system.[26] The public international law system is, in theory, premised on the notion of multilateral legal coordination of transnational state action; that is, consent to coordinating frameworks, such as formal treaties or generally accepted state practices, as the mechanism for regulating state and global conduct.[27] The normative hierarchy articulated in the Statute of the International Court of Justice largely reflects a predisposition towards both the sanctity of the state as the prime

25. *See* 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, 90 (2006) ("International environmental law has not, however, trumped the need for extraterritorial application of U.S. laws to protect the environment. *If anything, the need for extraterritorial application of U.S. environmental laws is greater now than ever before.* Application of U.S. environmental laws beyond its territorial boundaries under appropriate circumstances can be an indispensable weapon in fulfilling the goal of meaningful environmental protection on a global scale." (emphasis added)). *See also* Craig James Willy, *In Defense of Green Protectionism: Why the EU Should Put the Planet Before Free Trade*, FUTURECHALLENGES (Apr. 21, 2012), http://futurechallenges.org/local/in-defense-of-green-protectionism-why-the-eu-should-put-the-planet-before-free-trade/ ("The question for environmentalists is: When there is no agreement forthcoming, is there any real alternative to green protectionism?").

26. One question the international law community has struggled with is whether there is actually a clearly identifiable normative system that can be called international law. *See, e.g.*, Henry H. Perritt, Jr., *The Internet is Changing International Law*, 73 CHI.-KENT L. REV. 997, 1003 (1998) (noting that dualists distinguished sharply between public international law as the law of relations between states, mocked by John Austin, as not really "law," and private international law as the law governing persons, mocked by Austin as not really "international" although it was "law"). *See also* Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L.J. 2599, 2601 (1997) (discussing the various historical theories of compliance).

27. State practice or customary law arises from giving certain legal character to the perceived and generally accepted practices of sovereign states. *See* Jun-shik Hwang, *A Sense and Sensibility of Legal Obligation: Customary International Law and Game Theory*, 20 TEMP. INT'L & COMP. L. J. 111, 119 (2006). However, what exactly constitutes accepted custom is a fluid question. As the International Court of Justice has observed, the period of time over which a practice or custom forms does not alone determine whether it can be considered international law. *See, e.g.*, North Sea Continental Shelf (Ger./Den. v. Ger./Neth.), 1969 I.C.J. 3, ¶ 74 (Feb. 20) (noting that "the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law."). *See also* Andrew T. Guzman, *Saving Customary International Law*, 27 MICH. J. INT'L L. 115, 157-59 (2005) (discussing the concept of "instant" custom as a possible source of international law). Customary international law has an additional problem. While it is generally accepted that states may withdraw from treaties, the conventional thinking is that states may not withdraw from a rule of customary international law once accepted even if the state objects. *See* Curtis A. Bradley & Mitu Gulati, *Withdrawing from International Custom*, 120 YALE L.J. 202, 204 (2010).

actor in international law and the necessity of its consent to regulation.[28] Yet this normative hierarchy of how the system is supposed to work has always been somewhat dubious because the creation and implementation of the international legal order is an inherently chaotic business—a contact sport if you will—comprised of many players operating from different motivations, frequently seeking different outcomes, promoting different concepts, complying for different reasons, and using different language with only marginal refereeing.[29] This is most certainly true today despite the emergence of institutions designed to more effectively broker international behavior over a vast array of subjects. The effects of globalization and economic integration have not only led to a broadening of political power across states, but have accelerated the growth of substantial connections between individual behavior in one state and its impact in another. Thus, notwithstanding debates on the exact economic effects of globalization,[30] it is evident that the political and legal order of the last sixty years is being dislodged and replaced by various modalities of transnational regulation and that there are various actors engaged in the regulatory enterprise.

In understanding the impact of these developments and what they may mean for the future of public international law as a system, it is necessary to step back from formalistic definitions and categories, (e.g. municipal law versus international law, positivism versus natural law theory) and consider the question of what constitutes international law from a more pragmatic relational, behavioral and functional perspective—that is, what peoples, relationships, institutions and activities are being regulated, by whom, and how legitimate and successful is the regulatory effort. The legitimacy of any regulatory enterprise is hugely dependent upon its successful implementation. As will be discussed, the globe's most influential states have significant reserves of economic and political power available that can be deployed to promote success and therefore add legitimacy to

28. Traditionally scholars have pointed to the Statute of the International Court of Justice as defining the sources of international law. Statute of the International Court of Justice art. 38, June 26, 1945, 33 U.N.T.S. 993. According to Article 38, international law is comprised of (1) international conventions, whether general or particular, establishing rules expressly recognized by the contesting states; (2) custom, as evidence of a general practice accepted as law; (3) general principles of law recognized by civilized nations; and (4) subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations. Some question whether this view on the sources of international law is relevant today. *See, e.g.*, Kenneth S. Gallant, *International Criminal Courts and the Making of Public International Law: New Roles for International Organizations and Individuals*, 43 J. MARSHALL L. REV. 603, 606 (2010) (noting that states contribute to the formation of international law); Andreas Buss, *The* Preah Vihear *Case and Regional Customary Law*, 9 CHINESE J. INT'L L. 111, 126 (2010) (discussing calls to amend the statute to address its overly positivistic tone). *See also* Duncan B. Hollis, *Why State Consent Still Matters – Non-State Actors, Treaties, and the Changing Sources of International Law*, 23 BERKELEY J. INT'L L. 137, 145 (2005) (recognizing that consent from states contributes to the creation of international law).

29. Guglielmo Verdirame, *"The Divided West": International Lawyers in Europe and America*, 18 EUR. J. INT'L L. 553, 562 (2007).

30. *See, e.g.*, Ruchir Sharma, *Broken BRICs*, FOREIGN AFFAIRS (Nov./Dec. 2012), *available at* http://www.foreignaffairs.com/articles/138219/ruchir-sharma/broken-brics (arguing that international economic convergence is a myth).

their regulatory efforts, formal categories of law to the contrary notwithstanding. When examined from this more pragmatic viewpoint, therefore, it is clear that formal treaties and recognized customs are not the only *legal* mechanisms by which states shape global behavior. Law does not act upon institutions and individuals in a vacuum. Accordingly, while the study of public international law has tended to reflect an almost hypertensive concern for categorical subject matter "fragmentation,"[31] the real story in international law today is the extent to which conventional normative mechanisms of international lawmaking, e.g., treaties and state custom, are being augmented if not displaced by a rapidly growing list of unconventional normative mechanisms, e.g., non-state regulators, MBMs, and the extraterritorial application of municipal law.

The Aviation Directive is a case study in this latter development. It illustrates that states, particularly the most powerful and influential states,[32] have a variety of legal tools available outside of conventional international lawmaking by which to regulate and shape global behavior, not the least of which is giving transnational effect to their municipal laws premised upon the notion of substantial connectedness.[33] Extending the ETS to the global aviation sector cannot be seen simply as an act of regulating the activities of a particular industry with commercial ties to the EU. It is, rather, an attempt to reshape global behavior[34]

31. For a discussion concerning the "fragmentation" of public international law, see Int'l Law Comm'n, 58th Sess., May 9-June 9, 2006, and Jul. 3-Aug. 11, 2006, Rep. of the Study Group of the Int'l Law Comm'n, *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, U.N. Doc. A/CN.4/L.682 (Apr. 13, 2006) (finalized by Martti Koskenniemi), *available at* http://untreaty.un.org/ilc/documentation/english /a_cn4_l682.pdf. *See also* David Kennedy, *International Law: One, Two, Three, Many Legal Orders: Legal Pluralism and the Cosmopolitan Dream*, 31 N.Y.U. REV. L. & SOC. CHANGE 641, 641 (2007) ("Over the last few years, innumerable scholars have turned their attention to the fragmentation, disaggregation, and multiplicity of the international legal regime."). While the "fragmentation" problem may be of great concern to academics, this has hardly stopped the development of new legal regimes. The challenge facing international law, as evidenced by the Aviation Directive, is not subject matter fragmentation but rather the fact that it is the product of a segmented society; that is, a social structure (the international community) lacking a strong central authority to coordinate the development and enforcement of law and one whose actors place a premium on maintaining their sovereignty and autonomy. As a result, there is a constant push and pull between the center of the global legal system evidenced in such institutions as the U.N., WTO and ICJ, and the interests of the system's segments (states) to collaborate in solving common problems but not at the expense of their autonomy.

32. *See, e.g.*, Keith R. Fisher, *Transnational Competition Law and the WTO*, 5 J. INT'L TRADE L. & POL'Y 42, 46 (2006) (noting more developed economies have sufficient market "clout" to unilaterally assert extraterritorial jurisdiction in a meaningful way but smaller economies can rarely expect to make a plausible threat to prohibit conduct by large firms that might have negative effects within their borders).

33. One question that remains relatively unresolved is what exactly do we mean by "transnational" and "international" law? Vicki Jackson, for example, speaks of transnational law as both international law and the laws of foreign countries. *See generally* VICKI C. JACKSON, CONSTITUTIONAL ENGAGEMENT IN A TRANSNATIONAL ERA 1-2 (2010).

34. For example, according to 2011 figures provided by Heathrow Airport alone, 22.8 percent of 69.4 million, or 15,823,200, passengers departing or landing were on North American-oriented flights.

while protecting domestic interests by giving extraterritorial effect to what Dan Danielsen calls "local rules,"[35] in spite of protests to the contrary.[36] Does this mean that the sanctity of state is becoming irrelevant?[37] Hardly.[38] It does suggest, however, that as interdependencies and connections between states and individuals grow, solely formalistic notions of international law and conventional modes of international lawmaking will not define the regulation of transnational conduct.[39] Rather, pluralism, non-state action, extraterritoriality, and unilateralism are becoming as much a part of the globe's legal frameworks as is traditional multilateralism.[40] This may be an unnerving development for an international law purist seeking clean divides between "public," "private," "international," and

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About Heathrow Airport, HEATHROW, http://www.heathrowairport.com/about-us/facts-and-figures (last visited Mar. 4, 2012).

35. Dan Danielsen, *Local Rules and a Global Economy: An Economic Policy Perspective*, 1 TRANSN'L LEGAL THEORY 49, 49-50 (2010). *See also* Case C-366/10, Air Transp. Ass'n of Am. and Others v. Sec'y of State for Energy and Climate Change, Opinion of Advocate General Kokott, ¶ 147 (2011) [hereinafter Air Transport Case], *available at* http://curia.europa.eu/juris/document/document.jsf?text=&docid=110742&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=55150 ("Admittedly, it is undoubtedly true that, to some extent, account is thus taken of events that take place over the high seas or on the territory of third countries. This might indirectly give airlines an incentive to conduct themselves in a particular way when flying over the high seas or on the territory of third countries, in particular to consume as little fuel as possible and expel as few greenhouse gases as possible."). *See also* NICO KRISCH, BEYOND CONSTITUTIONALISM: THE PLURALIST STRUCTURE OF POSTNATIONAL LAW 4 (2010) ("The classical distinction between the domestic and international spheres that had sustained them is increasingly blurred, with a multitude of formal and informal connections taking the place of what once were relatively clear rules and categories.").

36. *See, e.g.*, Air Transport Case, *supra* note 35, ¶ 156 ("Contrary to the view taken by the claimants in the main proceedings and the associations supporting them, Directive 2008/101 does not, either in law or in fact, preclude third countries from bringing into effect or applying their own emissions trading schemes for aviation activities.").

37. *See, e.g.*, Appellate Body Report, *Japan – Taxes on Alcoholic Beverages*, 15, WT/DS11/8/AB/R (Oct. 4, 1996) (noting that the WTO Agreement is a contract and a self-evident exercise of sovereign power in pursuit of national interests).

38. *See, e.g.*, ROBERT GILPIN, GLOBAL POLITICAL ECONOMY: UNDERSTANDING THE INTERNATIONAL ECONOMIC ORDER 22 (2001) (noting that the "nation-state remains of supreme importance"). *See also* DAVID J. BEDERMAN, GLOBALIZATION AND INTERNATIONAL LAW 147-50 (2008) (noting that the Westphalian model of the nation-state is tested but it has not collapsed or been rendered irrelevant).

39. *See, e.g.*, Austen L. Parrish, *Domestic Responses to Transnational Crime: The Limits of National Law*, 23 CRIM. L.F. 275, 289-90 (2012) (discussing the growth of transnational crime and the increased use of municipal law, but challenging the desirability of this development); Jay Ellis, *Extraterritorial Exercise of Jurisdiction for Environmental Protection: Addressing Fairness Concerns*, 25 LEIDEN J. INT'L L. 397, 407 (2012) (observing that there are reasons to believe that unilateral exercises of extraterritorial authority may become more common); Shohit Chaudhry & Kartikey Mahajan, *The Case for an Effective Extraterritorial Jurisdiction of Competition Commission of India in Light of International Practices*, 32 EUR. COMP. L. REV. 314, 314 (2011) (describing the role of extraterritorial jurisdiction of the Competition Commission of India and the need to enforce such jurisdiction more effectively).

40. *See* KRISCH, *supra* note 35, at 4 (describing law and politics as having been "transformed"). *See also* David Kennedy, *The International Style in Postwar Law and Policy*, 1994 UTAH L. REV. 7, 10 (". . . interdependence is a fact, sovereignty a relic.").

"municipal," but it is a real and largely uncoordinated development nonetheless—one that is difficult to categorize and even harder to contain.

It is always dangerous to use a single event as a general indicator of future happenings. However, as Commissioner Hedegaard's statement evidences, global interdependencies and transnational problems are accelerating the need for coordinated action at the very moment the international community's ability to reach consensus-driven solutions in several critical areas languishes.[41] In response, the EU has chosen to push the "international community," whoever that may be at any one moment in time, into addressing problems such as climate change by unilaterally imposing its ETS on much of the global aviation sector, with all indications that it will not stop there.[42] The mere act of landing or departing from an aerodrome in a Member State now subjects a non-exempt aircraft and its owner (and therefore tangentially its passengers and/or cargo recipients) to the "unlimited jurisdiction" (i.e., global jurisdiction) of the EU for purposes of aviation emissions from the beginning to the end of the flight regardless of origin, destination or duration.[43] A public international legal order that was, in theory, premised on

41. *See, e.g.*, Carlyle A. Thayer, *Standoff in the South China Sea*, YALEGLOBAL (June 12, 2012), *available at* http://yaleglobal.yale.edu/content/standoff-south-china-sea (discussing China and the Philippines both laying claim to the same islands); *Dead Man Talking*, THE ECONOMIST (Apr. 28, 2011), *available at* http://www.economist.com/node/18620814 (noting the challenges first world countries are facing in negotiating with countries on the economic rise); Colum Lynch, *Russia, China Veto Syria Resolution at the United Nations*, THE WASHINGTON POST (Oct. 5, 2011), *available at* http://www.washingtonpost.com/world/national-security/russia-china-block-syria-resolution-at-un/2011/10/04/gIQArCFBML_story.html (describing Russia and China standing up to the U.S. with regards to a Syrian resolution before the UN Security Council); *Canada to Withdraw from Kyoto Protocol*, BBC NEWS (Dec. 13, 2011), *available at* http://www.bbc.co.uk/news/world-us-canada-16151310 (describing Canada's withdrawal from the Kyoto Protocol); Noel Brinkerhoff, *Why Does the U.S. Refuse to Ratify the Hazardous Waste Treaty?*, ALLGOV (Aug. 28, 2011), *available at* http://www.allgov.com/US_and_the_World/ViewNews/Why_Does_the_US_Refuse_to_Ratify_the_Hazardous_Waste_Treaty_110828 (pointing to the United States' lack of waste management and international dumping).

42. *See, e.g.*, Jeff Coelho, *IMO to Discuss CO2 Curbs for Ships, Industry Frets*, REUTERS (Feb. 22, 2012), *available at* http://www.reuters.com/article/2012/02/22/us-carbon-shipping-idUSTRE81L1K N20120222 (noting that the EU ran out of patience in the ICAO and imposed its own aviation emission standards and that EU is ready to act if the IMO fails to deliver on maritime emissions). *See also* JASPER FABER ET AL., TECHNICAL SUPPORT FOR EUROPEAN ACTION TO REDUCING GREENHOUSE GAS EMISSIONS FROM INTERNATIONAL MARITIME TRANSPORT 1 (2009), *available at* http://ec.europa.eu/climа/policies/transport/shipping/docs/ghg_ships_report_en.pdf; SIMONE MANFREDI ET AL., PRODUCT ENVIRONMENTAL FOOTPRINT (PEF) GUIDE 1 (July 17, 2012), *available at* http://ec.europa.eu/environment/eussd/pdf/footprint/PEF%20methodology%20final%20draft.pdf.

43. *See* Air Transport Case, *supra* note 35, ¶ 125. *But see* Brief of the Federal Republic of Germany as Amicus Curiae Supporting Respondents, Kiobel v. Royal Dutch Petroleum Co., 133 S. Ct. 98 (2012) (No. 10-1491), 2012 WL 379578, at *3-4 (explaining that the U.S. assertion of universal jurisdiction over a foreign corporation under the Alien Tort Statute should only be available if plaintiffs show no legal remedy available in country of incorporation or center of management); Brief of the Governments of the United Kingdom of Great Britain and Northern Ireland and The Kingdom of the Netherlands as Amici Curiae in Support of the Respondents, Kiobel v. Royal Dutch Petroleum Co., 133 S. Ct. 98 (2012), (No. 10-1491), 2012 WL 405480, at *2 (explaining that there exists continued

respect for the symmetric horizontal relationships of sovereign equals is being displaced by complex, asymmetric relationships where influential states and multiple actors use their regulatory powers to augment, provoke or even circumvent multilateral efforts aimed at shaping global behavior.[44] As a consequence, traditional conceptual curbs on a state's ability to overreach—for example, freedom from external control, and even the very nature of state authority or, exclusive sovereignty over a defined population within a given geographical territory—are becoming both ambiguous and less effective.[45] There has never been any question concerning the authority of a state to regulate relationships and behaviors *within* its borders regardless of an individual's citizenship, save that of diplomats. But increasingly more influential states seek to regulate the behavior of individuals with substantial connections to territory, economy or politics regardless of their actual physical location on the planet. Globalization has effectively created a virtual world for the political and regulatory powers of the most influential states, encouraging them to see an ever broadening array of connections between extraterritorial conduct and domestic interests that rationalize the greater use of municipal law in response.[46]

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recognition of the principle that broad assertions of extraterritorial jurisdiction arising out of aliens' claims against foreign defendants for alleged injuries in foreign jurisdictions should be avoided).

44. *See, e.g.*, Air Transport Case, *supra* note 35, ¶ 129 ("Furthermore, the fact that . . . certain matters contributing to the pollution of the air, sea or land territory of the Member State originate in an event which occurs partly outside that territory is not such as to call into question . . . the full applicability of European Union law in that territory." (Citations Omitted)).

45. Traditionally, the four attributes of the state were (1) a permanent population, (2) a defined territory, (3) a functioning government exercising authority over its population and territory, and (4) independence. *See* IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 70-72 (7th ed. 2008).

46. Nicolas van de Walle notes that one potential consequence of globalization is the "marketization" of public policy and public institutions through liberalization, privatization and deregulation. Therefore, the globalization of the world's economy and the marketization of public policy are distinctive but intertwined developments. *See generally* NICOLAS VAN DE WALLE, ECONOMIC GLOBALIZATION AND POLITICAL STABILITY IN DEVELOPING COUNTRIES 5 (1998), *available at* http://www.iatp.org/files/economic_globalization_and_political_stability.pdf. *See also* Case C-89/85, A. Ahlstrom Osakeyhtio v. Comm'n, 1988 E.C.R. 5193 (1988) (endorsing the extraterritorial application of EU competition law); Brendan Sweeney, *Reflections on a Decade of International Law: International Competition Law and Policy: A Work in Progress*, 10 MELB. J. OF INT'L L. 58, 58 (2009) (discussing both national and international developments in competition law); Bederman, *supra* note 38, at 27 ("For millennia, commerce has been the solvent of sovereignty. Throughout all epochs of globalization . . . international trade and all its attendant phenomena and consequences have been signal contributors to the processes of political, social, and cultural change around the world. Indeed, we tend to regard globalization as, first and foremost, a set of economic processes that bind international actors (States, individuals, corporations, and other polities) together in a web of mutual interdependence . . . . Commerce is subversive of established State and political order precisely because it allows for the free communication and transport of people, goods, services, and information across recognized national boundaries and cultural zones of influence. Throughout much of human history, the peoples of radically different cultures, ethnicities, religious traditions, and imperial regimes have nonetheless sought to trade with each other and to proposer from the consequent economic benefits that accrue from such economic interaction."); Pascal Lamy, *The Place of the WTO and its Law in the International Legal Order*, 17 EUR. J. INT'L L. 969, 969 (2006) (stating that trade is at the heart of many segments of public international law).

The Aviation Directive, therefore, is one of several illustrations of the impact that globalization is having on the development of international law, modes of international lawmaking, and the process by which the most influential states identify and confront global issues, sometimes using their municipal law systems as a principal response tool to perceived threats or transnational problems. With the language of integration infused into virtually every discussion concerning the globe's legal systems, the degree to which the most influential states use their municipal authority to shape global behavior is an often overlooked but profoundly important theme.[47] It is an undertow sometimes working with and sometimes against conventional structures of public international law and multilateralism. With the emergence of the rule of law culture over the last sixty years,[48] the extraterritorial application of municipal law can become a surrogate means by which the most influential states advance their many objectives.[49] Through law these states are capable of projecting their values, policies and power globally while protecting their domestic interests by wrapping them in a blanket of law that can often go unchallenged[50] because of the absence of super-national law enforcement institutions capable of meaningfully containing state adventurism.[51]

A. Environmental and Economic Policy in the EU—Greening the Planet, Green Protectionism or Both?

James Carville, the noted strategist for Bill Clinton's successful 1992 presidential campaign, famously coined the phrase, "It's the economy, stupid." The linkage between a state's economy and its many other systems—including its

47. *See, e.g.*, Commission Decision of 24 May 2004 Relating to a Proceeding Pursuant to Article 82 of the EC Treaty and Article 54 of the EEA Agreement against Microsoft Corporation, Case COMP/C-3/37.792 - Microsoft, 2007 O.J. L32/23 (2007), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:032:0024:0024:EN:PDF (ordering Microsoft to disclose certain software information to competitors).

48. *See generally* BRIAN Z. TAMANAHA, ON THE RULE OF LAW: HISTORY, POLITICS, THEORY 1 (2004). *See also* Julio Faundez & Ronald Janse, *Rule of Law Promotion and Security Sector Reform: Partners or Rivals?*, 4 HAGUE J. RULE L. 1, 1-3 (2012), *available at* http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8519803; Otto Triffterer, *Closing Remarks and a Vision: International Criminal Justice and the "Well-Being of the World,"* 22 CRIM. L.F. 531, 536-37 (2011).

49. *Cf.* Kriangsak Kittichaisaree, *Using Trade Sanctions and Subsidies to Achieve Environmental Objectives in the Pacific Rim*, 4 COLO. J. INT'L ENVTL. L. & POL'Y 296, 297-98 (1993) (explaining that, similarly, international law may be used as a means of advancing environmental objectives outside of a state's borders).

50. *Cf.* Foreign Account Tax Compliance Act, 26 U.S.C. §§ 1471-74 (2012) [hereinafter FACTA] (requires foreign banks to locate American account holders and disclose their balances, receipts, and withdrawals to the Internal Revenue Service or be subject to a thirty percent withholding tax on income from U.S. financial assets held by the banks).

51. *See e.g.*, Steve Charnovitz, *Essay in Honor of W. Michael Reisman: Trade, Investment and Dispute Settlement: The Enforcement of WTO Judgments*, 34 YALE J. INT'L L. 558, 562 (2009) ("[T]he WTO dispute system has been effective because there is an expectation that decisions will ultimately be complied with."). *But see* Born, *supra* note 16 (arguing that so-called second generation international adjudicatory bodies have far more enforcement powers than first generation bodies, such as the International Court of Justice).

legal system—is inseparable. Anti-trust and competition law is premised on the idea that the diffusion of commercial power is far better for a community than monopolism.[52] Parochial trade laws of the 1920's and 1930's intended to insulate national markets from global economic forces became accelerants to the Great Depression producing massive social and political dislocation.[53] More recently, the widespread integration of the world's economies has spurred new regulatory systems—both state and non-state driven—seeking to balance trade with other considerations such as development, the environment, labor rights, and natural resources exploitation.[54] Economics is, in short, one of the foremost imperatives behind a state's political, social, and legal order, as well as largely defining a state's capacity to affect events across the planet. Accordingly, the architecture of the global economy is not only undergirded by a complex system of international and regional treaties, customary law, and emerging non-state regulation, it is also influenced by municipal laws with significant extraterritorial reach. The globalization of a state's economy has, in some cases, encouraged and even hastened the need to globalize a state's municipal law.

Over the last forty years, economics and the environment have become intertwined as states and the international community recognize the impact human activity has on transnational ecosystems and international relations. This impact is not always empirically quantifiable leading at times to sharp disagreements over just how much influence environmental considerations should have on economic activity.[55] The result is virtual combat in some states between environmental considerations and economic development.[56] Such conflict is nothing new. But

52. *See, e.g.*, Sherman Antitrust Act, 15 U.S.C. §§ 1-38 (2012); Council Regulation (EC) No. 411/2004 of 26 February 2004 Repealing Regulation (EEC) No 3975/87 and Amending Regulations (EEC) No. 3976/87 and (EC) No. 1/2003, in Connection with Air Transport Between the Community and Third Countries, 2004 O.J. (L 68) 1. *See also* David J. Gerber & Paolo Cassinis, *The "Modernization" of European Community Competition Law: Achieving Consistency in Enforcement: Part I*, 27 EUR. COMPETITION L. REV. 10, 10-11 (2006); Heike Schweitzer, *Competition Law and Public Policy: Reconsidering an Uneasy Relationship: The Example of Art. 81, 81* (Euro. Univ. Inst., Working Paper No. 2007/30, 2007), *available at* http://ssrn.com/abstract=1092883.

53. Brendan Ruddy, *The Critical Success of the WTO: Trade Policies of the Current Economic Crisis*, 13 J. INT'L ECON. L. 475, 475-77 (2010) (explaining that trade protectionism exacerbated the Great Depression); Alan O. Sykes, *The Questionable Case for Subsidies Regulation: A Comparative Perspective*, 2 J. LEGAL ANALYSIS 473, 474 (2010) ("[T]he Great Depression taught the world that protective policies can quickly and destructively spread from nation to nation.").

54. *See, e.g.*, Marrakesh Agreement, *supra* note 17. *See also* Case C-337/09 P, Council v. Zhejiang Xinan Chem. Indus. Grp. Co. Ltd., 2012 EUR-Lex (Jan. 19, 2012), *available at* http://curia.europa.eu/juris/liste.jsf?language=en&num=C-337/09%20P# (discussing what constitutes a state controlled company from a non-market economy for purposes of applying anti-dumping rules).

55. *See, e.g.*, Massachusetts v. EPA, 549 U.S. 497, 504, 511 (2007) (discussing issues surrounding the power of the U.S. EPA to regulate greenhouse gas emissions).

56. *See, e.g.*, Lucy Madison, *House Republicans Reject Climate Change Science*, CBSNEWS, (Mar. 16, 2011, 2:38 PM), *available at* http://www.cbsnews.com/8301-503544_162-20043909-503544.html. *See also* Richard Balme, *The Politics of Environmental Justice in China* 1 (Am. Political Sci. Assoc. 2011 Annual Meeting, 2011), *available at* http://ssrn.com/abstract=1901849. *See, e.g.*, Alan B. Sielen, *Time for a Department of the Environment*, 16 OCEAN & COASTAL L.J. 435, 463 (2011) (explaining that the failure of the U.S. to establish a cabinet level environment department contributes

the emergence of truly global ecological problems,[57] spurred in part by demands for more robust worldwide economic growth,[58] is compelling some states to take a more nuanced view of the competing interests, not simply to address transnational problems but also to stimulate innovation and development at home. As Michael E. Porter and Claas van der Linde have observed:

> The relationship between environmental goals and industrial competitiveness has normally been thought of as involving a tradeoff between social benefits and private costs. The issue was how to balance society's desire for environmental protection with the economic burden on industry. Framed this way, environmental improvement becomes a kind of arm-wrestling match. One side pushes for tougher standards; the other side tries to beat the standards back.
>
> Our central message is that the environment-competitiveness debate has been framed incorrectly. The notion of an inevitable struggle between ecology and the economy grows out of a static view of environmental regulation, in which technology, products, processes and customer needs are all fixed. In this static world, where firms have already made their cost-minimizing choices, environmental regulation inevitably raises costs and will tend to reduce the market share of domestic companies on global markets.[59]

The application of the ETS to the global aviation sector may be seen as evidence of the EU embracing the Porter/van der Linde proposition that the environment and the economy are synergetic and therefore must be reciprocally regulated.[60] From a

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to a combative and not collaborative approach to finding solutions and allows industry to block anything a particular industry does not find congenial to its interests).

57. *See, e.g.*, Larry Catá Backer, *From Moral Obligation to International Law: Disclosure Systems, Markets and the Regulation of Multinational Corporations*, 39 GEO. J. INT'L L. 591, 592-93 (2008) (describing the role of multinational firms in creating a flexible new governance-style set of substantive obligations tracking "public" goals, reinforced by a hard international law regime of monitoring and disclosure).

58. *See, e.g.*, The Ilulissat Declaration, Arctic Ocean Conference, Greenland, May 27-29, 2008, 48 I.L.M. 362, *available at* http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf. *See, e.g.*, Tessa Mendez, *Thin Ice, Shifting Geopolitics: The Legal Implications of Arctic Ice Melt*, 38 DENV. J. INT'L L. & POL'Y 527, 527-28 (2010) (geopolitics is tied to resource use and control; the Arctic as virgin territory lacks geopolitical stability established in most other areas of the world). *See also* Cinnamon P. Carlarne, *Arctic Dreams and Geoengineering Wishes: The Collateral Damage of Climate Change*, 49 COLUM. J. TRANSNAT'L L. 602, 602-04 (2011).

59. Michael E. Porter & Claas van der Linde, *Toward a New Conception of the Environment-Competitiveness Relationship*, 9 J. ECON. PERSP. 97, 97 (1995). *See also* Geoffrey Heal, *A Celebration of Environmental and Resource Economics*, 1 ENVT'L ECON. & POL'Y 7, 7 (2007).

60. *See* Valeria Costantini & Massimiliano Mazzanti, *On the Green and Innovative Side of Trade Competitiveness? The Impact of Environmental Policies and Innovation on EU Exports*, 41 RESEARCH POL'Y 132, 132 (2012) (explaining that EU energy tax policies and innovation efforts positively influence export flow dynamics, revealing a Porter-like mechanism). *See also* Hans Vedder, *The Treaty of Lisbon and European Environmental Law and Policy*, 22 J. ENVTL. L. 285, 286 (2010).

purely regulatory perspective,[61] the U.S. has arguably reduced its international environmental leadership footprint in response to domestic politics that often see environmental and economic interests as opposing forces,[62] even placing itself at a strategic disadvantage sometimes.[63] In contrast, the EU has used its vast regulatory power over the Common Market to drive its economies to progressively incorporate environmental concerns as root considerations in commercial policies.[64] Whether this largely top-down approach[65]—as distinguished from a market-based approach[66]—will prove effective in the long term as a means to

61. It is important to make a distinction between regulatory leadership and environmental impact. As recent studies have shown, the shift of the U.S. to a greater use of natural gas has resulted in a significant decline in GHG emissions as power companies switch from coal to generate electricity. This is occurring even in the absence of regulatory-imposed emission reduction system. *See* Xi Lu, Jackson Salovaara & Michael B. McElroy, *Implications of the Recent Reductions in Natural Gas Prices for Emissions of CO2 from the US Power Sector*, 46 ENVTL. SCI. TECH. 3014, 3014 (2012). In contrast, the EU's ETS, which is meant to drive down GHG emissions through regulation, has had a smaller impact for a variety of reasons. *See also* European Environment Agency, *Why Did Greenhouse Gas Emissions Increase in the EU in 2010?* 3 (Technical Report No. 3/2012, 2012), *available at* http://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2012/why-did-greenhouse-gas-emissions.pdf/view.

62. *See, e.g.*, David Burwell, *Keystone XL Pipeline, A Poster Child for Political Posturing*, CNNOPINION (May 30, 2012, 3:13 PM), *available at* http://edition.cnn.com/2012/05/30/opinion/burwell-keystone-pipeline/index.html?eref=rss_mostpopular. *See also* Jutta Brunnée, *The United States and International Environmental Law: Living with an Elephant*, 15 EUR. J. INT'L L. 617, 618-19 (2004); Miranda A. Schreurs, Henrik Selin & Stacy D. VanDeveer, *Transatlantic Environmental Relations: Implications for the Global Community*, *in* TRANSATLANTIC ENVIRONMENT AND ENERGY POLITICS: COMPARATIVE AND INTERNATIONAL PERSPECTIVES 251, 254-55 (Miranda A. Schreurs, Henrik Selin & Stacy D. VanDeveer, eds., 2009).

63. *See, e.g.*, John A. C. Cartner & Edgar Gold, *Commentary in Reply to "Is it Time for the United States to Join the Law of the Sea Convention,"* 42 J. MAR. L. & COM. 49, 49-50 (2011) (arguing that the failure to ratify the Law of the Sea Convention places the U.S. at a significant disadvantage). *Cf.* Sharon E. Foster, *While America Slept: The Harmonization of Competition Laws Based Upon the European Union Model*, 15 EMORY INT'L L. REV. 467, 467-68 (2001) (arguing that the EU has harmonized competition laws and is influencing other states to adopt its model while the U.S. denies the feasibility to do so, in turn enabling the EU to have greater influence in the development of global competition law).

64. *See* Decision No. 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 Laying Down the Sixth Community Environment Action Programme, 2002 O.J. (L 242) 1. *See also* Commission of the European Communities, *Economic Growth and the Environment: Some Implications for Economic Policy*, at 7, COM (1994) 465 final (Mar. 11, 1994); *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Energy Roadmap 2050*, at 1, COM (2011) 885/2 (Dec. 15, 2011); Naomi Salmon, *What's Cooking? From GM Food to Nanofood: Regulating Risk and Trade in Europe*, 11 ENVTL. L. REV. 97, 97 (2009).

65. *But see* Adam Weiss, *Federalism and the Gay Family: Free Movement of Same-Sex Couples in the United States and the European Union*, 41 COLUM. J.L. & SOC. PROBS. 81, 99 (2007) (arguing that free movement of goods and peoples differ in the U.S. and EU with the former favoring a centralized approach while the latter vacillates between centralization and competition).

66. *Cf.* Gitanjali Deb, *Atrazine: A Case Study in the Differences Between Regulations of Endocrine Disrupting Chemicals in the EU and the US*, 25 TEMP. J. SCI. TECH. & ENVTL. L. 173, 173, 186-87 (2006) (noting that while both the EU and U.S. have elements of precaution in their environmental regulatory systems, the underlying drivers are very different).

address ecological problems remains to be seen.[67] Nevertheless, as Noah M. Sachs notes, "[s]ince 2000, the EU has embarked on ambitious environmental lawmaking in areas such as chemical regulation, energy efficiency, hazardous waste, and climate change. Europe has in many cases supplanted the United States as the leading originator and exporter of environmental law innovation."[68] The ETS is evidence of the EU's effort to link environment well-being to the Common Market's economic interests.[69] As stated by the Ecologic Institute in the Sixth Environmental Action Programme ("6EAP"):

> In relation to international environmental governance, it should be noted that the EU emerged as a global "green leader" in the second half of the 1980s. Observers have identified, among other factors, the withdrawal of the U.S. as a leader in international environmental policy making, the EU's *(competitive) interest* in promoting its own rather stringent environmental standards at the international level, and the EU's desire to shape its identity as a civilian world power as possible reasons for the active role of the EU in international environmental policy making.[70]

The result is the emergence of the EU as a leading environmental regulator with reach well beyond the Common Market given the integrated nature of today's economies and the size of its internal market.[71]

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67. *Cf.* Issachar Rosen-Zvi, *You Are Too Soft!: What Can Corporate Social Responsibility Do for Climate Change?*, 12 MINN. J.L. SCI. & TECH. 527, 527-30 (2011) (arguing that the failure of the Copenhagen Summit rested in part on the declining effectiveness of the regulatory state and the rise of non-state governance actors).

68. Noah M. Sachs, *Jumping the Pond: Transnational Law and the Future of Chemical Regulation*, 62 VAND. L. REV. 1817, 1819-20 (2009) (noting that the EU's Registration, Evaluation, and Authorization of Chemicals ("REACH") program is setting the *de facto* global standards in chemical regulation).

69. *See, e.g.*, *Communication from the Commission - Developing an EU Civil Aviation Policy Towards Brazil*, at 1.1, COM (2010) 0210 final (May 5, 2010) ("[T]he European Commission has proposed to launch targeted negotiations seeking to achieve comprehensive aviation agreements with selected key partners in all regions of the world, *with the aim of strengthening the prospects for promoting European industry and ensuring fair competition*, while at the same time seeking to reform international civil aviation.") (emphasis added)); European Environment Agency, *The European Environment - State and Outlook 2010: Synthesis*, at 9, State of the Environment report No. 1/2010 (Nov. 29, 2010), *available at* http://www.eea.europa.eu/soer/synthesis ("Continuing depletion of Europe's stocks of natural capital and flows of ecosystem services will ultimately undermine Europe's economy and erode social cohesion."). *See also* JAMES CONNELLY & GRAHAM SMITH, POLITICS AND THE ENVIRONMENT: FROM THEORY TO PRACTICE 241 (Michael Waller & Stephen Young eds., 1999) (describing EU environmental policy as dependent upon the "ecological modernisation" to minimize conflict between environmental quality and economic growth by betting on technological advances).

70. Ecologic Institute, Berlin and Brussels, et. al., *Final Rep. for the Assessment of the 6th Env't Action Programme*, at 119, DG ENV.1/SER/2009/0044 (Feb. 21, 2011) (emphasis added), *available at* http://ec.europa.eu/environment/newprg/pdf/Ecologic_6EAP_Report.pdf.

71. *See* David A. Wirth, *The EU's New Impact on U.S. Environmental Regulation* 91 (Boston Coll. Law School Legal Studies Research Paper Series, Research Paper No. 144, 2007), *available at* http://ssrn.com/abstract=1028733 (describing a new trend by which EU environmental policies are having an impact on U.S. environmental policies). *See also* Miranda A. Schreurs, Henrik Selin & Stacy D. VanDeveer, *Expanding Transatlantic Relations: Implications for Environment and Energy Politics*,

The EU's assumption of this role, however, cannot be seen solely as an altruistic effort aimed at improving global living conditions writ large. As Michael E. Porter further notes, "The performance of any company can be divided into two parts: the first attributable to the average performance of all competitors in its industry and the second to whether the company is an above- or below-average performer in its industry."[72] Arguably, the same can be said of states. To the extent that a state's internal market and regulatory systems can operate as an "above-average performer" across a range of activities through innovation, regulation, and process improvement, it holds a comparative and strategic advantage over states that are simply average or below-average performers. Singapore is arguably a case study in support of this principle.[73] The reason for this is simple: states with internal markets that perform above average and with efficient regulatory systems not only possess significant economic clout, but they position themselves to set favorable global standards—legal and otherwise.[74] As all but the most sophisticated manufacturing and servicing activity is globalized through integration and corporate restructuring,[75] those states that control the standards setting process, even informally,[76] can position themselves to address long-term environmental problems while promoting domestic innovation and internal market development. Consequently, while there are philanthropic aspects to the EU's global environmental efforts, it also reflects a keen desire to weave sustainability, energy efficiency, health, and clean environment issues into its practical economic objectives with the end result being an economy based on

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in TRANSATLANTIC ENVIRONMENT AND ENERGY POLITICS: COMPARATIVE AND INTERNATIONAL PERSPECTIVES 1, 1-18 (Miranda A. Schreurs, Henrik Selin & Stacy D. VanDeveer eds., 2009) (noting the transatlantic cooperation and tension between the U.S. and the EU on matters regarding environmental policy).

72. Michael E. Porter, *Michael Porter on Competition*, 44 ANTITRUST BULL. 841, 844 (1999).

73. *See generally* GAVIN PEEBLES & PETER WILSON, ECONOMIC GROWTH AND DEVELOPMENT IN SINGAPORE: PAST AND FUTURE 1, 4-5 (2002) (discussing the current state and possible future of Singapore's economy).

74. *Cf.* Sachs, *supra* note 68, at 1819 (noting that the EU's REACH program is setting the *de facto* global standards in chemical regulation). *See also* MANFREDI, *supra* note 42 (providing a guide to measure the environmental impacts of a product during its life cycle).

75. *See* GILPIN, *supra* note 38, at 289.

76. *See e.g., Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions: Trade, Growth and World Affairs Trade Policy as a Core Component of the EU's 2020 Strategy*, at 6-7, 11 COM (2010) 612 final (Sept. 11, 2010) [hereinafter *Commission Communication: Trade*] ("We [EU] will urge our major trading partners to join and promote the use of existing sectoral regulatory convergence initiatives such as the UN-Economic Commission for Europe ("ECE") regulations on automobiles, and to participate actively in the development of international standards or common regulatory approaches in a broad range of sectors. Indeed experience shows that it is much easier to tackle potential barriers *before* regulatory practices become entrenched, both in well established EU industry sectors such as automotives, machine tools and chemicals, but particularly in rapidly emerging sectors such as online services or biotech."). The Commission also noted: "The biggest remaining obstacles lie in the divergence of standards and regulations across the Atlantic, even though we [and the U.S.] have very similar regulatory aims." *Id.* at 7.

innovation and growth in emerging technologies.[77] As the late U.S. House Speaker Thomas "Tip" O'Neill so famously observed, "All politics is local." That includes global politics and its interaction with parochial economic and environmental interests.

Some fourteen principles now drive EU environmental and economic policy including the polluter pays principle;[78] a focus on sustainable development;[79] a linking of environment, health, safety and consumer protection;[80] a requirement that environmental problems be rectified at the source;[81] the integration of environmental and health concerns into all aspect of EU policy-making;[82] and, perhaps most influential, the notion of precaution to prevent problems and lower risk.[83] These principles impact a wide-range of industrial and economic interests such as construction,[84] transportation,[85] and energy,[86] and drive the EU's policies towards an interconnected environmental-economic regulation scheme within the

77. *See, e.g.*, Council Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and Amending and Subsequently Repealing Directives 2001/77/EC and 2003/30/EC, 2009 O.J. (L 140) 16 (noting the new technologies in the renewable energy sector that will incentivize economic growth); *Commission Communication: Trade*, *supra* note 76, at 5 ("Our economic future lies in keeping a competitive edge in innovative, high-value products, generating long term and well paid jobs."). *See also* Emily Barrett Lydgate, *Biofuels, Sustainability, and Trade-Related Regulatory Chill*, 15 J. INT'L ECON. L. 157, 158 (2012) (discussing the relationship between the World Trade Organization and national sustainable development policies); Jan H. Jans & Hans H.B. Vedder, *European Environmental Law*, 35 EUR. L. REV. 112, 113-14 (2010); Henning Grosse Ruse-Khan, *A Real Partnership for Development? Sustainable Development as Treaty Objective in European Economic Partnership Agreements and Beyond*, 13 J. INT'L ECON. L. 139, 139 (2010) (noting that a sustainable development treaty is one way of achieving integration of societal, the environmental, and the economic interests); *More Member States Agree NSRF 2007-13 with Commission*, 210 EU FOCUS 20, 20 (2007) (discussing various National Strategic Reference Frameworks); *Commission Outlines its Taxation Priorities*, 79 EU FOCUS 17, 17 (2001) ("[EU] tax policy must be fully consistent with other EU policies such as economic, employment, health and consumer protection, innovation, environmental and energy policies.").

78. *See* Council Declaration, Programme of Action of the European Communities on the Environment, 1973 O.J. (C 112) 16.

79. *See* Treaty on European Union, art. 130r(1), 1992 O.J. (C 191) 35, *available at* http://eur-lex.europa.eu/en/treaties/dat/11992M/htm/11992M.html#0001000001.

80. *See id.* art. 129a(b).

81. *Id.* art. 130r(2).

82. *See id.* art. 130r(2) (noting what the European Community shall consider when preparing its environmental policy).

83. *Id. See also* Council Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011 O.J. (L 174) 88 (noting the use of the precautionary principle in EU policy).

84. *See* European Parliament Resolution of 15 December 2010 on Revision of the Energy Efficiency Action Plan (2010/2107(INI)), 2012 O.J. (C 169) 66, 68.

85. *See id.* at 75; European Parliament Resolution of 25 November 2010 on International Trade Policy in the Context of Climate Change Imperatives (2010/2103(INI)), 2012 O.J. (C 99) 94, 99.

86. *See, e.g.*, Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Using Products and Amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council, 2005 O.J. (L 191) 29.

Common Market that is increasingly transposed across the globe.[87] Directives on the use of renewable energies[88] and bio-mass fuels[89] serve the dual propose of promoting sustainability while propelling innovation and protecting established and nascent European industries by imposing standards that others must adjust to as a condition of market access.[90] According to Tom Howes,

> [T]he growth of renewable energy depends on new technologies and processes, and ongoing efforts to improve the technology and bring down costs. Consequently, there is a clear technology innovation drive from the sector and a clear economic and employment benefit: the sector employs over 1.4 million people . . . ."[91]

The EU's use of the "precautionary principle" does not simply express its clean environment interests, it compels those in other states to alter their domestic practices as a condition of gaining access to the Common Market,[92] while promoting environmental innovation as a core economic driver at home.[93]

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87. *See* Brandon Mitchener, *Standard Bearers: Increasingly, Rules of Global Economy Are Set in Brussels—to Farmers and Manufacturers, Satisfying EU Regulators Becomes a Crucial Concern—From Corn to SUV "Bull Bars,"* WALL ST. J., Apr. 23, 2002, at A1.

88. *See, e.g.*, Directive 2008/28/EC of the European Parliament and of the Council of 11 March 2008 Amending Directive 2005/32/EC Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Using Products, as well as Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC, as Regards the Implementing Powers Conferred on the Commission, 2008 O.J. (L 81) 48.

89. *See, e.g.*, Council Directive 2009/28/EC, *supra* note 77, art. 19.

90. *See e.g.*, WILL STRAW, DAVID NASH & REUBEN BALFOUR, EUROPE'S NEXT ECONOMY: THE BENEFITS OF AND BARRIERS TO THE LOW-CARBON TRANSITION 12, 13 (2012), *available at* http://www.ippr.org/images/media/files/publication/2012/05/europesnexteconomy-lowcarbontransition-May2012_9182.pdf (noting that energy intensive industries are at risk from competitive pressures relating to the low-carbon transition and, "[t]herefore, the loss of these companies to jurisdictions outside the EU would harm Europe's low-carbon transition and cost jobs and economic output. . . . Given these complexities, compensating the energy-intensive sectors and using diplomatic channels to ensure that other jurisdictions commit to binding emissions reduction targets is a better approach than reducing the EU's own ambition, which could make a global agreement less likely and reduce current incentives for technological innovation.").

91. Tom Howes, *The EU's New Renewable Energy Directive (2009/28/EC), in* THE NEW CLIMATE POLICIES OF THE EUROPEAN UNION 117, 117 (Sebastian Oberthür & Marc Pallemaerts eds., 2010).

92. *See, e.g.*, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 Concerning the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), 2006 O.J. (L 136) 3, 16, 24, 40 [hereinafter REACH Regulation]. *See also* Yoshiko Naiki, *Assessing Policy Reach: Japan's Chemical Policy Reform in Response to the EU's REACH Regulation*, 22 J. ENVTL. L. 171, 172 (2010); Doaa Abdel Motaal, *Reaching REACH: The Challenge for Chemicals Entering International Trade*, 12 J. INT'L ECON. L. 643, 643-45 (2009); Bernard Hoekman & Joel Trachtman, *Continued Suspense: EC-Hormones and WTO Disciplines on Discrimination and Domestic Regulation: Appellate Body Reports: Canada/United States—Continued Suspension of Obligations in the EC - Hormones Dispute, WT/DS320/AB/R, WT/DS321/AB/R, adopted 14 Nov. 2008*, 9 WORLD TRADE REV. 151, 156 (2010).

93. Motaal, *supra* note 92, at 643; Porter & van der Linde, *supra* note 59, at 101 ("Innovation offsets can be broadly divided into product offsets and process offsets. Product offsets occur when environmental regulation produces not just less pollution, but also creates better-performing or higher-

The willingness of the EU to go forward with the Aviation Directive in the face of significant global opposition reflects (1) its unique character and market size; (2) its linkage of economic security with the environment; (3) its desire to be a global environmental regulator contributing to, if not outright commanding, the standards setting process; and (4) its willingness to use its collective political and economic clout to achieve the strategic policy objectives of the Member States and the Brussels' bureaucracy through the use of law and regulation.[94] It also reflects the keen economic interests of the EU, which originated as a trading bloc.[95] By integrating and projecting its market and regulatory power, the EU can position itself to set environmental standards across a wide-range of industries, services, and technologies, which benefit its own economic interests.[96] Although David Bederman notes that international organizations are essential in setting global standards, in part, because "[n]o single nation, or even group of countries, can unilaterally raise standards,"[97] this is true only to an extent. Notwithstanding growing economic integration and interdependency, the most influential states

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quality products, safer products, lower product costs (perhaps from material substitution or less packaging), products with higher resale or scrap value (because of ease in recycling or disassembly) or lower costs of product disposal for users.").

94. Joanne Scott, *From Brussels with Love: The Transatlantic Travels of European Law and the Chemistry of Regulatory Attraction*, 57 AM. J. COMP. L. 897, 899, 939, 940-41 (2009).

95. *See generally* Council Directive 2003/87, 2003 O.J. (L 275) 32 (EC); *Commission of the European Communities, Economic Growth and the Environment: Some Implications for Economic Policy*, at 1, COM (1994) 465 final (Mar. 11, 1994); *Commission of the European Communities, Directions for the EU on Environmental Indicators and Green National Accounting: The Integration of Environmental and Economic Information Systems*, at 2, COM (1994) 670 final (Dec. 21, 1994). *See also* Damian Chalmers, *Inhabitants in the Field of European Community Environmental Law*, 5 COLUM. J. EUR. L. 39, 41 (1999) (discussing the "ecologization" of EU economics and the "economization" of the EU ecology); A. Denny Ellerman & Barbara K. Buchner, *The European Union Emissions Trading Scheme: Origins, Allocation, and Early Results*, 1 REV. ENVTL. ECON. & POL'Y 66, 66 (2007).

96. Lawrence A. Kogan, *The Extra-WTO Precautionary Principle: One European "Fashion" Export the United States Can Do Without*, 17 TEMP. POL. & CIV. RTS. L. REV. 491, 491-92 (2008); Constance E. Bagley, *What's Law Got to Do With It?: Integrating Law and Strategy*, 47 AM. BUS. L.J. 587, 587 (2010). *See also* STRAW et al., *supra* note 90, at 19-22 (making the following recommendations with respect to the European economy and the ETS: "[1] Expand the EU ETS to include imported energy-intensive goods. Serious consideration should be given to extending the ETS into imported goods from energy intensive sectors if binding emissions commitments for 2020 are not agreed by 2015. [2] Raise the carbon price. The EU should act to raise the price of carbon, which is worryingly low. [3] Focus the EU's multiannual financial framework on innovation. In addition to the demand-side measures described above, the EU should develop a set of supply-side policies. [4] Protect ETS revenues for low-carbon projects. The ETS is partly undermined by concerns that it has become a fiscal policy to raise revenue rather than a climate policy to reduce emissions. [5] Provide industry with greater regulatory certainty. Industry participants from France, Germany and the UK called for more stability in the EU's regulatory setting process. [6] Maximise the EU's role as a standard setter. Vehicle emissions standards are a successful example of the EU generating a new market through standard setting."). *See also Two Ways to Make a Car,* THE ECONOMIST (Mar. 10, 2012), *available at* http://www.economist.com/node/21549950 (noting that currently Brazil builds automotive engines exclusively to EU standards).

97. Bederman, *supra* note 38, at 57.

continue to possess significant capacity to dominate global regulatory systems[98] often by conditioning access to vast internal markets on compliance with domestically driven standards.[99] As G. John Ikenberry observed, "[a]ll states have an interest in arriving at an agreement that coordinates policy—particular in areas of business and trade regulation—but the leading state[s] can use its power advantages to get other states to adopt its rules and regulations."[100] Even where these attempts have been successfully resisted in venues such as the WTO,[101] the fact remains that with regularity environmental and economic interests converge with the most influential states using their extensive lawmaking capacities to achieve advantageous outcomes within that convergence.[102] From the ETS to the Aviation Directive to its emerging "environmental foot printing" efforts, the EU is positioning itself to be a global innovator and regulator across a range of economic activities by using its environmental regulatory systems.[103] To the extent that the EU is successful in projecting its environmental standards on the global plane it forces the commercial bases, markets, and political establishments of other states, particularly in the developing world, to either adjust to its vision of the

98. *Cf.* Michael Byers, *The Complexities of Foundational Change*, *in* UNITED STATES HEGEMONY AND THE FOUNDATIONS OF INTERNATIONAL LAW 1, 2 (Michael Byers & George Nolte, eds. 2003).

99. *See, e.g.*, Commission Regulation No. 1235/2008, 2008 O.J. (L 334/ 25) 1 (EC); Marine Mammals Protection Act of 1972, *supra* note 9. *See also* Willy, *supra* note 25 ("Europe has every right to export this energy model to other developed countries, forcefully if necessary. It should stand up . . . [to] accurately price carbon in airlines as well as areas, such as oil taken from Canada's tar sands, even if it means conflict with Ottawa. Europeans also, by their economic power, have the means to assert themselves . . . . In addition, on the Western Eurasian landmass, which is to say in Europe's relations with the former Soviet Union, the Middle East and Africa, the EU's trade position is so dominant that it can effectively impose its preferences in that region.").

100. G. JOHN IKENBERRY, LIBERAL LEVIATHAN: THE ORIGINS, CRISIS AND TRANSFORMATION OF THE AMERICAN WORLD ORDER 113 (2011).

101. *See, e.g.*, Appellate Body Report, *Brazil—Measures Affecting Imports of Retreaded Tyres*, ¶ 1, WT/DS332/AB (Dec.3, 2007) [hereinafter Appellate Body Report, Brazil—Tyres]; Appellate Body Report, *United States—Standards for Reformulated and Conventional Gasoline*, ¶ 1, WT/DS2/AB/R (Apr. 29, 1996) [hereinafter Appellate Body Report, U.S.—Gasoline]; Appellate Body Report, *Tuna-Dolphin* (2012), *supra* note 9, ¶ 1; Appellate Body Report, *Australia—Measures Affecting the Importation of Apples from New Zealand*, ¶ 1, WT/DS367/AB/R (Nov. 29, 2010).

102. Pascal Liu, Alice Byers & Daniele Giovannucci, *Value-Adding Standards in the North American Food Market - Trade Opportunities in Certified Products for Developing Countries* 1-2 (Mar. 18, 2008), *available at* http://ssrn.com/abstract=1107382; Michael W. Meredith, *Malaysia's World Trade Organization Challenge to the European Union's Renewable Energy Directive: An Economic Analysis*, 21 PAC. RIM L. & POL'Y J. 399, 399, 404 (2012) (discussing how the EU's directive is seen by some as green protectionism, the practice of adding non-environmental objectives that are discriminatory, or overtly trade restrictive to environmental policy).

103. *See generally* FREDRIK ERIXON, GREEN PROTECTIONISM IN THE EUROPEAN UNION: HOW EUROPE'S BIOFUELS POLICY AND THE RENEWABLE ENERGY DIRECTIVE VIOLATE WTO COMMITMENTS, ECIPE OCCASIONAL PAPER NO. 1/2009 21 (Eur. Ctr. for Int'l Political Econ. ed., 2009). *Cf.* Julian L. Wong, *Don't Miss the Forest for the Trees, U.S. Investment in Clean Energy at Home Is the Best Response to China's Protectionism*, CENTER FOR AMERICAN PROGRESS (July 23 2010), http://www.americanprogress.org/issues/green/news/2010/07/23/8128/dont-miss-the-forest-for-the-trees/ (noting that the U.S. risks falling behind China, the EU and others because it lacks a long-term coordinated vision on the development of renewable energy).

environment-economics equation or find themselves outside a huge market.[104] This is arguably no different than the U.S. using its position as the world's leading financial system to achieve favorable domestic results in that field.[105] The fact that the Aviation Directive pulls a good part of a global sector into the EU's carbon market illustrates the capabilities that the most influential states have in setting global standards, creating and regulating markets, and shaping conduct well beyond their borders by using their vast economic power.[106] In the end, James Carville is largely correct.

So why does this matter to public international law? For a long time the field of public international law has been fixated on state-to-state relationships defined by the symmetrical status of equal sovereigns. Yet one of the most powerful and undervalued influences on the international legal order is the extent to which the extraterritorial application of municipal law by powerful states shapes and alters behavior patterns given global integration. As the Aviation Directive illustrates, the most influential states have immense lawmaking and law-projecting capabilities, often legitimatized by their perceived democratic nature and/or backed by enormous economic strength as measured by the size of their internal markets and their global trading profiles. These states also have a remarkable aptitude for deploying their law projecting capabilities globally to achieve certain policy objectives through the use of municipal regulatory systems.[107] When measured on

104. *See European Union*, CIA FACTBOOK (last updated Feb. 5, 2013), *available at* https://www.cia.gov/library/publications/the-world-factbook/geos/ee.html (estimating EU GDP in 2012 at $15.7 trillion). *See also* Eric J. Boos, *Between Scylla and Charybdis: The Changing Nature of U.S. and EU Development Policy and its Effects on the Least Developed Countries of Sub-Saharan Africa*, 11 TUL. J. INT'L & COMP. L. 181, 181-83, 185 (2003) (noting that developing countries are concerned that the U.S. and EU impose trade restrictions on labor and environmental grounds in order to satisfy domestic interests); Donald P. Harris, *TRIPS and Treaties of Adhesion Part II: Back to the Past or a Small Step Forward?*, 2007 MICH. ST. L. REV. 185, 189, 201 (2007) (discussing how the U.S. and EU coerce developing countries by threatening to withdraw or halt foreign direct investment, close off crucial markets, and impose retaliatory trade sanctions for failing to increase intellectual property protection); Joanne Scott, *The Multi-Level Governance of Climate Change*, 1 CARBON & CLIMATE L. REV. 25, 28, 30 (2011) (noting that several EU leaders are proposing a carbon border tax on products from states with less stringent emission standards).

105. *See* Michael Greenberger, *The Extraterritorial Provisions of the Dodd-Frank Act Protects U.S. Taxpayers from Worldwide Bailouts*, 80 U. MISSOURI-KANSAS L. REV. 965, 966 (2012).

106. *Cf.* Noah Sachs, *Planning the Funeral at the Birth: Extended Producer Responsibility in the European Union and the United States*, 30 HARV. ENVTL. L. REV. 51, 62, 68 (2006) (noting the impact California and the EU have on global standards setting).

107. *See* James L. Gunderson & Thomas W. Waelde, *Legislative Reform in Transition Economies: Western Transplants - A Short-Cut to Social Market Economy Status?* 43 INT'L & COMP. L. Q. 347, 347 (1994); Warren Pengilley, *United States Trade and Antitrust Laws: A Study of International Legal Imperialism from Sherman to Helms Burton*, 1999 CCLJ LEXIS 1, 12, 16, 23 (1999); Austen Parrish, *The Effects Test: Extraterritoriality's Fifth Business*, 61 VAND. L. REV. 1455, 1475-76 (2008); Peter K. Yu, *Six Secret (and Now Open) Fears of ACTA*, 64 SMU L. REV. 975, 977-78 (2011); Haider Ala Hamoudi, *The American Commercial Religion*, 10 DEPAUL BUS. & COM. L.J. 107, 107-08 (2012). *See also* JAMES A. GARDNER, LEGAL IMPERIALISM: AMERICAN LAWYERS AND FOREIGN AID IN LATIN AMERICA 280 (1980) (the law and development movement is "an energetic but flawed attempt to

the global scale, regulations set by the most influential states matter well beyond their borders; regulations set by small and developing states generally do not. Consequently, this lawmaking and law-projecting capability enables some states to dominate the global legal order—and therefore global behavior—even outside of comprehensive multilateral frameworks or cooperation-based agreements.[108] If the EU can successfully use its municipal lawmaking capability to rework the landscape of global environmental law in its economic favor,[109] it expands its global leadership, encourages the development of new industries and technologies at home,[110] forces other nations to adjust to its policy initiatives and standards, and plays a more dominant role in shaping global markets and behavior by pushing its standards ahead of others.[111] Basically, through the extraterritorial projection of its environmentally-focused municipal law, the EU can become a powerful global economic policy determiner.

The EU's assertiveness in global environmental regulation is not, therefore, the product of happenstance[112] or the pursuit of purely laudatory objectives. It also reflects a keen and strategic effort to protect its long-range commercial interests as transnational ecological problems become prime considerations in economic development and economic innovation.[113] This is precisely why some perceive the EU's ETS and other aggressive environmental undertakings as trade protectionism wrapped in a flag of law-based environmentalism—so-called "green protectionism."[114] History is replete with examples of influential states shaping

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provide American legal assistance and to transfer American legal models, which were themselves flawed.").

108. Rebecca Tsosie, *Indigenous Women and International Human Rights Law: The Challenges of Colonialism, Cultural Survival, and Self-Determination*, 15 UCLA J. INT'L L. & FOREIGN AFF. 187, 189 (2010); Richard H. Steinberg, *Who is Sovereign?*, 40 STAN. J. INT'L L. 329, 340 (2004).

109. *But see*, MCCORMICK, *supra* note 8, at 264 (noting that the EU often suffers from a "capability-expectation gap" due to its structural inability to turn economic power into hard results).

110. *Cf. Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions, Innovating for Sustainable Growth: A Bioeconomy for Europe*, at 2, COM (2012) 60 final (Feb. 02, 2012).

111. *See, e.g.*, Michael E. Porter, *Preemptive Capacity Expansion*, 16 J. REPRINTS ANTITRUST L. & ECON. 629, 631 (1986) (noting that one approach to economic dominance is preemptive capacity expansion in which a competitor "locks-up" a major portion of the market thereby discouraging other entrants).

112. *See, e.g.*, Commission Regulation 2493/2000, of the European Parliament and of the Council of 7 Nov. 2000 on Measures to Promote the Full Integration of the Environmental Dimension in the Development Process of Developing Countries, 2000 O.J. (L 288) 43, 1-9.

113. Giorgio Maganza, *The Treaty of Amsterdam's Changes to the Common Foreign and Security Policy Chapter and an Overview of the Opening Enlargement Process*, 22 FORDHAM INT'L L.J. 174, 174 (1999).

114. *See* ERIXON, *supra* note 103; LAWRENCE A. KOGAN, 'ENLIGHTENED' ENVIRONMENTALISM OR DISGUISED PROTECTIONISM? ASSESSING THE IMPACT OF EU PRECAUTION-BASED STANDARDS ON DEVELOPING COUNTRIES (2004), *available at* http://www.wto.org/english/forums_e/ngo_e/posp47_nf tc_enlightened_e.pdf. The EU is not alone in using its municipal regulatory power to shape global environmental behavior. *See also* Marine Mammal Protection Act, *supra* note 9; Austen L. Parrish, *Trail Smelter Deja Vu: Extraterritoriality, International Environmental Law, and the Search for Solutions to Canadian-U.S. Transboundary Water Pollution Disputes*, 85 B.U. L. REV. 363, 387-402

global behavior. What is new is the extent to which the broadening use of municipal law (in scope and subject) can be used to achieve global and domestic policy objectives given the increasing integration of state economies, the proliferation of transnational problems, and the substantial connectedness that now exists between individual behavior abroad and domestic interests.

Whether the EU will be successful in increasing its influence over the global environmental economic legal order remains an open question. The Aviation Directive demonstrates an interesting paradox in the unilateral use of municipal law to confront global problems. Global economic integration works in two directions: the most influential states can dominate legal systems,[115] or they can be forced by other influential states to accommodate alternatives standards[116] or run the risk of disrupting vital trade and political interests.[117] Thus, while the combination of economic power, political acumen and provocative transnational problems can incentivize a powerful state to aggressively extend its municipal law transnationally, the success of that endeavor is hugely dependent upon other similarly influential states yielding to the exercise. When they do not do this—as may now be the case with the Aviation Directive—not only is a specific project placed in jeopardy, but so too is the legitimacy of that state to act in a similar manner as new problems arise. Stated differently, international relations is still a game driven primarily by power politics and largely dominated by self-interest, no matter how much we may try to convince ourselves that it has evolved to higher standards of selflessness.[118]

(2005) (describing the recent growth in the extraterritorial application of law in the environmental context); *Avoiding Green Protectionism – A New Program of World Growth*, WORLD GROWTH (Dec. 6, 2010), http://worldgrowth.org/2010/12/avoiding-green-protectionism-a-new-program-of-world-growth-december-2010/.

115. John C. Reitz, *Export of the Rule of Law*, 13 TRANSNAT'L L. & CONTEMP. PROBS. 429, 430-35 (2003).

116. Emily Barrett Lydgate, *Biofuels, Sustainability, and Trade-Related Regulatory Chill*, 15 J. INT'L ECON. L. 157, 159-60 (2012) (discussing how EU biofuel regulations might violate WTO law). *See also America's Bounty: Gas Works*, ECONOMIST (July 14, 2012), *available at* http://www.economist.com/node/21558459 (noting that the U.S. reduced GHG emissions by 450 million tons over five years by increasing natural gas power generation while Europe's GHG emissions continue to rise given its reliance on coal).

117. *See, e.g.*, Fredrik Erixon, *The Rising Trend of Green Protectionism: Biofuels and the European Union* 2 (ECIPE Occasional Paper No. 2/2012, 2012). *See also* Gareth Porter *Pollution Standards and Trade: The "Environmental Assimilative Capacity" Argument*, 4 GEO. PUB. POL'Y REV. 49, 49-51 (1998).

118. *See, e.g.*, Gregory Shaffer & Yvonne Apea, *Institutional Choice in the General System of Preferences Case Who Decides the Conditions for Trade Preferences? Law and Politics of Rights*, 39 J. WORLD TRADE 977, 977 (2005); Daniel Abebe, *Great Power Politics and the Structure of Foreign Relations Law*, 10 CHI. J. INT'L L. 125, 126-27 (2009). *But see* Nico Krisch, *International Law in Times of Hegemony: Unequal Power and the Shaping of the International Legal Order*, 16 EUR. J. INT'L L. 369, 370-71 (2005).

B. Relevant History of the ETS

A brief history of the EU's attempts to address climate change by regulating carbon emissions under international environmental frameworks will provide context for understanding the operation of the ETS today. The genesis of cap-and-trade systems predates the United Nations Framework Convention on Climate Change ("UNFCCC")[119] and the Kyoto Protocol.[120] However, these two agreements gave global legitimacy to carbon trading systems well beyond their historic roots in the U.S.[121] In addition to the EU's ETS, so-called "cap-and-trade" systems now exist or are under consideration in Australia, China, Korea, and the U.S.[122] The UNFCCC recognizes the "common but differentiated responsibilities and respective capabilities . . . to protect the climate system for the benefit of present and future generations of humankind."[123] The recognition of "differentiated responsibilities" means in practice that developed countries (often referred to as "Annex 1 countries") are to "take the lead in combating climate change and the adverse effects thereof."[124] Accordingly, the Kyoto Protocol required Annex 1 countries (including those of the EU) to reduce their greenhouse gas ("GHG") emissions by 2012, while recognizing that it will take considerably longer for developing countries to meet similar objectives.[125] The 1997 Kyoto Protocol highlighted three approaches to promoting GHG reductions: (1) joint implementations;[126] (2) clean development mechanisms ("CDMs");[127] and (3) emissions trading.[128]

Historically, the EU was predisposed to a carbon tax[129] and resisted implementing a cap-and-trade system.[130] However, in June 1998 the then fifteen

119. *See generally* U.N. Framework Convention on Climate Change, May 9, 1992, 771 U.N.T.S. 107 [hereinafter UNFCCC].

120. *See generally* Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 2303 U.N.T.S. 148 [hereinafter Kyoto Protocol].

121. *See* PAUL A.U. ALI & KANAKO YANO, ECO-FINANCE: THE LEGAL DESIGN AND REGULATION OF MARKET-BASED ENVIRONMENTAL INSTRUMENTS 1-3 (2005) (discussing how cap-and-trade originated in the U.S. to combat acid rain). *See also* Richard Conniff, *The Political History of Cap and Trade,* SMITHSONIAN (August 2009), *available at* http://www.smithsonianmag.com/science-nature/Presence-of-Mind-Blue-Sky-Thinking.html.

122. Joshua Meltzer, *Climate Change and Trade - The EU Aviation Directive and the WTO*, 15 J. INT'L ECON. L. 111, 153 (2012).

123. UNFCCC, *supra* note 119, art. 3(1).

124. *Id.*

125. *See* Kyoto Protocol, *supra* note 120, arts. 2.3, 3.14, 10, 11.

126. *Id.* art. 6.

127. *Id.* art. 12. For a general discussion on CDM, *see* Charlotte Streck & Jolene Lin, *Making Markets Work: A Review of CDM Performance and the Need for Reform,* 19 EUR. J. INT'L L. 409, 410 (2008).

128. Kyoto Protocol, *supra* note 120, art. 17.

129. *See* Steven Nathaniel Zane, *Leveling the Playing Field: The International Legality of Carbon Tariffs in the EU*, 34 B.C. INT'L & COMP. L. REV. 199, 200-04 (2011).

130. Jonathan B. Wiener, *Property and Prices to Protect the Planet*, 19 DUKE J. COMP. & INT'L L. 515, 526-28 (2009) (noting that after a decade of pursuing a carbon tax unsuccessfully while denouncing cap-and-trade, the EU changed its position between 1998-2001).

members of the Common Market adopted a GHG burden sharing agreement, in effect an emissions allocation system, under which each state agreed to specific emission reduction targets. The aggregate of these targets constituted part of the EU's overall Kyoto Protocol contribution towards reducing GHG emissions.[131] It was followed in 2000 by the European Commission's ("Commission")[132] *Green Paper on Greenhouse Gas Emissions Trading within the European Union* that concluded, in part, that

> [t]he Commission believes that a coherent and coordinated framework for implementing emissions trading covering all Member States would provide the best guarantee for a smooth functioning internal emissions market as compared to a set of uncoordinated national emissions trading schemes. A Community emissions trading scheme would lead to one single price for allowances traded by companies within the scheme, while different unconnected national schemes would result in different prices within each national scheme. The development of the internal market has been one of the driving forces behind the EU's recent development, and this should be taken into consideration when creating new markets. Climate change is the clearest case of transboundary effects requiring concerted action. Moreover, scale effects at the level of the EU will allow for significant cost-savings, while similar regulatory arrangements will allow [the EU] to keep administrative costs as low as possible.[133]

The EU's creation of an ETS was something of a watershed moment. It was a policy shift away from an exclusive preference for carbon taxes as a mean to reduce emissions to a market-based system[134]—or a combination of the two[135]—that enabled the EU to employ its considerable market clout to implement a GHG reduction agenda.

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131. *See* FRANK CONVERY, DENNY ELLERMAN, & CHRISTIAN DE PERTHUIS, THE EUROPEAN CARBON MARKET IN ACTION: LESSONS FROM THE FIRST TRADING PERIOD, INTERIM REPORT 7-8 (2008), *available at* http://www.chaireeconomieduclimat.org/wp-content/uploads/2011/04/08-03-European-carbon-market-in-action-EN.pdf.

132. *See* Lisbon Treaty, *supra* note 23, art. 1(2)(b).

133. *Commission Green Paper on Greenhouse Gas Emissions Trading within the European Union*, at 4, COM (2000) 87 final (Aug. 3, 2000), *available at* http://eur-lex.europa.eu/LexUriServ/site/en/com/2000/com2000_0087en01.pdf. *See also Communication from the Commission to the Council and the European Parliament: Bringing Our Needs and Responsibilities Together-Integrating Environmental Issues with Economic Policy*, at 1-3, COM (2000) 576 final (Sept. 20, 2000).

134. *See* Roberta Mann, *How to Love the One You're with: Changing Tax Policy to Fit Cap-and-Trade*, 2 SAN DIEGO J. CLIMATE & ENERGY L. 145, 154-55 (2010) (discussing, in part, Europe's increasing preference for environmental market-based measures in place of taxes). *See also* Wiener, *supra* note 130, at 526-28.

135. *Proposed Danish CO2 Tax Reductions Conditionally Approved*, EU FOCUS 2009, at 34-35. *See also* David B. Hunter & Nuno Lacasta, *Lessons Learned from the European Union's Climate Policy*, 27 WIS. INT'L L.J. 575, 576-77 (2009).

The EU established the current ETS in 2003 to promote "reductions in GHG emissions in a cost-effective and economically efficient manner."[136] It was to be implemented in three phases, with the final phase beginning January 1, 2013.[137] The ETS is the first large-scale international carbon trading market of its kind, covering approximately fifty percent of the EU's GHG emissions from listed industries.[138] It is built around a MBM framework centered on a "cap-and-trade system" as distinguished from a "command and control system;" [139] that is, emission limits were established and emitters are given relative flexibility in meeting the limits through the buying, selling, and trading of European Union emission allowances ("EUAs") as opposed to implementing specific mandated emission control methodologies and technologies.[140] As originally constructed, the ETS was a decentralized system with each Member State developing a National Allocation Plan ("NAP")[141] according to certain EU criteria.[142] The NAPs established "the total quantity of allowances that [a Member State] intends to allocate for that period and how it proposed to allocate them."[143] Key decisions concerning the quantity and methodology of allocating EUAs were left to Member States[144] with the broad exception that (1) the NAP had to be based on objective and transparent criteria,[145] and (2) the amount of free EUAs would be reduced over

136. ETS Directive, *supra* note 1, art. 1.

137. The ETS was to be implemented in three phases: (1) January 1, 2005 to December 31, 2007 was marked a pilot phase; (2) January 1, 2008 to December 31, 2012 was the first commitment period under which Member States were to meet their emission reduction obligations; and (3) January 1, 2013 to Dec. 31, 2020 is to provide a longer trading period to encourage long-term investment in emission reduction.

138. Jon Birger Skjaerseth & Jørgen Wettestad, *The EU Emission Trading System Revised (Directive 2009/29/EC)*, *in* THE NEW CLIMATE POLICIES OF THE EUROPEAN UNION 65, 65-66, 74-75 (Sebastian Oberthür & Marc Pallemaerts eds. 2010); Eric R.W. Knight, *The Economic Geography of European Carbon Market Trading* 7 (Nov. 17, 2008), *available at* http://ssrn.com/abstract=1302982.

139. For an explanation of "cap-and-trade" and "command and control," see generally Robert N. Stavins, *Experience with Market-Based Environmental Policy Instruments* 1-2, 20 (Fondazione Eni Enrico Mattei Working Paper No. 52, 2002; Kennedy Sch. of Gov't Working Paper No. 00-004, 2004), *available at* http://ssrn.com/abstract=199848.

140. *See* Skjaerseth & Wettestad, *supra* note 138, at 67 (noting that the EU was initially of the market-based approach because of its flexibility, but that such mechanisms are now part of Kyoto Protocol).

141. *See* ETS Directive, *supra* note 1, art. 9. *But see*, Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 Amending Directive 2003/87/EC so as to Improve and Extend the Greenhouse Gas Emission Allowance Trading Scheme of the Community, 2009 O.J. (L 140) 63 [hereinafter Directive 2009/29/EC] (establishing a central allocation scheme effective for 2013 and beyond).

142. ETS Directive, *supra* note 1, art. 9(1).

143. *Id.*

144. *See* Case C-504/09 P, Comm'n v. Poland, 2012 E.C.R. ¶ 2 (Mar. 29, 2012), *available at* http://curia.europa.eu/juris/liste.jsf?language=en&num=C-504/09%20P; Case C-505/09 P, Comm'n v. Estonia, 2012 E.C.R. ¶ 2 (Mar. 29, 2012), *available at* http://curia.europa.eu/juris/liste.jsf?language=en &num=C-505/09%20P. For a general discussion of legal challenges under the Emission Trading Directive, *see* Josephine van Zeben, *Respective Powers of the European Member State and Commission Regarding Emissions Trading and Allowance Allocation*, 12 ENVTL. L. REV. 216, 216-17 (2010).

145. ETS Directive, *supra* note 1, art. 9.

time.[146] In 2009, the EU centralized the authority for determining the quantity of EUAs in the Commission beginning in 2013.[147] This move was initiated to combat the tendency of some states to liberally issue free EUAs, which had the effect of depressing allowance values, producing windfall profits for some industries, and doing little to actually reduce GHG emissions generated by the Community.[148]

Under Directive 2003/87/EC, Member States were required to ensure that as of January 1, 2005, "no installation undertakes any activity listed in Annex I resulting in emissions specified in relation to that activity unless its operator holds a permit . . . ."[149] Annex I activities include (1) energy; (2) production and processing of ferrous metals; (3) the mineral industry, including the production of cement, glass, and ceramic products; and (4) other activities including pulp and paper product.[150] Consequently, only certain GHG generating activities fell within the ambit of the Directive and even then only activities within the EU qualified.[151] Operators of these activities are required to obtain EUAs with each "unit" representing the "right" to emit one ton of carbon dioxide equivalent during a specified period.[152] Article 6 of the Directive requires installation operators "to surrender [EUAs] equal to the total emissions of the installation in each calendar year."[153]

Operators could acquire EUAs either directly from EU Member States or from other persons holding EUAs.[154] A key feature of the system was that EUAs had to be transferable within the EU and with those in third countries where they would be recognized.[155] Additionally, Article 2 of Directive 2004/101/EC amended the ETS to enable operators to exchange "certified emissions reductions" and "emissions reduction units" for EUAs up to a certain percentage of the allotted allowances to that installation.[156] These provisions then contributed to the market mechanism by establishing channels that could eventually provide for global carbon trading.[157] By "capping" the total number of EUAs and establishing an

146. *Id.* art. 10, Annex II.

147. Directive 2009/29/EC, *supra* note 141, arts. 1(5), 1(11).

148. David Harrison Jr., Per Klevnas, Albert L. Nichols & Daniel Radov, *Using Emissions Trading to Combat Climate Change: Programs and Key Issues*, 38 ENVTL. L. REP. 10367, 10378 (2008).

149. ETS Directive, *supra* note 1, art. 4.

150. *Id.* Annex I.

151. *See id.* art. 27, Annex I(1) (the former providing temporary exemptions from the directive and the latter exempting installations used for research, development and testing of new products and processes).

152. *Id.* art. 3(a).

153. *Id.* art. 6(2)(e).

154. *Id.* art. 12.

155. *Id.* art. 12(1).

156. Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 Amending Directive 2003/87/EC Establishing a Scheme for Greenhouse Gas Emission Allowance Trading Within the Community, in Respect of the Kyoto Protocol's Project Mechanisms, 2004 O.J. (L338) 18.

157. *See* A. DENNY ELLERMAN, THE EU EMISSION TRADING SCHEME: A PROTOTYPE GLOBAL SYSTEM? 23 (2008), *available at* http://belfercenter.ksg.harvard.edu/files/Ellerman11.pdf.

exchange mechanism for trading, the ETS seeks to reward low emitters by allowing them to sell surplus EUAs while penalizing excessive emitters by requiring them to purchase additional EUAs.[158] The fact that so many EUAs are issued free along with "grandfathering" has led some to question the efficacy of this approach since even typically large emitters can nevertheless reap windfall profits by selling surplus EUAs.[159] But, at least in theory, the ETS incentivizes industries and operators to lower their emissions within the Common Market (and now globally) by using market forces rather than explicit reduction directives.

It is important to note that the ETS as developed and implemented by the EU is not mandated by the UNFCCC or the Kyoto Protocol.[160] The Kyoto Protocol only obligates a party to "[i]mplement and/or further elaborate policies and measures *in accordance with its national circumstances*" to achieve "its quantified emission limitation and reduction commitments . . . ."[161] It is also important to note that while the Kyoto Protocol called for reductions in emissions from aviation and marine bunker fuels, this was to be done "working through the International Civil Aviation Organization and the International Maritime Organization, respectively."[162] Thus, the ETS is a unilateral response to climate change; it is not a legal mandate of the Kyoto Protocol nor has either the International Civil Aviation Organization ("ICAO") or the International Maritime Organization ("IMO") endorsed it. In point of fact, the ICAO has objected to the extension of the ETS to the global aviation sector and has called upon the EU to reverse its unilateral action.[163] Consequently, the extension of the ETS to much of the global aviation sector was an act unsupported by the consent of states outside the EU.

C. The ETS and the Aviation Sector

The Aviation Directive pulls a significant portion of the global aviation sector into the ETS by giving the system broad extraterritorial effect. As previously

158. *See* Danielle Goodwin, *Aviation, Climate Change and the European Union's Emissions Trading Scheme*, 6 J. PLAN. & ENVTL. L. 742, 743 (2008).

159. Kathryn M. Merritt-Thrasher, *Tracing the Steps of Norway's Carbon Footprint: Lessons Learned From Norway and the European Union Concerning the Regulation of Carbon Emissions*, 21 IND. INT'L & COMP. L. REV. 319, 338-40 (2011); E. Woerdman, O. Couwenberg & A. Nentjes, *Energy Prices and Emissions Trading: Windfall Profits from Grandfathering?*, 28 EUR. J.L. & ECON. 185, 185-86 (2009); Henry Van Geen, *Emission Allowance Trading in the European Union*, 11 INT'L ENERGY L. & TAXATION REV. 299, 303-05 (2003).

160. ETS Directive, *supra* note 1, pmbl. ¶ 5. *See also Final Report of the European Climate Change Programme II Aviation Working Group*, Annex I at 5 (April 2006), *available at* http://ec.europa.eu/clima/policies/transport/aviation/docs/final_report_en.pdf (outlining options for extending the ETS to aviation intra-EU only; all flights departing from the EU; all flights arriving or departing from the EU). Other options discussed, but rejected, included intra-EU plus fifty percent of routes to and from the EU; emissions in EU airspace; all flights departing from the EU and EU airspace; and intra-EU and routes to and from countries that have ratified the Kyoto Protocol.

161. Kyoto Protocol, *supra* note 120, arts. 2.1, 2.1(a) (emphasis added).

162. *Id.* art. 2.2.

163. *See* International Civil Aviation Organization, Council — 194th Session Summary Minutes of the Second Meeting on 2 Nov. 2011, ¶ 107, C-MIN 194/2 (Nov. 18, 2011), *available at* http://ec.europa.eu/clima/policies/transport/aviation/docs/minutes_icao_en.pdf.

noted, effective January 1, 2012 operators of non-exempt aircraft arriving at or departing from the EU must hold or acquire a sufficient number of EUAs or interchangeable credits to cover their carbon emissions.[164] Additionally, aircraft operators must "prepare a monitoring plan and monitor and report emissions in accordance with that plan."[165] The Commission has assigned various air carriers (both EU and non-EU carriers) to "administrating Member States" to oversee compliance with the Aviation Directive.[166] For example, Aeroflot is assigned to Germany while Qatar Airways is assigned to the United Kingdom ("UK").[167] This means, in practice, that Member States with vast international and regional air transport hubs will receive a bulk of the income generated by auctioning of the allowances,[168] an issue that could become a point of some controversy as Member States face significant budget challenges.

Like much of the EU's environmental policy, the ETS reflects both a strong ecological rationale—such as combating climate change—and a strong economic rationale—such as reducing energy consumption, incentivizing innovation, establishing global standards, promoting favorable market mechanisms, and protecting local industries. The Aviation Direction is no different in having a dual purpose. The ecological rationale is rather obvious: the EU has "made a firm independent commitment . . . to reduce its greenhouse gas emissions to at least 20 [percent] below 1990 levels by 2020."[169] Thus, "[i]f the climate change impact of the aviation sector continues to grow at the current rate, it would significantly undermine reductions made by other sectors to combat climate change."[170] But the economic rationale, while more subtle, is equally important. If the Aviation

164. Aviation Directive, *supra* note 2, pmbl. ¶ 16.

165. *Id.* ¶ 15.

166. Commission Regulation (EU) No 100/2012 of 3 February 2012 Amending Regulation (EC) No 748/2009 on the List of Aircraft Operators that Performed an Aviation Activity Listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council on or after 1 January 2006 Specifying the Administering Member State for Each Aircraft Operator Also Taking into Consideration the Expansion of the Union Emission Trading Scheme to EEA-EFTA Countries Text with EEA Relevance, 2012 O.J (L39) 1.

167. *Id.* Annex ¶¶ 8, 124. For a complete list of airline assignments to administrating Member States, see ¶¶ 3-132.

168. Council Directive 2008/101, 2008 O.J. (L 8) 3 (foreseeing that in 2012, eight-five percent of the allowances will be given for free to aircraft operators and fifteen percent of the allowances will be allocated by auctioning. In the trading period 2013-2020, eighty-two percent of the allowances will be granted for free, fifteen percent of the allowances will be auctioned, and the remaining three percent will remain in reserve for later distribution to fast growing airlines and new entrants into the market.) For a full discussion on how EU-wide aviation allowances are to be calculated and allocated, see *Climate Action*, EUROPEAN COMMISSION, http://ec.europa.eu/clima/policies/transport/aviation/allowances/index_en.htm (last updated Oct. 27, 2011).

169. Aviation Directive, *supra* note 2, pmbl. ¶ 4.

170. *Id.* ¶ 11. *But see* Tate L. Hemingson, Comment, *Why Airlines Should Be Afraid: The Potential Impact of Cap and Trade and Other Carbon Emissions Reduction Proposals on the Airline Industry*, 75 J. AIR L. & COM. 741, 742 (2010) (noting that the aviation sector accounts for only two percent of GHG emissions but is lumped in with the overall transportation sector, which accounts for one-third of emissions).

Directive applied only to the EU aviation sector it would have a market-distorting effect by placing European airlines at a competitive disadvantage to their international counterparts.[171] European airlines would likely incur higher operating costs as a function of complying with the ETS, costs that would include those associated with administrative compliance, such as measuring and reporting on emissions, and the costs of emission compliance, such as buying EUAs. There are wildly varying estimates on the costs of compliance.[172] But this is clearly not a cost-free exercise. The EU aviation sector would presumably pass these costs on to customers through higher fees who might then decide to fly non-EU long-haul carriers not subject to the ETS.[173] Likewise, investors in the EU's aviation sector might see lower returns given the costs of the programs. Consequently, absent broad application the EU aviation sector would suffer a "carbon leakage" problem[174] as the cost from pricing carbon leads businesses and consumers to relocate to, or obtain services from, countries with a lower carbon price.[175] The result would be no net reduction in carbon emissions and yet higher costs to European consumers.[176] The universal application of the Aviation Directive to the global aviation sector, in theory, addresses the economic challenges created by the ETS by leveling the field between EU and non-EU carriers. It also promotes EU environmental and economic standards given the increasing ties between the two systems, the size of the Community's internal market, and the breath of the EU's carbon trading market.

There are several features of Directive 2008/101/EC that are significant. First, perhaps the most important feature of the directive and the feature that has generated the greatest objection is the extent of its application. Under the 1944 Convention on International Civil Aviation ("Chicago Convention"), "[a]ircraft have the nationality of the State in which they are registered."[177] However, the Chicago Convention also recognizes that,

> the laws and regulations of a contracting state relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while

171. *See* Aviation Directive, *supra* note 2, pmbl. ¶ 16.

172. *See, e.g.*, Madhu Unnikrishnan, *European Union, ATA Offer Wildly Differing Views on ETS Costs*, AVIATION DAILY, Oct. 31, 2011, at 3.

173. Meltzer, *supra* note 122, at 118-19.

174. *Id.* at 112-13.

175. For a fuller discussion of carbon leakage-competitive concern on other European industries, see PEDRO LINARES & ALBERTO SANTAMARÍA, THE EFFECTS OF CARBON PRICES AND ANTI-LEAKAGE POLICIES ON SELECTED INDUSTRIAL SECTORS 3 (2012), *available at* http://www.climatestrategies.org/research/our-reports/category/61/363.html.

176. *See* JULIA REINAUD, CLIMATE POLICY AND CARBON LEAKAGE: IMPACTS OF THE EUROPEAN EMISSIONS TRADING SCHEME ON ALUMINUM 2 (2008), *available at* http://www.iea.org/publications/freepublications/publication/Aluminium_EU_ETS-1.pdf. *See also* Steve Charnovitz, *Trade and Climate Change: Reviewing Carbon Charges and Free Allowances Under Environmental Law and Principles*, 16 ILSA J. INT'L & COMP. L. 395, 398-99 (2010).

177. Chicago Convention, *supra* note 17, art. 17.

> within its territory, shall be applied to the aircraft of all contracting States without distinction as to nationality . . . .[178]

Therefore, no clear rules exist

> that the law of that state applies on board the aircraft in the same way as the law of the flag state applies aboard ships, and the extent to which a state's laws apply to events occurring on board an aircraft registered in its territory has been largely left to states to determine for themselves.[179]

As a result, the Aviation Directive does not limit itself to the EU aviation sector or intra-EU air travel, both of which are clearly under the EU's jurisdiction. Rather, the Aviation Directive extends the ETS to all segments of all flights of non-exempt operators without regards to the principles of nationality or territoriality, in effect forcing a significant part of the global aviation sector into the EU's carbon trading market. With few exceptions, all flights to or from the EU must account for their carbon emissions and surrender a sufficient number of EUAs regardless of nationality of the air carrier or territorial location of the emission generating activity. Therefore, emissions from EU- bound or departing aircraft include generating activity (1) over EU's territory; (2) over the territory of non-EU states; (3) in international airspace; and (4) while on the ground in a third country.[180]

This broad application results from the Aviation Directive's fuel consumption formula, which is based on the "[a]mount of the fuel contained in aircraft tanks once fuel uplift for the flight is complete [minus] amount of fuel contained in aircraft tanks once fuel uplift for subsequent flight is complete [plus] fuel uplift for that subsequent flight."[181] Thus, a flight from Hong Kong to Frankfurt must hold EUAs for its total fuel consumption (and therefore total carbon emissions) from point of departure to the point of landing, including the running of an auxiliary power unit while parked at the gate.[182] A non-exempt aircraft operator that has exhausted its free EUAs must then purchase additional EUAs from other holders. As free EUAs are reduced over time,[183] the global aviation sector will be forced to purchase additional EUAs in the carbon market where hopefully a raise in carbon prices will spur behavioral changes and innovation.

Second, under the Aviation Directive the Commission may exclude from the ETS airlines from a third country if it has adopted "measures for reducing the climate change impact of flights departing from that country which land in the Community . . . ."[184] This vaguely worded provision, when read in conjunction

178. *Id.* art. 11.

179. Eileen Denza, *International Aviation and the EU Carbon Trading Scheme: Comment on the* Air Transport Association of America *Case*, 37 EUR. L. REV. 314, 325 (2012) (citation omitted). *See also* Chicago Convention, *supra* note 17, arts. 17-21.

180. *See* Aviation Directive, *supra* note 2, Annex ¶ 2(b). *See also* Meltzer, *supra* note 122, at 114.

181. Aviation Directive, *supra* note 2, Annex ¶ 2(b).

182. *Cf. id.* (describing calculation for fuel consumption).

183. *Id.* art. 3(c).

184. *Id.* ¶ 18.

with the Directive's Preamble language of "equivalent measures,"[185] appears to give the Commission significant authority to assess the sufficiency of a third country's carbon reduction programs. Although the EU has stated that it intends to seek "optimal interaction" between trading systems to avoid double regulation, the fact remains that third country measures must in the view of the Commission "have an environmental effect at least equivalent to that of this Directive"[186] before an exemption is granted. This provision encourages two unstated objectives: (1) promoting the EU's emission trading system as the globe's aspirational standard; and (2) promoting the tie between environmental regulations and economic activity with the EU as a precursor to further technological and industrial innovation. Whether provisions within the Directive authorizing recognition of third party measures will incentivize the development of a global ETS system that aligns with the EU's ETS remains an open question.[187] However, absent objective standards for assessing whether third country's measures have an "environmental effect at least equivalent to [that of the ETS]," it is difficult to see how the question of equivalency can be assessed in a transparent, objective and apolitical manner given the interdependencies of the global economy.[188] The lack of objective standards may, in practice, lead to a reduction in the effectiveness of the Aviation Directive by granting accommodations to third countries that amounts to a race to the bottom. Or, it may do so by creating complete paralysis in efforts to obtain a global GHG emissions reduction agreement given vast difference over what constitutes "equivalent" measures now that the EU's ETS is in place and operational.

Finally, funds derived from the ETS are intended to "tackle climate change in the EU and third countries."[189] However, the Aviation Directive also states that, "[i]t shall be for Member States to determine the use to be made of revenues generated from the auctioning of allowances."[190] This language raises two important issues. First, although there is a political agreement that a significant portion of the revenues generated by the auctioning EUAs will be dedicated to reducing GHG emissions, to fund research and development, and to cover the costs of administering the ETS,[191] the revenues are paid directly to Member States and therefore can be diverted to other purposes.[192] While the Aviation Directive

185. *Id.* pmbl. ¶ 17.

186. *Id.*

187. *See* Hua Lan, *Comments on EU Aviation ETS Directive and EU - China Aviation Emission Dispute*, 45 REVUE JURIDIQUE THEMIS 589, 600-01 (2011).

188. *Cf. Airbus Supports China's Opposition to EU Emissions Tax*, CHINA DAILY (June 13, 2012, 9:21 AM), http://www.chinadaily.com.cn/business/2012-06/13/content_15497338.htm (describing negative reactions by entities from European, Chinese, and U.S. aviation industries to EU taxing international airlines under ETS).

189. Aviation Directive, *supra* note 2, ¶ 4.

190. *Id.*

191. *Id.* ¶ 22; *Council Conclusions on Climate Finance - Fast Start Finance*, at ¶¶ 5-7 (May 15, 2012), *available at* http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/130262.pdf.

192. Aviation Directive, *supra* note 2, ¶ 22.

strongly suggests that the revenue should be dedicated to addressing climate change, nothing prevents a Member State from using the revenues to cover, for example, the costs of state pensions.[193] Second, because the global aviation sector must acquire EUAs issued by Member States even for emissions that occur outside the EU, the ETS's revenue generating provisions effectively forces the global aviation industry into the EU's carbon market by attaching to economic activity occurring outside the territory of the EU. Whether this constitutes an extraterritorial tax is debatable.[194] What is less debatable is that the Aviation Directive establishes an extraterritorial revenue generating mechanism that, for the most part, ignores issues of nationality and territoriality with respect to global aviation economic activity.

D. Legal Validity of the ETS—the ECJ's Opinion

In addition to the diplomatic row caused by the EU's unilateral extension of the ETS to third country airlines—such as threats to remove landing rights for European airlines,[195] introduction of legislation prohibiting airlines from complying,[196] and formal objections[197]—the Aviation Directive was almost immediately challenged in the courts. The Air Transport Association of America ("ATA"), along with a number of U.S. and Canadian airlines, initiated suit in the High Court of England and Wales ("Queens Bench") seeking a preliminary ruling on the validity of the UK's regulations implementing the Aviation Directive.[198] Because the case implicated the validity of EU legislation and was thus beyond the competence of a national court,[199] the case was referred to the ECJ under Article 267 of the Treaty on the Functioning of the European Union ("TFEU").[200]

On December 21 2011, the ECJ issued its ruling rejecting the ATA's challenge holding generally that neither customary international law nor existing treaties barred the EU from applying its directive to third country aircraft operators

193. *Cf. Minister Says Suspend EU ETS for Two Years*, GLOBAL TRAVEL INDUSTRY NEWS (Mar. 21, 2012, 10:55 AM), http://www.eturbonews.com/28426/minister-says-suspend-eu-ets-two-years (noting that UK's Air Passenger Duty ("APD") started off as a "green tax" but is now a pure revenue-raising mechanism).

194. *See* Meltzer, *supra* note 122, at 127.

195. *See, e.g.*, James Fontanella-Khan, et al., *India Warns EU on Airline Carbon Tax*, FINANCIAL TIMES, May 25, 2012, at 1 (noting that India has threatened to bar European airlines from its airspace should sanctions be imposed against its airlines for non-compliance).

196. *See, e.g.*, European Union Emissions Trading Scheme Prohibition Act of 2011, H.R. 2594, 112th Cong. §§ 2-4 (2011).

197. *See, e.g., Chinese Airlines Oppose ETS*, SHANGHAI DAILY, Mar. 22, 2011, http://www.china.org.cn/business/2011-03/22/content_22195295.htm (describing statement the China Air Transport Association ("CATA") sent to the EU about ETS on 10 March 2011).

198. *See* Air Transport Case, *supra* note 35, ¶¶ 1-2, 45.

199. *Id.* ¶ 47.

200. Consolidated Version of the Treaty on the Functioning of the European Union, art. 267, Mar. 30, 2010, 2010 O.J. (C 83) 164 [hereinafter TFEU] (national court may apply to the ECJ for preliminary ruling on the interpretation of the treaties or the validity or interpretation of acts of the EU).

or to those operating outside of its territory.[201] It is not necessary to conduct an extensive review of the ECJ ruling with respect to the technical validity of the ETS. However, three particular issues are noteworthy: the status of the EU as a supranational lawmaking entity with separate legal personality; the conditions under which international law forms a benchmark against which EU law is measured; and the ETS's extraterritorial revenue generating mechanism.

First, as an entity with legal personality, the EU is unique.[202] One observer has noted:

> The misunderstandings [of the power of the European Union] have multiple sources, not least of which has been the failure of political scientists to reach an agreement on the character of the EU. It is more than a conventional international organization, but it is less than a state. Establishing its character has been made more difficult by the rearguard actions fought by European governments in the name of national sovereignty, which have combined with the pioneering nature of the EU experiment to produce a system of policy-making that is segmented, complex, often unpredictable and constantly changing. Unlike the founders of the United States or the French Fifth Republic, the founders of the European Union did not draw up a constitution to serve as a blueprint for a new system of government, but instead reached some general agreements about some policy goals, and have spent the last [fifty] years editing those agreements in order to redefine the nature of integration.[203]

The status and authority of the EU as a regulator is a point of contention across the globe and within the EU itself. Unlike a federated union with a clear hierarchy of authority, the EU is something of a limited confederation in which its principal actors—the Member States—have ceded some authority to a supranational body but have not ceded their status as sovereign states. In reverse, the EU has assumed powers as a supranational governing institution that, in theory, sits separate and apart from its Member States—at once bound to and liberated from its creator.

As a supranational body with independent legal personality, the EU has declared that it is not bound by international agreements unless it has agreed to be so, unless it has assumed from the Member States authority over a particular matter, or unless another body has exclusive jurisdiction over a subject the EU would otherwise seek to regulate.[204] As the ECJ pointed out with regards to the Chicago Convention, the EU is not a signatory to the Convention[205] and the ICAO has not assumed exclusive authority over aviation.[206] While all Member States are

201. *See* Air Transport Case, *supra* note 35, ¶ 129.

202. *See* Consolidated Version of the Treaty on European Union, art. 47, 2010 O.J. (C 83) 41 [hereinafter TEU].

203. MCCORMICK, *supra* note 8, at 69.

204. Air Transport Case, *supra* note 35, ¶¶ 61- 63.

205. *Id.* ¶ 60.

206. *Id.* ¶ 69.

bound by the Chicago Convention, the EU itself is not.[207] Consequently, the ECJ declared that the EU can neither be bound by the Convention nor can the Convention be relied upon to defeat an act of an EU institution.[208] The ECJ's opinion essentially recognizes the institution of the EU as possessing the qualities of a quasi-state for certain purposes, leading to the larger unresolved question of what now constitutes a "state" for purposes of international law.

Second, the ECJ has often acknowledged that EU institutions are bound by international law, including customary international law.[209] However, being bound by international law and subjecting acts of EU institutions to scrutiny under international law are two different considerations. According to the ECJ, for an international agreement to limit EU authority, two conditions beyond membership must be met: (1) the "nature and the broad logic of [the agreement concerned] do not preclude [such a review of validity]";[210] and (2) the agreement must be unconditional and sufficiently precise as to confer some right upon the individual.[211] For example, in contrast to its conclusions relative to the applicability of Chicago Convention, the ECJ found with regard to the Kyoto Protocol that notwithstanding the EU's membership that it conferred no rights upon individuals[212] and, in any event, it was not sufficiently precise as to grant exclusive authority over aviation to another institution preempting EU authority.[213] Stated differently, the Kyoto Protocol may have imposed binding obligations on EU institutions leading to the promulgation of binding regulations to effectuate its purposes, but it could not be read as conferring any individual standing to challenge regulations promulgated in pursuit thereof. Moreover, with regard to the Open Skies Agreement,[214] the ECJ found that it could be read to confirm rights upon individuals,[215] and was sufficiently precise,[216] but nevertheless the ETS was completely compatible with the agreement.[217] Consequently, according to the ECJ, none of the cited agreements could defeat the broad regulatory application of the Aviation Directive.

The ECJ also held that the same interpretative principles generally applied within the context of customary international law: (1) the principles are capable of calling into question the subject-matter competence of the EU; and (2) the custom affects "rights which the individual derives from European Union law or to create

207. *Id.* ¶ 71.
208. *Id.* ¶ 72.
209. *Id.* ¶¶ 49, 102.
210. *Id.* ¶ 53.
211. *Id.* ¶ 54.
212. *Id.* ¶ 77.
213. *Id.*
214. *See generally* United States European Union Air Transport Agreement, U.S.-E.U., Apr. 27 & 30, 2007, 46 I.L.M. 470 [hereinafter Open Skies Agreement].
215. Air Transport Case, *supra* note 35, ¶ 84.
216. *Id.*
217. *Id.* ¶¶ 131-157.

obligations under European Union law in [the individual's] regard."[218] Applying this analysis, the ECJ rejected challenges to the Aviation Directive under the customary international law principles of sovereignty of airspace, freedom of international airspace, and jurisdiction of aircraft in international airspace.[219] The ECJ concluded that in as much as flights subject to the Aviation Directive performed some activities within an EU Member State, they were subject to "the unlimited jurisdiction of the European Union."[220] It stated that since the Aviation Directive was intended to provide a high level of environmental protection, the EU may permit commercial activity within its territory "on condition that operators comply with the criteria that have been established by the European Union and are designed to fulfill the environmental protection objectives."[221] It also explained that using activities that take place outside EU airspace for purposes of applying the Aviation Directive does not impinge upon the sovereignty of non-EU states.[222]

Finally, the ECJ rejected the claimants' contention that the Aviation Directive amounted to an unlawful tax in violation of the Open Skies Agreement. In rejecting this attack, the ECJ distinguished the allowance system from a tax, duty, or fee on fuel stating, in part, that "it is not intended to generate revenue for public authorities . . . ."[223] The ECJ concluded that the Aviation Directive does not breach Open Skies Agreement provisions that exempt fuel from taxes and other fees as it found no direct or inseverable link exists between the cost of the Aviation Directive and fuel used.[224] This conclusion is highly suspect, given that Member States are free to use revenue generated by the sale of EUAs for other purposes notwithstanding political commitments to support climate change programs.[225] The ECJ appears to have ignored the fact that the directive clearly states that income generated by the sale of EUAs were under the discretion and control of Member States.[226]

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218. *Id.* ¶ 107.

219. *Id.* ¶¶ 124-130.

220. *Id.* ¶ 125.

221. *Id.* ¶ 128.

222. *Id.* ¶¶ 125-130.

223. *Id.* ¶ 143. The ECJ also held that the Aviation Directive did constitute a tax because it was not a rate-based system but rather the costs of compliance depended as much on market conditions as upon action of state authorities. *See id.* ¶¶ 145-147.

224. *Id.* ¶¶ 142, 143.

225. At least one Member State, the UK, refuses to "ring-fence" revenue generated by the sale of carbon credits for climate change projects. *Report Criticises the UK Over Its Refusal to Earmark EU ETS Carbon Revenues for Financing Green Projects*, GREENAIR ONLINE.COM (Feb. 25, 2011), http://www.greenaironline.com/news.php?viewStory=1077.

226. The issue of how ETS revenues generated by aircraft operations are to be used presents the EU with two rather thorny problems. First, as originally presented, the revenue generated by aircraft operations was to be used principally for climate change programs. *See* Aviation Directive, *supra* note 2, ¶ 22 (revenues generated from auctioning allowances should be used to reduce GHG emissions, adapt to climate change, fund research and development, cover the cost of administration, fund contributions to the Global Energy Efficiency and Renewable Energy Fund, and undertake measures to avoid deforestation and facilitate adaptation in developing countries). If dedicated to these purposes, the revenues arguably would not amount to a general tax *per se*, but rather a fee dedicated to a specific

What is perhaps most fascinating in the ECJ's decision is the degree to which the ECJ sustained the EU's climate change efforts by promoting the concept of "unlimited jurisdiction"[227] and the degree to which the Court relied on EU treaties alone to justify extending the EU's authority beyond its borders to encompass aviation activities occurring in third states. An aircraft operator is now subject to very specific EU jurisdiction—the Aviation Directive—no matter where on the planet it is headquartered so long as its aircraft arrive at or depart from an aerodrome in an EU Member State. The Aviation Directive does not simply require an aircraft operator in a third country to hold sufficient EUAs for a particular flight. It requires that operator to develop and maintain sophisticated emission calculation and reporting systems even if only a relatively small percentage of its flights are connected to Europe and even if only a small percentage of its emissions actually occur over EU airspace. Moreover, in its final discussion on the applicability of customary international law, the ECJ noted that, "European Union policy on the environment seeks to ensure a high level of protection in accordance with art. 191(2) TFEU . . . ."[228] The EU, therefore, claims broad authority to regulate transnational economic activity based not only on its international obligations (which cannot be challenged), but also on the transnational extension of the aspirational guarantees contained in the TFEU.[229] Stated differently, because the TFEU seeks a high level of environmental protection within the EU, institutions of the EU by extension must have broad authority to regulate activity occurring outside the EU that jeopardize the guaranteed protection. This is not only an extraordinary example of the assertion of municipal jurisdiction beyond the physical boundaries of a state; it is an example of the capacity of influential states to use the notion of substantial connections to capture the virtual space between what is domestic and what is international for regulatory purposes.

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cause not unlike security fees imposed on air transport passengers. However, the lack of any authority within the EU to demand that Member States dedicate revenue to this purpose leaves states with discretion to use the funds as they see fit. *See, e.g., id.* ("Decisions on national public expenditure are a matter for Member States, in line with the principle of subsidiarity."). Arguably, this seriously jeopardizes the legitimacy of both the EU's and the ECJ's position with regards to whether the ETS is a tax under Open Skies. *See, e.g.,* Open Skies Agreement, *supra* note 214, art. 1. Given the current fiscal crisis now gripping states such as Greece, Italy and Spain, policymakers will be hard pressed not to divert Aviation Directive revenues to general government purposes, *e.g.*, funding schools, pensions, defense, healthcare. The current practice of Member States, except Germany, is to plough revenues raised from carbon permit auctions into general expenditures. This calls into question the entire integrity of the ETS as a climate change initiative, leading to the possible conclusion that the Aviation Directive is nothing more than a revenue generating exercise in practice if not in theory. Second, and possibly more divisive within the EU, is that Member States to whom a large number of airlines have been assigned will potentially reap windfall revenues over time that, as noted, could be applied to general government operations. States with smaller assignments will receive far less revenue for either climate change initiatives or general government operations.

227. Air Transport Case, *supra* note 35, ¶ 124. It should be noted that in the French version of the decision the term "unlimited jurisdiction" is expressed as the "pleine jurisdiction."

228. *Id.* ¶ 128.

229. *Id.*

III. THE AVIATION DIRECTIVE AS INDICATOR

This article began with the assertion that the Aviation Directive provides a platform upon which to see an emerging trend in international law: the use of municipal law to regulate global relationships and behaviors. Alone, the Aviation Directive does not represent a momentous shift in "international" lawmaking so much as it serves as an indicator of the how the most influential states can assert and protect their self-interests in a global arena. Other states have acted likewise to project their political values, economic interests, and legal norms unilaterally using municipal law.[230] But the Aviation Directive is an important example of how states and institutions such as the EU use a combination of economic power, political power, and municipal lawmaking to protect their interests.[231]

As transnational problems explode and the world becomes more integrated in terms of economics, energy, culture,[232] security, and the environment, the actions of one state can clearly have parochial and global consequences for others.[233] The embedded liberalism pushed by Western states and so embraced by the world[234] may in the end have encouraged so much integration, in both the economic and non-economic spheres, that distinctions between the limits of state legal authority and the limits of international legal authority blur incentivizing the greater extraterritorial application of municipal law as a tantalizing alternative to multilateralism. The importance of the Aviation Directive lies in what it says about changing attitudes concerning the nature of the "state" and the agility of the most influential states to alter global behavior through their municipal lawmaking and regulatory apparatuses.

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230. *See generally* Smitherman, *supra* note 9, at 771-72.

231. *See, e.g.*, Press Release, European Commission, Knowledge, Responsibility, Engagement: The EU Outlines its Policy for the Arctic (July 3, 2012), *available at* http://europa.eu/rapid/press-release_IP-12-739_en.htm?locale=en; Press Release, European Commission, Strengthening Europe's Place in the World: An External Budget for 2014-2020 to Respect EU Commitments and Promote Shared Values (Dec. 7, 2011), *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1510; *Organization Environmental Footprint (OEF), available at* http://ec.europa.eu/environment/eussd/corporate_footprint.htm; EUROPEAN COMMISSION, PRODUCT ENVIRONMENTAL FOOTPRINT (PEF), *available at* http://ec.europa.eu/environment/eussd/product_footprint.htm; THE EU ARCTIC FOOTPRINT AND POLICY ASSESSMENT PROJECT, THE EU ARCTIC FOOTPRINT, *available at* http://arctic-footprint.eu/.

232. *See, e.g.*, *Brand of Dreams: America is Wooing Foreign Tourists for the First Time*, ECONOMIST, June 30, 2012, http://www.economist.com/node/21557782 (noting that one Brazilian's explanation for not visiting the U.S. is "[t]he United States did such a good job of turning Brazilians into Americans it's not all that different.").

233. *See, e.g.*, Steven Wheatley, *A Democratic Rule of International Law*, 22 EUR. J. INT'L L. 525, 528-29 (2011) ("The consequences of industrialization, globalization, and modernization have resulted in policy issues that states acting alone cannot regulate effectively (global warming, the international financial markets, and international terrorism, etc.), and states accept the need for highly focused cooperation and coordination efforts in the various sectors of global society (trade, environment, human rights, etc.).").

234. *See* JONATHAN GRAUBART, LEGALIZING TRANSNATIONAL ACTIVISM: THE STRUGGLE TO GAIN SOCIAL CHANGE FROM NAFTA'S CITIZEN PETITIONS 9 (2008).

A. Managing Interstate Relations

For some 300 years the theoretical *legal* management of the international relations system was premised on the notion of sovereign equality and non-interference in the affairs of other states. These were not merely geographically-based concepts. Rather, their importance rested in the assumed quality of the nation-state as an autonomous, self-regulating, and sovereign political constituent equal to all other like constituents. As the U.S. Supreme Court noted more than 100 years ago, "[e]very sovereign state is bound to respect the independence of every other sovereign state, and the courts of one country will not sit in judgment on the acts of the government of another, done within its own territory."[235] Sovereignty did not merely mean physical control of geographical territory; it meant the exclusive control of all of the means available to a state to regulate relationships and behavior within its territory.[236] Whether this assumed quality of the nature of the state reflected the actual equality of the state are two separate considerations. While states may enjoy legal equality in theory under international law, it is self-evident that not all states enjoy equivalent influence and, therefore, are not created equal when measured on the broader plains of economic, political, legal and cultural power. The world of statehood is a place of evolving and relative equities and parities, not static and absolute equalities. The globalization of economic activity and its attendant impacts on states means that developments in one part of the world can rapidly have dire consequences in another part of the world demanding domestic regulation of extraterritorial activities as a means of self-preservation. The relative parity of states is the very reason that some are far more capable of defining global rules and global behavior than are others.

The Aviation Directive demonstrates that globalization combined with the openness and plasticity of the international law system[237] leaves ample space for the most powerful states to influence the internal legal regimes of other states, or to influence how individuals behave in other parts of the world. Global phenomena such as climate change, economic integration, resource management, and transnational security concerns now serve to entice states to act extraterritorially in an effort to favorably shape their global interdependencies,[238] protect local

235. Underhill v. Hernandez, 168 U.S. 250, 252 (1897).

236. *Cf.* KRASNER, *supra* note 11, at 227; MICHAEL ROSS FOWLER & JULIE MARIE BUNCK, LAW, POWER, AND THE SOVEREIGN STATE: THE EVOLUTION AND APPLICATION OF THE CONCEPT OF SOVEREIGNTY 93, 124 (1995).

237. For example, a state may sign a treaty but then make numerous reservations to critical provisions effectively rendering its obligations a nullity. *See* Edward T. Swaine, *Reserving*, 31 YALE J. INT'L L. 307, 307-08 (2006); Catherine Logan Piper, Note, *Reservations to Multilateral Treaties: The Goal of Universality*, 71 IOWA L. REV. 295, 308 (1985); Andrés E. Montalvo, *Reservations to the American Convention on Human Rights: A New Approach*, 16 AM. U. INT'L L. REV. 269, 274-76 (2001).

238. *Cf.* Stephen J. Choi & Andrew T. Guzman, *The Dangerous Extraterritoriality of American Securities Law*, 17 NW. J. INT'L L. & BUS. 207, 208 (1996) ("Extraterritoriality results in frequent conflicts between the United States and other nations."); Rochelle C. Dreyfuss & Jane C. Ginsburg, *Draft Convention on Jurisdiction and Recognition of Judgments in Intellectual Property Matters*, 77

markets,[239] promote specific behaviors,[240] and address problems whose origins may rest elsewhere but nevertheless have a clear domestic impact.[241] The world is not a collection of legally isolated states. It is a world of asymmetrical paradoxes marked by a greater need for multilateralism offset by tempting opportunities for state unilateralism.[242]

The Aviation Directive evidences this paradox in three ways. First, at a policy level, the Aviation Directive demonstrates that the most influential states retain significant influence over the international legal order even as their formal authority has been constrained by the diffusion of global political power.[243] States, such as the U.S., the EU, and now China, exercise this influence by combining their distinctive lawmaking capabilities with their economic strengths leveraging both to achieve particular objectives.[244] As EU Climate Commissioner Hedegaard stated, "[t]his is very much proof that we in the Commission do not think we should sit idly waiting for the big international agreement."[245] Moving forward in Europe means unilaterally globalizing Europe's climate change framework using its considerable collective regulatory and economic power,[246] an approach used by the other most influential states as well.[247] The EU is clearly prepared to play to its

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CHI.-KENT. L. REV. 1065, 1117 (2002) ("Extraterritorial application of law has become worrisome to many observers because it interferes with sovereign authority by limiting the extent to which a State can control the local conditions . . . .").

239. *Cf.* Jack L. Goldsmith, *The Internet and the Legitimacy of Remote Cross-Border Searches*, 2001 U. CHI. LEGAL F. 103, 103 (2001); Ariel Ezrachi, *Globalization of Merger Control: A Look at Bilateral Cooperation through the GE/Honeywell Case*, 14 FLA. J. INT'L L. 397, 400 (2002).

240. Iran Freedom Support Act, Pub. L. 109-293, 120 Stat. 1344, §§ 301-02 (2006); Stop Online Piracy Act, H.R. 3261, 112th Cong. § 102 (2011). *See also* REACH Regulation, *supra* note 92.

241. *See* Parrish, *supra* note 114, at 387-88; Colleen Graffy, *Water, Water, Everywhere, nor any Drop to Drink: The Urgency of Transnational Solutions to International Riparian Disputes*, 10 GEO. INT'L ENVTL. L. REV. 399, 424 (1998).

242. *See e.g.*, Hedegaard, *supra* note 10.

243. *Cf.* Christopher L. Eisgruber, *Birthright Citizenship and the Constitution*, 72 N.Y.U. L. REV. 54, 72 (1997) (noting that U.S. law is applied transnationally creating entities able to operate across borders).

244. *Cf.* Sungjoon Cho, *A Bridge Too Far: The Fall of the Fifth WTO Ministerial Conference in Cancun and the Future of Trade Constitution*, 7 J. INT'L ECON. L. 219, 239 (2004) ("The inherent discriminatory nature of bilateralism/regionalism is often blended with an internal power disparity and ultimately begets unilateralism. Unilateralism, which is often clad with extraterritoriality, tends to eclipse international trade law, thereby placing the global trading system at the mercy of bare politics by a handful of powerful states.").

245. Hedegaard, *supra* note 10.

246. Aaron R. Harmon, *The Ethics of Legal Process Outsourcing – Is the Practice of Law a "Noble Profession," or is it Just Another Business?*, 13 J. TECH. L. & POL'Y 41, 44 (2008) (noting that "[t]he European Union has largely consolidated its economies, raising its collective resources and influence.").

247. *See* Richard Frimpong Oppong, *The African Union, the African Economic Community and Africa's Regional Economic Communities: Untangling a Complex Web*, 18 AFR. J. INT'L & COMP. L. 92, 93 (2010); Jason Pierce, *A South American Energy Treaty: How the Region Might Attract Foreign Investment in a Wake of Resource Nationalism*, 44 CORNELL INT'L L.J. 417, 437 (2011); Rafael Leal-Arcas, *Proliferation of Regional Trade Agreements: Complementing or Supplanting Multilateralism?*, 11 CHI. J. INT'L L. 597, 620-21 (2011). *See also* Smitherman, *supra* note 9, at 783 (noting that other supranational bodies are seeking to broaden their global influence as well).

strengths and push its climate change agenda even in the absence of a multilateral consensus on the specific approaches to be used to address atmospheric carbon levels.[248] The combination of power, impatience, and transnational problems provide fertile ground for aggressive unilateralism on the part of some contrary to the so-called embedded liberal framework that was supposed to promote greater integration while containing national adventurism.[249]

Second, in the absence of a binding multilateral framework, the implementation of the Aviation Directive indicates that the EU is positioning itself to create and regulate carbon markets by defining and setting the standards of equivalency.[250] As noted earlier, while all states have an incentive to seek common policy on transnational issues, the state that leads the effort can often force other states to adapt to its standards. Within the context of the ETS and the Aviation Directive, the EU can achieve its objectives in three ways: (1) by tightly regulating its carbon market, which is the largest in the world;[251] (2) by defining what constitutes equivalency between its carbon markets and emerging third-country carbon reduction policies thereby driving the latter to largely comport with the former;[252] and (3) by broadening the definition of what constitutes economic activity within the Common Market thus expanding its transnational regulatory reach into activities that occur in third states. The Aviation Directive, to the extent it is successfully implemented,[253] drives a significant segment of a global industry into a regional carbon trading system and extends the EU's regulatory powers into spaces previously assumed to be reserved to other states.[254] The mere act of landing at, or departing from, an aerodrome in the EU effectively constitutes

248. *See, e.g.*, Council Directive 2009/30, 2009 O.J. (L 140) 88 (EC). *See also* Michael Taylor & Sabrina Davis, *Oil Sands and European Union Fuel Quality Directive (FQD): an Update*, LEXOLOGY.COM (Mar. 15, 2012), *available at* http://www.lexology.com/library/detail.aspx?g=cc8066c7-4eb8-4318-b89d-570aa518bbad.

249. *Cf.* Jeffrey A. Hart & Aseem Prakash, *Globalisation and Regionalisation: Conceptual Issues and Reflections*, 2 INT'L TRADE L. & REGULATION 205, 205 (1996).

250. Similarly, the American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. §§ 401, 768 (2009) sought to include imports in the U.S. cap-and-trade system starting from 2020 through "international reserve allowances" to offset lower energy and carbon costs of manufacturing covered goods. This would not have applied to countries with acceptable carbon reduction regimes in place.

251. *Cf.* Council Directive 2009/29, 2009 O.J. (L 140) 63 (EC).

252. *Cf.* IKENBERRY, *supra* note 100, at 113. *See also* Scott & Rajamani, *supra* note 6, at 483 (discussing that "equivalent" may have multiple meanings, but that "third country measures are required to achieve an environmental effect at least equivalent to that of the directive" and that "the emphasis upon equivalence would seem to suggest that equal treatment, not differentiation, will be the guiding principle in this respect.").

253. *See* Julia Pyper, *U.S. Lawmakers, State Dept. to Escalate Opposition to E.U. Emissions Scheme*, CLIMATEWIRE, July 31, 2012, at 3.

254. With odd sort of reasoning, Advocate General Kokott opined that the Aviation Directive did not pose a threat to the sovereignty of non-EU member states by regulating aviation emissions over their territories because it did not preclude third countries from bringing into effect or applying their own emissions trading schemes for aviation activities. *See* Air Transport Case, *supra* note 35, ¶ 156.

economic activity within the Common Market, notwithstanding the fact that a bulk of that economic activity may occur outside the EU.[255]

Finally, as noted, under the Aviation Directive the EU retains authority to pass on the efficacy of aviation-based climate change policies initiated in third states. The Aviation Directive accomplishes this by empowering the Commission to grant waivers to third-country air carriers based upon the quality of a country's aviation carbon reduction efforts. It also deploys certain economic tools to support the waiver system—such as granting or withdrawing landing rights. This waiver system is, in effect, an approval system. That is, the granting of a waiver is the equivalent of the EU placing its imprimatur on a third country's aviation emission reduction efforts. Conversely, the Commission's refusal to grant a waiver is a *de facto* judgment that a third country's aviation carbon reduction efforts do not pass EU muster. Not only does the Aviation Directive project a regulatory system onto third parties, but it pulls into the Brussels' bureaucracy the assessment of third-country efforts in this area. Whether the Commission ultimately uses this power is an open question. The fact that the EU uses its own treaties and regulations to confer upon itself certain comprehensive powers provides important insight into states' responses to the impact of transnational problems,[256] here with regard to effectively globalizing one aspect of the EU's environmental regulatory authority.

B. Managing State and Global Conduct by Reshaping Individual Behavior

Traditionally the authority of a state to regulate the behaviors of persons (legal and natural) within its borders free from outside interference has been

255. Some might argue that the EU's aviation direction is no different from other aviation regulatory schemes imposed by other states such as, for example, the U.S. requirement of 100 percent cargo screening for inbound flights regardless of origin. The Implementing Recommendations of the 9/11 Commission Act of 2007, Pub. L. 110-53, § 1602, 121 Stat. 380, 478 [hereinafter The Implementing Recommendations]. Does that requirement not constitute extraterritorial regulation of economic activity that occurs elsewhere? To some extent the answer is "yes." However, the Aviation Directive is distinguishable in one important sense. The formula that was developed to calculate the amount of fees to be paid through the purchase of carbon credits clearly enables both generators and non-EU states to distinguish between locations of economic activity, such as in a non-EU state and over international airspace. Thus, unlike the 100 percent cargo screening requirement or many airport landing fees, the Aviation Directive imposes a financial charge on carbon generating economic activity attributable to a particular flight even when much of that economic activity occurs outside the EU. As discussed, the reason for this approach was to (1) mitigate a potential carbon leakage problem, and (2) protect EU-based airlines from economic distortions associated with compliance. This does not alter the fact, however, that a non-EU registered airline landing or departing from a Member State is subject to the regulatory effects of the ETS and must ostensibly pay a fee based upon the length of flight (that is, total fuel consumed) to the assigned Member State for its total carbon generating economic activity regardless of where it physically occurs.

256. *See, e.g.*, TFEU, *supra* note 200, arts. 3, 191, 192. *Cf. Commission Proposal for a Directive of the European Parliament and of the Council Amending Directive 1999/32/EC as Regards the Sulphur Content of Marine Fuels*, at 4, COM (2011) 439 final (July 15, 2011) (explaining that EU authority to regulate sulphur content of marine bunker fuels stems from IMO regulations and authority granted to it by the TFEU).

considered sacrosanct in international relations.[257] Although the so-called "American Doctrine"[258] has at times recognized extraterritorial application of municipal laws, most states have resisted its broad adoption in the absence of treaty or customary obligations.[259] Even U.S. courts have been hesitant to grant wide transnational application to domestic laws and regulations.[260] The extent to which one state may extend its domestic authority into the affairs of another state is, however, a question with liquid results. Ian Brownlie notes that, "[t]he present position *is probably* this: a state has enforcement jurisdiction abroad only to the extent necessary to enforce its legislative jurisdiction" based primarily on the principle of "substantial connection."[261] Under assumed principles of public international law, an extraterritorial act can only be legal if: (1) there is a substantial and bona fide connection between the regulated act, the subject matter, and the jurisdiction; (2) the principle of non-intervention is observed; and (3) accommodation, mutuality and proportionality are followed.[262]

But this is only "probably" the law and as Halpin and Roeben note, globalization gives broad artistic legal license to states and lawmakers. Limitations on the extraterritorial extension of municipal law are fluid because international law is a creation of actors (state and now non-state) imbued with wide discretion[263] juxtaposed by narrow accountability for their actual regulatory choices.[264] By defining the notion of "substantial and bona fide connection" narrowly or broadly, the most influential states can restrict or expand the application of their municipal law to individuals and activities in other states. The

257. *But see* Jaye Ellis, *Shades of Grey: Soft Law and the Validity of Public International Law*, 25 LEIDEN J. INT'L L. 313, 324 n. 74 (2012) ("[I]t once appeared self-evident that state sovereignty implied a right of the sovereign to define and pursue domestic policy goals without interference from other states. This interpretation of sovereignty remains highly persuasive and pervasive, but has lost its self-evidence.").

258. Brownlie, *supra* note 45, at 309.

259. P.M. Roth, *Reasonable Extraterritoriality: Correcting the "Balance of Interests,"* 41 INT'L COMP. L. Q. 245, 251 (1992).

260. *See, e.g.*, The Antelope, 23 U.S. 66, 123 (1825) (the courts of no country execute the penal laws of another); EEOC v. Arabian Am. Oil Co., 499 U.S. 244, 249 (1991) (rejecting the EEOC's position that Title VII applies extraterritorially to regulate employment practices of U.S. employers employing American citizens abroad); Morrison v. Nat'l Austl. Bank Ltd., 130 S. Ct. 2869, 2878, 2881 (2010) (rejecting the "conduct and effects" tests relying upon the default presumption against extraterritorial application of American laws abroad, absent express statutory designation).

261. Brownlie, *supra* note 45, at 311 (emphasis added).

262. *Id.* at 311-12.

263. *See, e.g.*, Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide, Advisory Opinion, 1951 I.C.J. 15, 21 (May 28) [hereinafter Genocide Advisory Opinion] ("It is well established that in its treaty relations a State cannot be bound without its consent, and that consequently no reservation can be effective against any State without its agreement thereto.").

264. *See, e.g.*, Stephanie Nebehay, *U.N. Rights Body Condemns Syria Over Violations*, REUTERS, Mar. 1, 2012, http://uk.reuters.com/article/2012/03/01/uk-syria-rights-idUKTRE8200I220120301. *See also* Cedric Ryngaert, *The European Court of Human Rights' Approach to the Responsibility of Member States in Connection with Acts of International Organizations*, 60 INT'L COMP. L.Q. 997, 997 (2011) (discussing the lack of member state responsibility for actions of international organizations).

expanding list of transnational problems in such areas as climate change,[265] security,[266] and finance[267] actually serve to incentivize states to see substantial connections where none existed before,[268] or even undertake the unilateral enforcement of the "collective will," whatever that may mean.[269] In short, for regulatory purposes it is increasingly difficult to tease apart purely domestic behavior from the purely transnational behavior, given their interconnectedness.[270]

But the Aviation Directive illustrates more than the expanding notion of substantial connection between external behavior and domestic state interests. It also illustrates the emerging tendency of the most influential states to achieve certain policy objectives by circumventing frozen multilateral apparatuses and going directly after the extraterritorial conduct of individuals. Globalization has arguably created the "virtual citizen" living in multiple legal spheres and subject directly and indirectly to a virtual system of legal regimes, some of which operate completely beyond the borders of a particular state. Such regimes seek to alter global behavior by attaching directly to individual conduct regardless of where it

265. *See, e.g.*, Air Transport Case, *supra* note 35, ¶¶ 24-29, 33.

266. *See* Christopher C. Joyner, *Countering Nuclear Terrorism: A Conventional Response*, 18 EUR. J. INT'L L. 225, 225-26 (2007) (discussing the threat of nuclear terrorism to international security).

267. In addition to issues concerning the environment and climate change, the 2008 financial crisis encouraged further extraterritorial regulation of the global financial industry given the transnational effects of that crisis. For example, the U.S. Commodities Futures Trading Commission ("CTFC") has proposed that as part of its implementation of the Dodd-Frank Act's swap rules the term "U.S. person" be interpreted "by reference to the extent to which swap activities or transactions involving one or more such person *has relevant effect on U.S. commerce*." Press Release, CFTC Approves Proposed Interpretive Guidance on Cross-Border Application of the Swaps Provisions of the Dodd-Frank Act (June 29, 2012) (emphasis added), http://www.cftc.gov/PressRoom/PressReleases/pr6293-12. This results from provisions within the Dodd-Frank Act that apply to activities that "have a direct and significant connection with activities in, *or effect on*, commerce of the United States . . . ." Commodities Exchange Act, § (i)(1), 7 U.S.C. § 2, *amended by* Pub. L. No. 111-203 §722(d)(i)(1) (2010). Although the CTFC does not require foreign governments, central banks or international financial institutions to register, it is clear that Dodd-Frank and the CTFC's interpretation of its powers are meant to cast a wider transnational net over certain financial transactions that have effects on the U.S. economy. For further definition of "Swap Dealer," "Security-Based Swap Dealer," "Major Swap Participant," "Major Security-Based Swap Participant" and "Eligible Contract Participant," see 77 Fed. Reg. 30596, 30693 (May 23, 2012).

268. *See also* Pakootas v. Teck Cominco Metals, Ltd., 452 F.3d 1066, 1071 (9th Cir. 2006) (noting that CERCLA expresses clear intent by Congress to remedy domestic conditions within U.S. even from extraterritorial sources thus justifying the extraterritorial application of CERCLA in some cases). *See, e.g.*, Larry Kramer, *Extraterritorial Application of American Law After the Insurance Antitrust Case: A Reply to Professors Lowenfeld and Trimble*, 89 AM. J. INT'L L. 750, 755-56 (1995).

269. *See* Nico Krisch, *Unilateral Enforcement of the Collective Will: Kosovo, Iraq and the Security Council*, 3 MAX PLUNK Y.B. U.N.L. 59, 60 (1999) (discussing the evolution of a new right of states to take unilateral action to enforce the perceived collective will when multilateral enforcement efforts fail).

270. *See e.g., Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Reducing the Climate Change Impact of Aviation*, at 4, COM (2005) 459 final (Sept. 27, 2005) (stating that "international aviation should be included in any post-2012 climate change regime to give States stronger incentives to take action.").

occurs on the planet and with decreasing respect for the notion of total state sovereignty. The extraterritorial application of municipal law becomes a convenient and largely unchecked method for shaping global behaviors ranging everywhere from how tuna are caught on the high seas,[271] to how the internet is used,[272] to how the world is reducing its carbon footprint,[273] to overseeing corporate activity,[274] to provincial concerns over national security.[275]

The Aviation Directive is not simply an attempt to highlight a growing global problem or regulate a specific market activity. It is rather an attempt at behavior modification par excellence;[276] a behavior modification exercise in which the EU extends its municipal authority beyond the notion of the state to a virtual world of substantially connected behavior in an attempt to alter global conduct by individuals and companies,[277] while protecting its domestic interests from the adverse consequences of its own policy choices. Transnational certification regimes can serve a similar purpose.[278] The Aviation Directive seeks to achieve the dual goals of attacking climate change and protecting domestic economic interests by incentivizing alternative behavior making existing behavior more expensive to continue while capitalizing on the effort.[279] If airlines must buy carbon credits and the cost of carbon increases, passengers are more likely to demand greater efficiency and innovation in the delivery of aviation services if for no other reason than to reduce associated expenses. And, if the EU is ahead of the

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271. *See, e.g.*, Marine Mammals Protection Act, *supra* note 9, § 111(c).

272. *See e.g.*, R v. Re the MARITIM Trade Mark, [2003] I.L. Pr. 17, 297 (Hamburg Dist. Ct.) (Ger.) (holding that under German law, a tort occurs any place where the internet domain can be called up regardless of the physical location of the domain).

273. *See e.g.*, Aviation Directive, *supra* note 2, ¶ 16.

274. *See, e.g.*, Anti-monopoly Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 30, 2007, effective Aug. 1, 2008), *available at* http://www.fdi.gov.cn/pub/FDI_EN/Laws/GeneralLawsandRegulations/BasicLaws/P020071012533593599575.pdf (declaring law shall apply extraterritorially based on effects); The U.K. Bribery Act 2010, 2010 c. 23 (2010) (extending UK bribery law to third counties).

275. *See e.g.*, The Implementing Recommendations, *supra* note 255 (requiring 100 percent cargo scanning in foreign ports). One additional area of emerging concern regards income taxation. With the globalization of capital, investments and profits, the sources of income for taxation purposes diversify. *See* Nolan Cormac Sharkey, *International Tax as International Law and the Impact of China*, 3 BRIT. TAX REV. 269, 270 (2012).

276. According to the ICAO, "[t]he airlines of . . . 191 Member States carried approximately 2.7 billion passengers in 2011, showing an increase of about 5.6 per cent over 2010. The number of departures on scheduled services reached 30.1 million globally in 2011 compared to 29 million in 2010." Int'l Civil Aviation Org., *Annual Report of the Council* 1 (2011), *available at* http://www.icao.int/publications/Documents/9975_en.pdf. *See also* Aviation Directive, *supra* note 2, ¶ 15 ("Aircraft operators have the most direct control over the type of aircraft in operation and the way in which they are flown . . . .").

277. Air Transport Case, *supra* note 35, ¶ 147.

278. *Cf.* Kristin L. Stewart, *Dolphin-Safe Tuna: The Tide is Changing*, 4 ANIMAL L. 111, 118 (1998) (discussing the "Dolphin-Safe Tuna" certification).

279. *See, e.g.*, Air Transport Case, *supra* note 35, ¶ 140 ("In particular, by allowing the allowances . . . to be sold, the scheme is intended to encourage every participant in the scheme to emit quantities of greenhouse gases that are less than the allowances originally allocated to him.").

pack in altering its behavior and transforming its economy, better for its citizens and its future economic prospects.

The unilateral application of the Aviation Directive, therefore, targets a broad swath of persons by penalizing existing behavior and incentivizing alternative behavior. By extending the ETS to global aviation, the EU effectively seeks to drive-up the financial costs of current global carbon generating behavior (not by aircraft but by people); encourage other states to take climate change more seriously; establish its carbon trading market as a central tool in global emissions reduction efforts; meet its international climate change obligations by globalizing those obligations; and protect its own internal markets from the potentially distorting effects of its climate change policies while simultaneously encouraging innovation. Aircraft are not merely static objects of metal, plastic and rubber. They exist for a functional purpose and that is to transport people and goods.

The Aviation Directive's individual behavior-focused approach to addressing global climate change, as distinguished from a formal state-to-state focused approach typically associated with multilateralism, has two advantages: (1) it bypasses external political barriers, such as the inconvenience of multilateral agreements or intransigence of other states; and (2) it enables the EU to protect its own domestic policies and objectives.[280] It also has the potential of sparking a significant trade war in response to a perception of EU overreach, thus encouraging other states to take equally broad unilateral actions in other areas of transnational concern.

IV. CONCLUSION

Throughout history influential states have sought to shape global relations and global behavior beyond their immediate borders often through conquest and colonization. In more recent years, law has become an important tool in achieving political and economic objectives, and protecting domestic interests from global forces. The Aviation Directive evidences that while many global problems need multilateral solutions, those same problems can incentivize states to act unilaterally by extending their municipal laws into the virtual spaces of transnational conduct created by globalization.[281] Yet the EU's unilateral efforts at addressing climate change and other environment concerns do more than demonstrate developments and paradoxes within the field of international law. It demonstrates three important points about the globe's legal order. First, the extension of the ETS to global aviation demonstrates that notwithstanding efforts by Western states over

280. Danielle Goodwin, *Aviation, Climate Change and the European Union's Emissions Trading Scheme,* 6 J. PLAN. & ENV'T L. 742, 744, 748 (2008); Mark Stallworthy, *New Forms of Carbon Accounting: The Significance of a Climate Change Act for Economic Activity in the United Kingdom*, 18 INT'L CO. & COMM. L. REV. 331, 331 (2007). *See also* Aviation Directive, *supra* note 2, ¶ 15 (noting air carriers "have the most direct control over the type of aircraft in operation and the way in which they are flown.").

281. *See, e.g.,* Aviation Directive, *supra* note 2, ¶ 16 ("In order to avoid distortions of competition and improve environmental effectiveness, emissions from all flights arriving at and departing from Community aerodromes should be included from 2012."). *See also* sources cited, *supra* note 9.

the last sixty years to promote multilateralism as the favored tool for solving global problems, these same states can still be driven by domestic concerns to act unilaterally when it suits them, given their vast reserves of political, economic and cultural power. As non-economic matters such as climate change, national security, and transnational crime emerge on the same plane as economics they become powerful incentives for unilateralism and extraterritoriality. In short, when multilateralism fails, the world's most powerful states are not rendered powerless in shaping global behavior.

Second, the Aviation Directive demonstrates that in a world defined by substantial connectedness, influential states have the power to shape global behavior by regulating individual conduct regardless of where a person or entity may be physically located on the planet. The Aviation Directive is not simply about regulating economic activity. It is fundamentally about reshaping global behavior by using municipal laws to incentivize behavior change across the world.

> Aircraft operators have the most direct control over the type of aircraft in operation and the way in which they are flown and should therefore be responsible for complying with the obligations imposed by this Directive, including the obligation to prepare a monitoring plan and . . . to report emissions in accordance with that plan.[282]

Global interdependencies will demand greater multilateral cooperation and yet encourage states to use extraterritorial legal powers to regulate individual behavior elsewhere regardless of the limitations imposed by conventional notions of the state.[283] The idea of the "virtual individual" subject to the virtual regulatory power of states is replacing the idea that an individual is tied to a time and place in order to define the limit of state authority.[284]

Finally, the Aviation Directive points to the fact that notwithstanding a desire to define the normative parameters of public international law—always a questionably successful exercise—globalization is not only contributing to subject matter fragmentation, but more importantly, source fragmentation.[285] What is to be made of the Aviation Directive, the Dodd-Frank Act, or India's amended Competition Law on the spectrum of law? Are they examples of purely municipal law? Are they examples of a new form of international law? Are they hybrids of

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282. Aviation Directive, *supra* note 2, ¶ 15.

283. *But see* Wheatley, *supra* note 233.

284. Suzanne A. Spears, *The Quest for Policy Space in a New Generation of International Investment Agreements*, 13 J. INT'L ECON L. 1037, 1038 (2010).

285. *See, e.g.*, José E. Alvarez & Robert Howse, *From Politics to Technocracy—And Back Again: The Fate of the Multilateral Trading Regime*, 96 AM. J. INT'L L. 94, 102 (2002). *See* Michael S. Barr & Geoffrey Miller, *Global Administrative Law: The View from Basel*, 17 EUR. J. INT'L L. 15, 17 (2006) (critiquing lawmaking by networks of bank regulators and international bureaucrats in the Basel Accord as lacking accountability and legitimacy, but arguing that Basel II is subject to a subtle structure of international administrative law). *See also* Meredith Crowley & Robert Howse, *US-Stainless Steel (Mexico)*, 9 WORLD TRADE REV. 117, 148 (2010); Dieter Kerwer, *Rules that Many Use: Standards and Global Regulation*, 18 GOVERNANCE 611, 612 (2005); Andrea Hamann & Hélène Ruiz Fabri, *Transnational Networks and Constitutionalism*, 6 INT'L J. CONST. L. 481, 481-82 (2008).

both? While these examples are arguably not "international law" in the strictest, most conventional sense of that term, each is nevertheless designed to shape international behavior, to redefine the relationship of the individual to the state, and to project a municipal regulatory system across the globe. Thus, in spite of efforts over the last sixty years to transform international law from a coordinating exercise into a cooperation exercise, it is still the product of a segmented society. It is defined by the will of each segment to cooperate and capability of its more influential segments to "go it alone" when cooperation fails. To ignore this fact is to ignore one of the most important and understudied developments in international law: the power of some states to rebuff multilateralism when unilateralism provides a more effective and expedient approach to transnational problem-solving. As transnational problems grow in breadth, number, and speed of effect, the incentive for some states to shape global behavior—and therefore international law through the unilateral use of municipal law—will be an attractive alternative to multilateralism, claims to the contrary notwithstanding.