(IN)EFFICIENT BREACH OF INTERNATIONAL TRADE LAW: THE STATE OF THE "FREE PASS" AFTER CHINA'S RARE EARTHS EXPORT EMBARGO

Compliance and noncompliance with international agreements have long puzzled scholars, producing a wide range of theories regarding what motivates state behavior and a corresponding array of institutional design principles meant to promote compliance with international law. Only recently has the theory of efficient breach entered this fray, along with institutional design principles meant to promote compliance only where it is more efficient than noncompliance. The importation of efficient breach theory into international law has gained particular traction in the study of the World Trade Organization (WTO). Despite the WTO's attempts to create efficient remedies, the organization's structure for dispute resolution has a glaring yet underexplored inefficiency in the form of a time lag between a country's breach and the WTO's involvement — a gap during which trade violations may proceed undeterred. Because of this lag, existing remedies may underdeter inefficient violations of WTO law, undercutting the trade regime's compatibility with efficient breach theory.

Such a hole in the enforceability of international obligations can diminish the force of the obligations themselves. Indeed, the experience of international law provides abundant examples of international commitments' losing meaning when unenforced. In a prototypical illustration, North Korea reneged on a prisoner-of-war exchange that it had negotiated as part of the armistice ending the Korean War, after South Korea had already performed its part and thus lacked effective enforcement tools.[1] To investigate the effects of the WTO's enforcement time lag on efficient compliance and noncompliance, this Note considers a modern example of unchecked behavior in violation of international law: China's strategic embargo of rare earth minerals exports in 2010, immune from international sanctions thanks to the lag. Although China's embargo put on full display the serious implications of the "free pass"[2] created by the time lag, the incident has eluded notice in legal scholarship until now.

This Note examines the behavioral effects of the free pass. Part I describes efficient breach theory's place in international trade law, identifying four features of the WTO that make its remedies for trade violations conducive to efficient breach. Part II introduces the free

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[1] *See* LOUIS HENKIN, HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY 77–78 (2d ed. 1979).

[2] *See* John H. Jackson, *The Case of the World Trade Organization*, 84 INT'L AFF. 437, 452 (2008) (first applying the term "free pass" to the time lag).

pass's potential to undermine efficient breach and surveys the free pass through several lenses: first, recounting China's rare earths disruption as a case study to expose the phenomenon's seriousness; second, analyzing the trade law that enables it; and third, using a formal model to determine which situations encourage (and which discourage) its abuse. Part III considers policy proposals that derive from the formal model and attempts to predict, based on the model, how the free pass might affect different types of countries. In sum, this study captures the free pass in a comprehensive formal model that yields new conclusions regarding what circumstances promote abuse of the free pass and what solutions might promote efficient compliance.

I. EFFICIENT BREACH THEORY IN INTERNATIONAL TRADE

A. Theoretical Foundations in International Law

Rational choice theorists in international law posit that states make commitments in international law only to serve their self-interest and therefore breach those commitments to the extent international law fails to serve their interests.[3] An emerging theory further holds that the notion of efficient breach,[4] although traditionally associated with domestic contract law, applies as well to international agreements.[5] This approach — recently termed "efficient noncompliance"[6] — presumes that in some scenarios violation of international commitments is more efficient than compliance with those commitments.[7]

Efficient noncompliance theory begins from the key premise that international law serves to increase global welfare by reducing the inefficiencies that result from negative international externalities.[8] Be-

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[3] *See, e.g.*, JACK L. GOLDSMITH & ERIC A. POSNER, THE LIMITS OF INTERNATIONAL LAW 7 (2005).

[4] Efficient breach describes a situation in which "a party is tempted to break his contract simply because his profit from breach," even after compensating his promisee's loss from his breach, "would exceed his profit from completing performance." RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 120 (7th ed. 2007). For criticism of efficient breach theory, see Daniel Friedmann, *The Efficient Breach Fallacy*, 18 J. LEGAL STUD. 1 (1989); and Ian R. Macneil, *Efficient Breach of Contract: Circles in the Sky*, 68 VA. L. REV. 947, 963 (1982).

[5] *See, e.g.*, Richard Morrison, *Efficient Breach of International Agreements*, 23 DENV. J. INT'L L. & POL'Y 183 (1994); Eric A. Posner & Alan O. Sykes, *Efficient Breach of International Law: Optimal Remedies, "Legalized Noncompliance," and Related Issues*, 110 MICH. L. REV. 243 (2011); Alan O. Sykes, *Protectionism as a "Safeguard": A Positive Analysis of the GATT "Escape Clause" with Normative Speculations*, 58 U. CHI. L. REV. 255, 284–85 (1991); Joel P. Trachtman, *The Theory of the Firm and the Theory of the International Economic Organization: Toward Comparative Institutional Analysis*, 17 NW. J. INT'L L. & BUS. 470, 482–83 (1997).

[6] Posner & Sykes, *supra* note 5, at 246.

[7] *See id.* at 252–53.

[8] *See, e.g.*, Jeffrey L. Dunoff & Joel P. Trachtman, *Economic Analysis of International Law*, 24 YALE J. INT'L L. 1, 14 (1999) (discussing international externalities).

cause states are motivated by their self-interest, states will behave efficiently only if they internalize both the costs and the benefits of their behavior.[9] Under this theory, international law aims to improve global welfare by forcing each state to internalize the externalities of its actions, thereby inducing states to behave more efficiently from the global perspective. With that purpose in mind, an international legal regime functions best if it both encourages breach in situations where breach is more efficient than compliance and deters breach in situations where compliance is more efficient than breach.[10]

B. Balance of Deterrence in International Trade Law

Many scholars of international trade approach their field from a law and economics standpoint, starting from a welfarist perspective[11] and using the tools of rational choice theory. In a leading economic analysis of international trade law, Professors Kyle Bagwell and Robert Staiger argue that the modern trade regime developed in reaction to inefficiencies in individual states' separate determinations of their respective trade policies.[12] They explain various features of the trade regime as mechanisms by which individual states internalize terms-of-trade externalities.[13] The study of international trade has engaged efficient noncompliance extensively, championed in the first instance by Professor Alan Sykes's use of contract law to analyze the efficiency of the General Agreement on Tariffs and Trade[14] (GATT) and by Professor Joel Trachtman's analysis of how the WTO's Dispute Settlement Understanding[15] (DSU) can motivate rational and "discrete institutions" to facilitate global welfare maximization.[16]

A common starting point in the analysis of efficient breach in international trade law assumes the global welfarist perspective of trade remedies, and it defines an efficient system as one whose remedy for breach approximates expectation damages, forcing a breaching country

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[9] *See, e.g.*, Alan O. Sykes, *International Law*, *in* 1 HANDBOOK OF LAW AND ECONOMICS 757, 768 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

[10] *See* Posner & Sykes, *supra* note 5, at 258.

[11] This Note accepts the conventional welfarist perspective on the role of treaties and international law as "enabl[ing] states to commit to behavior that will move them closer to the Pareto frontier [of efficiency]." Sykes, *supra* note 9, at 768. *See generally id.* at 766–78.

[12] KYLE BAGWELL & ROBERT W. STAIGER, THE ECONOMICS OF THE WORLD TRADING SYSTEM 43–47 (2002).

[13] *Id.* at 28–30.

[14] General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT]; *see* Sykes, *supra* note 5.

[15] Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter DSU].

[16] Trachtman, *supra* note 5, at 555; *see also id.* at 551–53.

to internalize its trading partners' costs due to the breach.[17] An efficient regime would serve further goals: providing accurate adjudication of both claims and remedies;[18] making enforcement credible, such that actors believe the appropriate remedies will apply against them if they breach;[19] and allowing parties to renegotiate their obligations regularly in order to modify any provisions that would otherwise require inefficient overperformance.[20]

The WTO's consistency with these efficient breach values depends on its protocols for dispute resolution and remedies — the subject of the DSU.[21] Under the DSU, after an arbitral panel of the Dispute Settlement Body (DSB) finds a WTO member in violation of its trade commitment or, if the losing party chooses to appeal, after the standing Appellate Body (AB) finds the same, several remedial provisions become relevant. As a component of its report, each panel "recommend[s]"[22] that the losing respondent come into compliance with its commitments, and the respondent has a "reasonable period of time" (RPT) following arbitration to act upon the recommendation.[23] Complainants left unsatisfied after the RPT can return to the DSB to ask for damages in the form of authorization to take countermeasures.[24] When it comes time to take countermeasures, the DSU sets forth an unequivocal requirement: "The level of the suspension of concessions or other obligations authorized by the DSB shall be equivalent to the level" of the aggrieved party's loss due to the original violation.[25] Thus, the basic allowable level of countermeasures is "retaliation that chokes off a volume of trade that is equivalent to the volume lost as a

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[17] *See generally* POSNER, *supra* note 4, at 119–20 (emphasizing the efficiency of expectation damages); Richard R.W. Brooks & Alexander Stremitzer, *Remedies on and off Contract*, 120 YALE L.J. 690, 706 n.40 (2011) (noting "the well-known result that expectation damages induce 'efficient breach' by the promisor").

[18] *See* Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961, 1187–88 (2001).

[19] A given measure of damages deters breach efficiently only to the extent that the probability-adjusted expected remedy is itself efficient. *See, e.g.*, Rachel Brewster, *The Remedy Gap: Institutional Design, Retaliation, and Trade Law Enforcement*, 80 GEO. WASH. L. REV. (forthcoming 2011) (manuscript at 14 n.29) (on file with the Harvard Law School Library).

[20] *See* Morrison, *supra* note 5, at 221; *cf.* Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1758–59 (2001) (observing that the cotton industry's arbitral process undergoes frequent renegotiation, leading to expected efficiency in performance levels).

[21] The DSU provides that the procedures and remedies created under it form the exclusive means of resolving trade disputes. *See* DSU, *supra* note 15, art. 23.

[22] *Id.* art. 19.1. Contrary to the connotation that they are discretionary, recommendations under the DSU constitute binding obligations. *See id.* art. 21.1.

[23] *Id.* art. 21.3.

[24] *Id.* art. 22.2. WTO members take countermeasures by withdrawing trade concessions from another member. *Id.*

[25] *Id.* art. 22.4.

result of the violation."[26] The DSB generally authorizes the countermeasures upon request,[27] and if the respondent subsequently files an objection, then the DSU provides for an arbitrator to "determine whether the level of [countermeasures] is equivalent to the level" of the loss due to the underlying violation.[28] The countermeasures continue until the breaching member cures its violation.[29]

On its face, this structure includes each of the elements conducive to efficient breach: First, the symmetry between the magnitude of a violation and the maximum allowable countermeasures provides for a compensation measure that approximates expectation damages.[30] Second, the international trade regime features effective and centralized authority for adjudication and for determining appropriate levels of enforcement, much like in domestic contract law.[31] Third, the international trade agreements' self-enforcing nature renders the probability of detection and enforcement more credible than in other international regimes.[32] Fourth, embedded in the trade regime are mechanisms for renegotiation, allowing members to change their obligations and avoid costly overperformance.[33] In light of these features, the WTO system is sometimes portrayed as the cutting edge of efficient breach–sensitive international law.[34]

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[26] Posner & Sykes, *supra* note 5, at 277.

[27] Joost Pauwelyn, *Enforcement and Countermeasures in the WTO: Rules Are Rules — Toward a More Collective Approach*, 94 AM. J. INT'L L. 335, 337 (2000) (calling authorization "virtually automatic"). Authorization is only withheld if the DSB decides by consensus to oppose the countermeasures. DSU, *supra* note 15, art. 22.6.

[28] DSU, *supra* note 15, art. 22.7.

[29] *Id.* art. 22.8.

[30] Posner & Sykes, *supra* note 5, at 261 (concluding that the WTO provides "a rough analog to an expectation damages system; it makes breach costly — but not prohibitively so — and thereby facilitates breach when compliance is too costly").

[31] *See* Warren F. Schwartz & Alan O. Sykes, *The Economic Structure of Renegotiation and Dispute Resolution in the World Trade Organization*, 31 J. LEGAL STUD. (SPECIAL ISSUE) S179, S200–03 (2002) (explaining reforms to the WTO dispute settlement mechanism that centralize adjudication, authorize sanctions, and provide arbitration for defining the proper magnitude of sanctions).

[32] *Compare* Morrison, *supra* note 5, at 183 ("In the [pre-WTO] international arena, there [was] little chance that a state [would] be forced to pay damages for breaching an agreement."), *with* Robert E. Scott & Paul B. Stephan, *Self-Enforcing International Agreements and the Limits of Coercion*, 2004 WIS. L. REV. 551, 597 (noting the self-enforcing nature of WTO dispute resolution).

[33] *See, e.g.*, Marrakesh Agreement Establishing the World Trade Organization art. IV, ¶ 1, Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement] (providing for biennial Ministerial Conferences comprising all WTO members); GATT, *supra* note 14, art. XXVIII bis (providing mechanism for renegotiation of bound tariff rates). *But see* Posner & Sykes, *supra* note 5, at 277 (pointing out that "in a complex multilateral treaty such as the WTO, with 153 member states, renegotiation alone is an inadequate mechanism for adjusting the bargain").

[34] *See, e.g.*, Posner & Sykes, *supra* note 5, at 257, 294; Schwartz & Sykes, *supra* note 31, at S184, S203–04.

Still, for a host of reasons, this remedial system falls short of perfect efficiency. As it turns out, the approximation of expectation damages forms only an "upper bound" on countermeasures,[35] meaning that although they guarantee against overdeterrence, the countermeasures often underpenalize the breaching party and thus underdeter breach.[36] DSB-authorized countermeasures are also unlike expectation damages in that they are not redistributive but rather negative-sum penalties.[37] Other sources of inefficiency include the unavailability of side payments in the form of cash transfers,[38] the accepted practice of retaliation through prohibitive tariffs that hurt *all* parties' terms of trade,[39] and high litigation costs that deter many developing countries from bringing complaints to the DSB.[40]

II. THE PUZZLE OF THE FREE PASS

A. China Takes a Free Pass: The Rare Earths Export Embargo of 2010

Another fundamental flaw in the efficiency of trade dispute resolution and remedies revealed itself in late 2010, in a moment of high drama that has eluded legal scholarship until now. The incident illustrates vividly the mechanics of this institutional design flaw and demonstrates how a powerful and willing country may exploit it.

Long-standing tensions over the strategically and economically valuable Senkaku island group[41] came to a head after the *Minjinyu 5179*,

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[35] Posner & Sykes, *supra* note 5, at 277.

[36] *Compare* Simon Schropp, *The Equivalence Standard Under Article 22.4 of the DSU: A "Tariffic" Misunderstanding?*, *in* THE LAW, ECONOMICS AND POLITICS OF RETALIATION IN WTO DISPUTE SETTLEMENT 446, 457–67 (Chad P. Bown & Joost Pauwelyn eds., 2010) (arguing that expectation damages provide the best measure of quantifying breach), *with id.* at 479–86 (criticizing WTO arbitrators' use of reliance damages and direct trade damages in breach calculations).

[37] Unlike typical expectation damages, countermeasures do not benefit (and may even further injure) the party taking them. *See, e.g.*, JAN WOUTERS & BART DE MEESTER, THE WORLD TRADE ORGANIZATION ¶ 358, at 250–51 (2007); Petros C. Mavroidis, *Remedies in the WTO Legal System: Between a Rock and a Hard Place*, 11 EUR. J. INT'L L. 763, 807 (2000). The DSB has recognized this dynamic as well. *See* Arbitrator's Report, *European Communities — Regime for the Importation, Sale and Distribution of Bananas*, ¶ 2.13, WT/DS27/ARB (Apr. 9, 1999) ("[T]he suspension of concessions is not in the economic interest of either [party].").

[38] *See* Mostafa Beshkar, *Optimal Remedies in International Trade Agreements*, 54 EUR. ECON. REV. 455, 461 (2010).

[39] *See* Gene M. Grossman & Alan O. Sykes, "*Optimal*" *Retaliation in the WTO — A Commentary on the* Upland Cotton *Arbitration*, 10 WORLD TRADE REV. 133, 159–60, 163 (2011).

[40] *See* CHAD P. BOWN, SELF-ENFORCING TRADE 110–11 (2009).

[41] Japan and China both claim sovereignty over the Senkaku islands and have disputed the territorial waters and resources surrounding them for decades. *See* Carlos Ramos-Mrosovsky, *International Law's Unhelpful Role in the Senkaku Islands*, 29 U. PA. J. INT'L L. 903, 917–22 (2008). The Chinese refer to the islands as "Diaoyu Tai," while the Japanese refer to the islands as "Senkaku Gunto." Hungdah Chiu, *An Analysis of the Sino-Japanese Dispute over the T'iaoyutai*

a Chinese fishing boat, collided with two Japanese Coast Guard vessels in the waters near Senkaku.[42] Japanese authorities arrested Zhan Qixiong, the captain of the *Minjinyu 5179*, setting off a diplomatic row.[43] Chinese Prime Minister Wen Jiabao insisted on the captain's release, and he "threatened unspecified further actions if Japan did not comply."[44] Those further actions gained specificity, and then reality, in a matter of days. They included the arrests of four Japanese nationals,[45] Wen's refusal to meet with Japanese Prime Minister Naoto Kan at a summit of world leaders,[46] and even the shelving of a Japanese boy band's tour in China.[47]

Among the levers China pulled in its effort to force Zhan's release, international trade provided tremendous power. Taking advantage of Japan's reliance on Chinese exports of rare earth minerals, customs officials at China's ports embargoed all shipments of rare earths from China to Japan.[48]

The operation and production of many high-technology products requires rare earths,[49] making high-technology economies dependent on them. Auto manufacturing drives much of the reliance on rare earths because electric cars' motors use electromagnets made from rare

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Islets (Senkaku Gunto), 15 CHINESE Y.B. INT'L L. & AFF. 9, 9 (1996–1997). In keeping with familiar American usage, this Note adopts the Japanese name.

[42] *See* Aileen McCabe, *East China Sea Tensions Subside, but Animosity Remains*, OTTAWA CITIZEN, Sept. 14, 2010, at A6; *Leading the News: East China Sea Boat Collision Raises Tensions*, WALL ST. J. ASIA (Hong Kong), Sept. 8, 2010, at 3. The *Minjinyu 5179* incident was not the first time that tumult erupted in East Asia over Chinese or Taiwanese fishing vessels' entry into Senkaku waters and the subsequent Japanese responses. In 2008, such an episode sparked tensions between Taiwan and Japan. *See* Toshinao Ishii, *Japanese Flags Burned in Taiwan Ship Protest*, DAILY YOMIURI (Tokyo), June 20, 2008, at 3. In 2009, Japan seized a Taiwanese fishing boat near Senkaku and detained its captain and deckhand, again enkindling Taiwanese outrage. Bear Lee, *Taiwan Protests Against Japan's Detention of Fishing Boat Captain*, TAIWAN NEWS ONLINE (Sept. 16, 2009), http://www.taiwannews.com.tw/etn/news_content.php?id=1058918.

[43] *See* Edward Wong, *As Beijing Asserts Itself, U.S. Senses an Opening*, INT'L HERALD TRIB. (Paris), Sept. 24, 2010, at 3; Mure Dickie & Kathrin Hille, *Japan's Arrest of Captain Angers Beijing*, FT.COM (Sept. 8, 2010, 6:47 AM), http://www.ft.com/cms/s/0/a09e651a-bb04-11df-9e1d-00144feab49a,s01=1.html#axzz1ZxJfoDyi.

[44] Keith Bradsher, *In Dispute, China Blocks Rare Earth Exports to Japan*, N.Y. TIMES, Sept. 23, 2010, at B1.

[45] Ian Johnson, *China Arrests Four Japanese amid Tensions*, N.Y. TIMES, Sept. 24, 2010, at A12.

[46] Wong, *supra* note 43.

[47] David Pilling, *Time to Be Wary of China's New Swagger*, FIN. TIMES (London), Sept. 30, 2010, at 15.

[48] *See* Bradsher, *supra* note 44. Notably, China has engaged in less extreme forms of rare earths export restrictions since 1999. *See* U.S. DEP'T OF ENERGY, CRITICAL MINERALS STRATEGY 32–33 (2010).

[49] On the geopolitics of rare earths, see generally LEE LEVKOWITZ & NATHAN BEAUCHAMP-MUSTAFAGA, U.S.-CHINA ECON. & SEC. REVIEW COMM'N, CHINA'S RARE EARTHS INDUSTRY AND ITS ROLE IN THE INTERNATIONAL MARKET (2010).

earth–based metals, such as neodymium.[50] As Toyota purchases more neodymium than any other company in the world (it uses more than two pounds of the material in every Prius motor),[51] Japan relies heavily on China's rare earths exports.[52] Many of Japan's other exports — including batteries, LCD televisions, and mobile phones — also require rare earths for their production.[53] The seventeen rare earth elements are, ironically, not rare at all, with a recent U.S. government report noting that "reserves are abundant."[54] However, due to a lack of ongoing production elsewhere, China has a near monopoly on the world's supply.[55] Consequently, China's cutting off Japan's supply of rare earths immediately threatened the capacity of Japan's electric car manufacturing.[56]

China's disruption of rare earth exports began on September 21, 2010,[57] and Japan relented on September 25, releasing Captain Zhan.[58] Japan had detained Zhan for seventeen days, but it put him on a flight home just four days into the rare earths export embargo.[59] Observers quickly identified China's swift "retaliatory actions" as the impetus for the captain's release.[60]

With Zhan's return to China, tempers cooled and policies returned to their pre–*Minjinyu 5179* status.[61] China began the process of lifting its rare earths export embargo on September 29, not even two weeks after it had begun.[62] To be sure, China's bold embargo invited abundant criticism in the United States and throughout the international

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[50] Keith Bradsher, *China Tightens Grip on Rare Minerals*, N.Y. TIMES, Sept. 1, 2009, at B1; Mike Ramsey, *Toyota Tries to Break Reliance on China*, WALL ST. J., Jan. 14, 2011, at B1.

[51] Ramsey, *supra* note 50.

[52] Yogesh Joshi, *Power, Interdependence and China's Rare Earth Moment*, INSTITUTE FOR DEFENCE STUDIES & ANALYSES (Dec. 28, 2010), http://www.idsa.in/idsacomments/PowerInterdependenceandChinasRareEarthMoment_yjoshi_281210.

[53] Hiroshi Kawamoto, *Japan's Policies to Be Adopted on Rare Metal Resources*, SCI. & TECH. TRENDS — Q. REV., Apr. 2008, at 57, 58.

[54] LEVKOWITZ & BEAUCHAMP-MUSTAFAGA, *supra* note 49, at 1.

[55] China is responsible for ninety-seven percent of the world's rare earths production. *Id.* A recent survey points out that China "is the only exporter of commercial quantities of rare earth metals." MARC HUMPHRIES, CONG. RESEARCH SERV., R41347, RARE EARTH ELEMENTS: THE GLOBAL SUPPLY CHAIN 8 (2010).

[56] Bradsher, *supra* note 44.

[57] Arthur Max & Scott McDonald, *Japan Says Maritime Spat with China Over*, NEWSDAY, http://www.newsday.com/news/japan-says-maritime-spat-with-china-over-1.2336272 (last updated Oct. 5, 2010).

[58] *See* Chico Harlan & William Wan, *Chinese Boat Captain Is Released*, WASH. POST, Sept. 25, 2010, at A7.

[59] *Id.*

[60] *Id.*

[61] *See, e.g.*, Chester Dawson & Aaron Back, *China, Japan Say Relations Thawing*, WALL ST. J. ONLINE (Nov. 15, 2010), http://online.wsj.com/article/SB10001424052748704327704575613943021840782.html.

[62] *See China Set to Resume Shipments to Japan*, AUSTRALIAN, Sept. 30, 2010, at 11.

community: op-eds decried the move,[63] the U.S. Senate held a hearing on rare earths and associated "geopolitical risks" in the week following Zhan's release,[64] and public attention to rare earths continued into the new year as awareness of other rare earths export restrictions grew during the spring of 2011.[65] However, China has felt no ramifications in the WTO.[66]

It simply took a free pass.

B. Defining the Free Pass: Inefficiency Embedded in the DSU

The free pass owes its existence to the interaction between two features of the DSU: First, a substantial amount of time must pass before an injured WTO member may take countermeasures against a breaching member. Second, the DSU does not provide for any retroactive damages.[67] Consequently, a lag time precedes the application of coun-

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[63] *See, e.g.*, Pilling, *supra* note 47.

[64] *Rare Earths: Hearing Before the Subcomm. on Energy of the S. Comm. on Energy & Natural Res.*, 111th Cong. 6 (2010) (statement of David Sandalow, Assistant Secretary, Policy and International Affairs, U.S. Dep't of Energy).

[65] *See, e.g.*, Press Release, Representative Mike Coffman, Coffman Demands Action on China's Illegal Trade Practices: Calls Restrictions on Rare Earth Exports Unfair (Mar. 3, 2011), *available at* http://coffman.house.gov/index.php?option=com_content&task=view&id=421&itemid=10; Press Release, Senator Charles Schumer, Senators Urge Administration to Oppose Domestic and International Chinese Mining Projects Until China Plays Fair and Square with Rare Earth Element Exports (Mar. 15, 2011), *available at* http://www.schumer.senate.gov/Newsroom/record.cfm?id=331896.

[66] *See Chronological List of Disputes Cases*, WORLD TRADE ORG., http://www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm (last visited Oct. 29, 2011); Jonathan Lynn, *Scenarios — Could China Face a WTO Dispute Over Rare Earths?*, REUTERS (Oct. 29, 2010, 10:50 PM), http://in.reuters.com/article/2010/10/29/idINIndia-52553020101029. China's discriminatory embargo — preventing exports to Japan — probably violated the fundamental Most Favored Nation principle, *see* GATT, *supra* note 14, art. I, ¶ 1, and also served as a prohibited quantitative restriction on exports, *see id.* art. XI, ¶ 1. While the GATT's limited exceptions cover some quantitative export restrictions, *see id.* art. XI, ¶ 2, the short term of the rare earths disruption prevented the dispute from ever reaching WTO litigation; thus, China never got to argue that such an exception applied.

[67] *E.g.*, Rachel Brewster, *Shadow Unilateralism: Enforcing International Trade Law at the WTO*, 30 U. PA. J. INT'L L. 1133, 1134 (2009); *see also* William J. Davey, *Sanctions in the WTO: Problems and Solutions*, *in* THE LAW, ECONOMICS AND POLITICS OF RETALIATION IN WTO DISPUTE SETTLEMENT, *supra* note 36, at 360, 367. Although an implementation panel recommended retrospective damages after the one-time subsidy in the *Automotive Leather* case, *see* Article 21.5 Panel Report, *Australia — Subsidies Provided to Producers and Exporters of Automotive Leather*, ¶ 6.39, WT/DS126/RW (Jan. 21, 2000), that conclusion is widely considered "a one-time aberration of no precedential value." Gavin Goh & Andreas R. Ziegler, *Retrospective Remedies in the WTO After* Automotive Leather, 6 J. INT'L ECON. L. 545, 545 (2003) (quoting Dispute Settlement Body, Minutes of Meeting 8 (Feb. 11, 2000), *available at* www.wtocenter.org.tw/SmartKMS/fileviewer?id=54111) (internal quotation mark omitted). Like the panel in *Automotive Leather*, some argue "that nothing in the WTO contract precludes retroactive (*ex tunc*) remedies"; however, "the overwhelming majority" of case law suggests that redress is limited to prospective remedies. PETROS C. MAVROIDIS ET AL., THE LAW OF THE WORLD TRADE ORGANIZATION (WTO) 1084 (2010).

termeasures wherein violative behavior has no influence on the calculation of remedies either by the DSB or by the injured member. Any gains emerging from such conveniently or opportunistically timed behavior come to the breaching member without the cost of remedies. Leaving aside reputation and litigation costs for a moment, this loophole allows members to receive complete windfalls for short-term violations. The loophole can have either of two possible remedy-distorting effects: for a continued violation against which the injured member ultimately applies countermeasures, the loophole creates an asymmetry between the violation and the remedy;[68] and for a short-term violation that ends before the injured member can apply countermeasures, the loophole creates a free pass, rendering the violation irremediable under the DSU.

The lag manifests itself in a labyrinth of procedures that first resolve whether a country violated its international trade obligations and then legitimate countermeasures. The entire process can take months or even years. If the injured member immediately detects the violation and immediately requests consultations, it must still negotiate with the breaching member for sixty days before even beginning the arbitration process.[69] Once the DSB establishes an arbitral panel and the panel sets its working procedures, it can take six to nine months to adjudicate the dispute.[70] After the panel has issued its ruling, a party may appeal to the AB, and the ensuing process may take up to ninety days.[71] If, after this process, the DSB has found a violation of a member's obligations, the RPT must pass before the injured member can request authorization to take countermeasures. If the parties do not agree on the length of the RPT, its definition goes to arbitration with the "guideline" that the RPT should not typically be longer than

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[68] A few observers have already taken notice of this particular phenomenon. *See, e.g.*, Marc L. Busch & Eric Reinhardt, *The Evolution of GATT/WTO Dispute Settlement*, *in* TRADE POLICY RESEARCH 2003, at 143, 176 (John M. Curtis & Dan Ciuriak eds., 2003), *available at* http://userwww.service.emory.edu/~erein/research/TPR.pdf; Schropp, *supra* note 36, at 494; *cf.* Amelia Porges, *Settling WTO Disputes: What Do Litigation Models Tell Us?*, 19 OHIO ST. J. ON DISP. RESOL. 141, 172 (2003).

[69] *See* DSU, *supra* note 15, art. 4.4, 4.7. The complaining member can forego consultations if the respondent does not respond to the request within ten days or does not enter into consultations within thirty days. *Id.* art. 4.3. The complainant begins litigation with a request to establish an arbitral panel, which the DSB takes up at its next meeting, within fifteen days of the request. *Id.* art. 6.1 & n.5. Another twenty days can pass during which the parties may negotiate the membership of the panel, and if they cannot agree, then the Director-General can take up to ten days afterward to decide on the membership. *Id.* art. 8.7.

[70] *Id.* art. 12.8–.9. The DSU also suggests an expedited process that "aim[s]" for three months of panel proceedings "[i]n cases of urgency, including those relating to perishable goods." *Id.* art. 12.8; *cf. id.* art. 4.8. Regardless, after the panel has issued its ruling, the DSB meets to adopt the ruling, making it binding on the parties. *Id.* art. 16.1. The period between issuance and adoption may last up to sixty days. *Id.* art. 16.4.

[71] *Id.* art. 17.5.

fifteen months from the date of the panel or AB ruling.[72] Thus, by the time a party can take countermeasures, all of these steps — which together add up to several years on average[73] — have passed. Given the rule against retroactive damages, this procedural quagmire means that any violator whose goal can be accomplished in a short period of time is immune to sanctions under the DSU.

Since the establishment of the WTO, scholars have increasingly noticed the vast potential for uncompensated breach. In the early days of the WTO, Professor Petros Mavroidis conjectured that the then-newly penned DSU could theoretically allow "hit and run"–style breach.[74] Professor Rachel Brewster later referred to similar violations as "stall-and-withdraw" tactics, suggesting that countries could use the loophole for immediate and illegal retaliation for other violations of trade law.[75] Professor John Jackson applied the phrase "free pass" in 2008, pointing to the "compliance incentive problem" but leaving that problem's resolution for another day.[76] Professors Eric Posner and Alan Sykes took up the mantle in their recent work on efficient noncompliance but mentioned the free pass with just enough elaboration to call it "[a]n interesting puzzle . . . [to which] [w]e have no sure answer."[77] Most recently, Professor Brewster has returned to the topic with an empirical analysis of the duration of the time lag, concluding that trade violations can proceed "for several years without facing any retaliation."[78]

The proposals already offered in the scholarship include calculating "higher levels of retaliation" in order to "encourage timely com-

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[72] *Id.* art. 21.3(c).

[73] According to a recent empirical study, "[t]he average time from the composition of a panel to the adoption of an Appellate Body report was over two years for cases brought between 2005 and 2009." Brewster, *supra* note 19 (manuscript at 7); *see id.* (manuscript at 36–37, 121 tbl.1).

[74] Mavroidis, *supra* note 37, at 783 (internal quotation marks omitted). Mavroidis queried whether the "hit and run" practice had become "moot" in the WTO era but concluded that the specter of short-term, uncompensated breach remained present. *Id.*

[75] Brewster, *supra* note 67, at 1143–45. Brewster's work is unique in the extant literature because it offers a case study to illustrate the free pass — namely, the United States's sharp increase of steel import tariffs in 2002 and the immediate retraction of that increase after the DSB pronounced it illegal in 2003. *Id.* at 1144. But that illustration is an imperfect representation of abuse of the free pass because the United States appeared to raise legitimate and good faith arguments, many of which even persuaded the AB. *See* Appellate Body Report, *United States — Definitive Safeguard Measures on Imports of Certain Steel Products*, ¶¶ 284–285, 324–325, 367, 413–419, 429, WT/DS248/AB/R (Nov. 10, 2003). In situations involving good faith disputes over compliance, the very purpose of prospective remedies in the WTO is to encourage countries to withdraw policies after the DSB has declared them violative. *See, e.g.*, MAVROIDIS ET AL., *supra* note 67, at 1053.

[76] Jackson, *supra* note 2, at 452.

[77] Posner & Sykes, *supra* note 5, at 277–78.

[78] Brewster, *supra* note 19 (manuscript at 119).

pliance."[79] A related set of proposals would extend retaliation by making retroactive monetary damages available.[80] One influential article looks beyond remedies to solve the puzzle, emphasizing WTO members' capacity to renegotiate their trade obligations: if states continually trade off rules demanding inefficient overperformance for new rules that optimize required levels of performance, strict liability for noncompliance would always induce efficient behavior.[81] And looking beyond the constraints of the DSU altogether, countries retain the option of "illegal retaliation" — in other words, countermeasures not authorized by the DSB — and therefore have the power to create, for better or for worse, an ongoing tit-for-tat dynamic in response to bad faith violations such as abuses of the free pass.[82]

C. Free Pass Effects over Infinitely Repeating Games: A Formal Approach

In light of the DSU's underdeterrence of opportunistic, short-term noncompliance, intuition suggests that increasing the payoff from cooperation, decreasing the payoff from free pass abuse, and increasing the penalty for free pass abuse can increase efficiency. This section offers a formal model of the free pass that confirms these intuitions and also suggests a new lever, the manipulation of which can alter the proclivity of any given country to abuse the free pass — namely, how a country values its short-term payoff relative to its long-term payoff.

The variables involved in a payoff structure for short-term breach are not limited to the breach and the DSB-authorized punishment. This model adds several new factors: First, a country considering whether to breach an international trade agreement likely has a longer time horizon in its strategic considerations than the period of its breach, so it considers longer-term implications. Second, there are more countries whose behavior may change the incentives for breach than simply the breaching country and a unitary victim. And finally, the breaching party may discount future gains or losses.[83] The model

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[79] Davey, *supra* note 67, at 365.

[80] *See, e.g.*, Marco Bronckers & Naboth van den Broek, *Financial Compensation in the WTO: Improving the Remedies of WTO Dispute Settlement*, 8 J. INT'L ECON. L. 101, 109–10 (2005); Steve Charnovitz, *Rethinking WTO Trade Sanctions*, 95 AM. J. INT'L L. 792, 825–27 (2001); William J. Davey, *The Sutherland Report on Dispute Settlement: A Comment*, 8 J. INT'L ECON. L. 321, 322 (2005); Mavroidis, *supra* note 37, at 783; Nils Meier-Kaienburg, *The WTO's "Toughest" Case: An Examination of the Effectiveness of the WTO Dispute Resolution Procedure in the Airbus-Boeing Dispute over Aircraft Subsidies*, 71 J. AIR L. & COM. 191, 246–48 (2006); Pauwelyn, *supra* note 27, at 345–47; *cf.* Kyle Bagwell et al., *Auctioning Countermeasures in the WTO*, 73 J. INT'L ECON. 309 (2007) (proposing, analogously, transferable rights to countermeasures).

[81] *See* Schwartz & Sykes, *supra* note 31, at S192 (citing GATT, *supra* note 14, art. XXVIII).

[82] Brewster, *supra* note 67, at 1144–46.

[83] In the language of game theorists, discounting represents players' diminished valuation of future payoffs relative to current payoffs. Each player has a time discount factor that quantifies

below incorporates these factors to provide easy comparisons among a WTO member's strategies given different conditions.

While the model contemplates different conditions, several basic assumptions run throughout. The model assumes that if country B breaches, then nonbreaching victim country N retaliates at its earliest opportunity under the DSU; also, if B cooperates, then N cooperates as well.[84] The model also assumes that rational actors discount their future payoffs to some extent. The discount factor between periods of play $\delta \in (0,1)$ is given by $\delta = e^{-rL}$,[85] where r denotes the rate of time preference[86] and L denotes the length of each period of play or "the length of time it takes to observe the trading partners' policies and respond to them."[87] In terms of DSU-authorized retaliation, L signifies the duration of the free pass — the length of the period between B's breach and the authorization for N to take countermeasures. In terms of reputational and other unofficial sanctions, L denotes the length of time between B's breach and other countries' detection of and retaliation against the breach.

"the amount by which the value of a payoff in the next period must be adjusted to reflect its value in the present period." DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 168 (1994). In any situation where punishment in future periods is stronger than in the period in which the player initiates its breach, cooperation is less likely to result when players discount future payoffs more, since substantial discounting suppresses the value of future punishment relative to the present payoff from breach. *See, e.g.*, OZ SHY, INDUSTRIAL ORGANIZATION 31–33 (1995).

[84] Admittedly, this assumption creates an artificially simplified game and therefore limits the applicability of the model. In some cases, this model does not capture all of N's possible strategies: taking the *Minjinyu 5179* incident as an example, Japan (N) had the capacity to capitulate to China's (B) demand for the release of the fishing boat captain at any time during the free pass, and indeed it did. Moreover, China's expectations about Japan's willingness to capitulate would have changed its expected payoffs.

Those nuances, however, are not universal to all short-term defections that seek to exploit the free pass. In other situations, a country may breach for a short period of time to provide temporary protection to home industry; moreover, a decisionmaker can gain domestic political capital by defecting from international trade agreements. Either of those defections offers a payoff unaffected by N's behavior and unaffected by B's expectations about N's behavior. The model therefore avoids those nuances and retains its usefulness for comparing a few basic strategies.

[85] The discount factor is a positive fraction less than one. This infinitely repeated game can also be conceptualized as a repeated game with a hazard rate, h, that the game will continue beyond each given period and a discount factor, δ, where $\delta = he^{-rL}$. Robert W. Staiger, *International Rules and Institutions for Trade Policy*, *in* 3 HANDBOOK OF INTERNATIONAL ECONOMICS 1495, 1520 n.35 (Gene M. Grossman & Kenneth Rogoff eds., 1995); *see also* Giovanni Maggi, *The Role of Multilateral Institutions in International Trade Cooperation*, 89 AM. ECON. REV. 190, 196 n.12 (1999).

[86] Rate of time preference is a player's "impatience or myopia," capturing the player's subjective emphasis on short-term consequences in determining its strategies. K.J. Arrow et al., *Intertemporal Equity, Discounting, and Economic Efficiency*, *in* CLIMATE CHANGE 1995: ECONOMIC AND SOCIAL DIMENSIONS OF CLIMATE CHANGE 125, 131 (James P. Bruce et al. eds., 1996).

[87] Maggi, *supra* note 85, at 196 n.12.

As a baseline, when B and N both continuously cooperate they receive positive payoffs, C and C', respectively, at every stage.[88] For its infinitely repeated game of trade relations, B therefore receives an average discounted value of

$$(1-\delta)\left[C+\delta(C)+\delta^2(C)+...\right]=(1-\delta)\left[\sum_{t=0}^{\infty}\delta^t(C)\right]=C$$

Comparing each breach strategy to this payoff will define B's preferred strategy in each case, as between cooperation and breach.

1. Pure retaliation condition. — The first model assumes that N's retaliation, once authorized by the DSB, constitutes the only cost to B of breaching. In this way, it is a *pure retaliation* model, capturing only the penalties provided by international trade law.

The pure retaliation model estimates B's payoff if it takes advantage of the free pass by breaching until the end of the free pass but no longer. The notation for the last day of the free pass is $t = F$. The time represented by F will in most cases equal at least two years.[89] For all stages until B abandons its breach (hypothesized here as $t = F$), it receives payoff D. In the case of a breach with a short-term goal of prompting a one-time, discrete result, D represents the probability-weighted value of accomplishing that goal in the given stage. For example, during China's export embargo of rare earths, D included the probability that the embargo would induce the return of the detained Chinese citizen. In the case of a breach with actual payoffs in each stage, such as the benefit of protecting domestic industry for every day that an illegal tariff is in place, D represents that actual payoff.

B's average discounted value if it stops breaching at time F is

$$(1-\delta)\left[D+\delta(D)+\delta^2(D)+..\delta^F(D)+\delta^{F+1}(C)+\delta^{F+2}(C)...\right]$$
$$=(1-\delta)\left[\sum_{t=0}^{F}\delta^t(D)+\sum_{t=F+1}^{\infty}\delta^t(C)\right]$$

Thus, if

$$(1-\delta)\left[\sum_{t=0}^{F}\delta^t(D)+\sum_{t=F+1}^{\infty}\delta^t(C)\right]\le C$$

then continuously cooperating is a more dominant strategy for country B than breaching during the period of the free pass. Intuitively, when gains from cooperation exceed the gains of a short-term breach strategy, B will not breach.

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[88] Although gains from trade can vary over time, *see, e.g.*, Schropp, *supra* note 36, at 458–59, this model simplifies such gains into the constants C and D (explained in the text below). These notations can be viewed alternatively as standing for functions whose definitions are left for trade economists.

[89] *See* Brewster, *supra* note 19 (manuscript at 7, 36–37, 120 tbl.1).

By contrast, a *continuous* breach strategy provides B with a payoff of D at each stage during the free pass period and a payoff of $D - R$ (where R is the loss due to DSB-authorized trade retaliation) at each future stage after time F. The average discounted value of continuous breach, then, is

$$(1-\delta)\left[D+\delta(D)+\delta^2(D)+\ldots\delta^F(D)+\delta^{F+1}(D-R)+\delta^{F+2}(D-R)\ldots\right]$$
$$=(1-\delta)\left[\sum_{t=0}^{F}\delta^t(D)+\sum_{t=F+1}^{\infty}\delta^t(D-R)\right]$$

B therefore will embrace a continuous breach strategy only if $D - R \geq C$. In such a situation, B gains more from its breach, even after compensating N, than it would from not breaching. That result represents the notion of efficient breach in the WTO; however, the caveat that this condition triggers only at time F represents the inefficiency of the free pass.

That result also explains why the model compares scenarios in which B abandons its breach at time F: if it continues to breach indefinitely, then its breach is probably efficient, so the model uses short-term breach strategies as representative of free pass abuses. Nonetheless, the policy proposals considered in Part III apply to close the remedy gap for longer-term breaches as much as for short-term abuses.

2. Unauthorized sanctions condition. — A WTO member's costs due to breach and the associated incentives to comply with trade agreements are not limited to DSB-authorized countermeasures. Even in the absence of treaty enforceability, some level of compliance is expected because factors such as future gains[90] and reputation[91] induce compliance. The true break-even point at which breach is efficient — and should therefore be encouraged — depends both on the trade effects due to the breach and on these other costs and benefits. These "soft sanctions" may help to explain why WTO members do not take advantage of the free pass more often. Notably, such unauthorized sanctions violate Article 23 of the DSU. Still, they are prevalent and influence countries' decisions about whether to breach.[92] These penalties include both unilateral sanctions imposed by the injured trading partner, which are already commonplace,[93] and third-party sanctions that can buttress the penalty.

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[90] *See, e.g.*, L.G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27, 37 (1980).

[91] *See, e.g.*, Jens David Ohlin, *Nash Equilibrium and International Law*, 96 CORNELL L. REV. 869, 870–71 (2011). *See generally* Andrew T. Guzman, *Reputation and International Law*, 34 GA. J. INT'L & COMP. L. 379 (2006).

[92] *See, e.g.*, Brewster, *supra* note 67, at 1143.

[93] Schwartz & Sykes, *supra* note 31, at S198–99.

Assume that the countries of the world take until time A to detect B's breach.[94] In many cases, a DSB announcement of a violation prompts A, but in other cases A comes even sooner (for example, many countries took note of China's rare earths embargo even before a DSB adjudication was possible).[95] No matter how it comes about, A always precedes F, because the authorization of countermeasures at time F occurs after the DSB rules on the merits of the claim.

After detecting the breach at time A, the international community sanctions B, imposing a payoff of $C - P$ (where P is a decreasing function representing the magnitude of unauthorized sanctions[96]) for all subsequent stages in which B cooperates and a payoff of $D - P$ for all subsequent stages in which B defects. The resulting discounted average value of a breach that ends at time F is

$$\begin{aligned}&(1-\delta)\Big[D+\delta(D)+\delta^2(D)+\ldots\delta^A(D)+\delta^{A+1}(D-P)+\delta^{A+2}(D-P)\\&+\ldots\delta^F(D-P)+\delta^{F+1}(C-P)+\delta^{F+2}(C-P)\ldots\Big]\\&=(1-\delta)\left[\sum_{t=0}^{A}\delta^t(D)+\sum_{t=A+1}^{F}\delta^t(D-P)+\sum_{t=F+1}^{\infty}\delta^t(C-P)\right]\end{aligned}$$

In such a case, the DSB-authorized retaliation never comes, so the breaching country gets its payoff due to breach or due to cooperation in each stage, less the reputational damage in each stage after time A. B will therefore continuously cooperate given the expectation of unauthorized sanctions and DSB-authorized retaliation so long as

$$(1-\delta)\left[\sum_{t=0}^{A}\delta^t(D)+\sum_{t=A+1}^{F}\delta^t(D-P)+\sum_{t=F+1}^{\infty}\delta^t(C-P)\right]\leq C$$

By contrast, the discounted average value of breach continuing indefinitely beyond time F[97] and therefore met both by reputational sanctions and by DSB-authorized retaliation is equal to

$$\begin{aligned}&(1-\delta)\Big[D+\delta(D)+\delta^2(D)+\ldots\delta^A(D)+\delta^{A+1}(D-P)+\delta^{A+2}(D-P)\\&+\ldots\delta^F(D-P)+\delta^{F+1}(D-[P+R])+\delta^{F+2}(D-[P+R])\ldots\Big]\\&=(1-\delta)\left[\sum_{t=0}^{A}\delta^t(D)+\sum_{t=A+1}^{F}\delta^t(D-P)+\sum_{t=F+1}^{\infty}\delta^t(D-[P+R])\right]\end{aligned}$$

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[94] This timing structure is simplified for the purpose of the formal model: in fact, different countries likely detect an abuse of the free pass at different points in time, and surely the injured country detects the abuse long before other countries do.

[95] *See* sources cited *supra* notes 63–65 (describing international reaction).

[96] Because the sanctions will wane over time, P is a function of time that, although always positive, drops off over time.

[97] B prefers to defect continuously, rather than defecting only until time F, if $D - R \geq C$. This is generally not the case for the same reason as in the pure retaliation model. A longer-term inefficient breach is unlikely because a rational country abusing the free pass loses its incentive to continue its breach at time F.

This expression builds upon the prior scenario by adding to *D*'s penalty after time *F* the DSB-authorized retaliation of *R*.

Although in theory *B* may also breach until some definite time later than time *F*, that strategy would be dominant (that is, it would benefit *B* more than continuous cooperation and more than breaching until time *F*) only if the single-stage payoff $D - (P + R)$ is positive at time *F* and becomes negative at a later time. Because the latter is unlikely,[98] this possibility will not ordinarily affect a country's decision whether to breach.

3. Manipulating discount factors to "solve" the puzzle. — These discounted average payoffs of *B*'s potential strategies can explain the effect of *B*'s discount factor, δ, on its preferences. This analysis will lay the foundation for policy reforms, examined in section III.A, that aim to influence the variables herein in order to sustain cooperation.

B will continuously cooperate whenever its dominant breach strategy (that is, abusing the free pass up until time *F*) returns a lower (or equal) average discounted payoff than its returns from continuous cooperation, namely *C*. Thus, under the pure retaliation model, *B* will continuously cooperate only if

$$(1-\delta)\left[\sum_{t=0}^{F}\delta^t(D)+\sum_{t=F+1}^{\infty}\delta^t(C)\right]\leq C$$

Similarly, under the unauthorized sanctions model, *B* will continuously cooperate only if

$$(1-\delta)\left[\sum_{t=0}^{A}\delta^t(D)+\sum_{t=A+1}^{F}\delta^t(D-P)+\sum_{t=F+1}^{\infty}\delta^t(C-P)\right]\leq C$$

Under pure retaliation, continuous cooperation requires a discount factor $\delta \geq 1$.[99] Because by definition $\delta \in (0,1)$, this solution is more limited than it first seems. In fact, *B* will never prefer continuous cooperation in a pure retaliation model, assuming that *B* has anything more to gain by breaching than by cooperating (that is, assuming that $D > C$), because its discount factor cannot be greater than or equal to one. Thus, there is no way to manipulate *B*'s discount factor in a manner that would result in continuous cooperation in the pure retaliation model.

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[98] After all, *P* is by hypothesis a decreasing function, and *R* is constant, so the benefit from breach would have to diminish anomalously for that condition to be true.

[99] This solution assumes that $D > C$, so that dividing both sides of the inequality by $C - D$ also reverses the inequality. If $D < C$ then, unsurprisingly, continuous cooperation will always emerge as the dominant strategy (that is, for all values $\delta \leq 1$, which includes the full set of possible values for δ).

In the combined model of unauthorized and DSB-authorized sanctions, continuous cooperation depends on *B*'s discount of its payoff after the free pass ends, at the time it abandons its breach, such that

$$\delta^{F+1} \geq \frac{P\delta^{A+1}}{C-D}+1$$

As above, these conclusions assume that *B* has anything more to gain by breaching than by cooperating, so that $D > C$. A lower value of *P* or a greater value of *C* will make this inequality true more often,[100] formalizing the intuition that a more severe punishment for *B*'s breach after time *A* or a heightened payoff for *B*'s continuous cooperation will make *B* more likely to cooperate. Similarly, a lower value of *D* will make the inequality true more often, which corresponds to the intuition that decreasing *B*'s payoff during the free pass for its abuse of the free pass will make such abuse less attractive to *B*.

III. THE FUTURE OF THE FREE PASS

A. The Challenge of Reform

The coincidence of two factors — the lack of retroactive damages and the long process involved in DSB arbitration — engenders the free pass. The most obvious policy reforms for eliminating or suppressing the inefficiency of the free pass therefore focus on offering retroactive damages and shortening the dispute settlement process. But a myriad of practical and theoretical challenges accompany these reforms. The formal model above indicates that some less obvious policies might countervail the inefficiency of the free pass, but they too involve political friction and values trade-offs. Each potential reform and each attendant challenge highlights the nuance of the free pass and the need for further study.

One policy suggestion already advanced in the scholarship would provide for retroactive damages, allowing WTO members to seek monetary compensation for trade injuries suffered starting from the commencement of the violative trade practice.[101] Retroactive damages can plausibly target *D* (the benefit from breach during the free pass period) in the formal model above, decreasing its value and thereby potentially inducing compliance.[102] However, such compensation

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[100] The numerator in the equation, $P\delta^{A+1}$, represents the discounted magnitude of sanctions in the first period in which sanctions are imposed.

[101] *See, e.g.*, sources cited *supra* note 80.

[102] *Cf.* Bronckers & van den Broek, *supra* note 80, at 116 (discussing retroactive damages' potential to discourage "foot-dragging" in reforming policies even if payments "do not reach those who actually suffered damages"). Other advantages of retroactive monetary damages over the default remedy of withdrawal of concessions include less trade-restrictive effects, *see* Meier-

would come with the risk of encouraging excessive litigation in the WTO and discouraging settlement in the consultations stage. Particularly for the United States, where critics have derided the WTO as undermining U.S. sovereignty,[103] retroactivity proposals are politically tainted due to their association with decreased home sovereignty.[104]

As an alternative to retroactive damages, reducing the time between offense and remedy would at least reduce inefficiency due to the free pass. However, this solution comes with a different set of challenges because the time lag serves important purposes. For example, the consultations stage that forestalls litigation and contributes to the lag provides an often successful avenue for countries to reach mutually satisfactory resolution without incurring litigation costs.[105] The lag also provides cover for involuntary breach, which an efficient system should not seek to deter,[106] by giving WTO members a chance to bring their policies into conformity with trade obligations.

The formal model in section II.C suggests two other possible solutions: unauthorized sanctions against opportunistic violators who take advantage of the free pass and preliminary injunctive relief for victims of the free pass. These new responses to the free pass offer distinct advantages, but they are plagued by political obstacles as well as trade-offs in values central to the DSU.

Encouraging sanctions not currently authorized under the DSU would deter free pass exploitation by raising the strategy's long-term costs. Unauthorized sanctions, when compared with the pure retaliation model above, affect the average discounted payoff of a breach strategy in two ways. First, because A (the time at which the international community detects an uncompensated breach and sanctions it) takes place before F (the end of the free pass period),[107] unauthorized

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Kaienburg, *supra* note 80, at 246, and better serving of the interests of the injured member, *see, e.g.*, WOUTERS & DE MEESTER, *supra* note 37, ¶ 358, at 250–51, as well as the interests of all WTO members, *see* Pauwelyn, *supra* note 27, at 343.

103 *See, e.g.*, ROBERT Z. LAWRENCE, COUNCIL ON FOREIGN RELATIONS, THE UNITED STATES AND THE WTO DISPUTE SETTLEMENT SYSTEM 13 & n.25 (2007), *available at* http://i.cfr.org/content/publications/attachments/WTO_CSR25.pdf; John H. Jackson, *Sovereignty, Subsidiarity, and Separation of Powers: The High-Wire Balancing Act of Globalization*, *in* THE POLITICAL ECONOMY OF INTERNATIONAL TRADE LAW 13, 18–19 (Daniel L.M. Kennedy & James D. Southwick eds., 2002).

104 *See* LAWRENCE, *supra* note 103, at 23; *cf.* Robert E. Hudec, *The Adequacy of WTO Dispute Settlement Remedies*, *in* DEVELOPMENT, TRADE, AND THE WTO 81, 85 (Bernard Hoekman et al. eds., 2002) ("The GATT practice of denying compensation for past wrongs clearly reflects a view of GATT law as having a lower status than domestic law.").

105 *See* Stephanie Smith & Janet Martinez, *An Analytic Framework for Dispute Systems Design*, 14 HARV. NEGOT. L. REV. 123, 159 (2009).

106 *See* POSNER, *supra* note 4, at 119.

107 For example, in the case of China's rare earths embargo, international pressure mounted against China within days of the embargo's beginning, *see, e.g.*, sources cited *supra* notes 63–65, while the end of the free pass period remained at least months away.

sanctions shorten the period of uncompensated breach. Second, and even more saliently, unauthorized sanctions have the potential to effect greater costs at each stage after time *A* than a breaching country encounters at any stage of the pure retaliation model.

One approach to non-DSB-authorized sanctions would involve extensive, institutional retaliation by all the countries of the world against any abuse of the free pass. A strong policy of global retaliation against abuses could include either harsh institutional retaliation within the WTO (such as stripping an abusive country of its membership[108]) or even broadening the range of sanctions beyond the trade sphere.[109] Such a strong approach, however, would present a risk of descending into perpetual and destructive retaliatory defection. For example, a principle of cross-issue linkages might vindicate China's rare earths embargo as retaliation against Japan's detention of a Chinese national. Like other harsh, third-party retaliation strategies, this approach can also result in inefficiency because it punishes the defector even to the extent that the punishing countries incur costs.[110]

A separate and more plausible approach would encourage "soft sanctions," limited to rational responses by each trading partner of a breaching country. Past work in the game theory of international trade has assumed that whatever distrust follows a breach has the effect of punishing the breach through withdrawn trade concessions, diminished willingness to cooperate in future trade negotiation rounds, hesitation to negotiate in collateral settings such as preferential trade agreements, and general "loss of cooperation."[111] Heightened awareness of the free pass would foster distrust of countries that exploit it, making their WTO counterparts less likely to cooperate with them in the future. Panels of the DSB can facilitate such soft sanctions by using their announcement power to alert the WTO membership to free pass abuses — for example, by verifying in their reports when abuses have taken place — thus touching off future distrust.[112] Notably, any

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[108] *See* Alan V. Deardorff, *An Economist's Overview of the World Trade Organization* 31 (Research Seminar in Int'l Econ., Discussion Paper No. 388, 1996) (entertaining the plausibility of threatening violators with expulsion from the WTO).

[109] For example, Olympics hosting decisions are already linked to political issues not self-evidently related to the Olympics themselves. *See, e.g.*, Alissa N. Baier, Note, *Let Freedom Ring in Post-Olympics Beijing: Enforceability Strategies for China's National Human Rights Action Plan Found in the Intersection Between Asian History, Culture, and International Law*, 9 SEATTLE J. FOR SOC. JUST. 999, 1009 (2011) (describing bargains surrounding human rights and the environment that China incorporated into its 2008 hosting bid).

[110] *See* George Norman & Joel P. Trachtman, *The Customary International Law Game*, 99 AM. J. INT'L L. 541, 551 (2005).

[111] Maggi, *supra* note 85, at 191.

[112] Professor Giovanni Maggi demonstrates the power of the DSB to "verify violations of the agreement and inform third countries, thus facilitating multilateral enforcement efforts." *Id.* Verifying free pass abuses would serve the same function. However, it is unclear whether the inter-

sanctions not authorized by the DSB contravene the DSU,[113] so these policies would require a change to the trade agreements.

The case of China's rare earths embargo exposes this proposal's major shortcoming. The threat of soft sanctions might either appear less credible to, or have less impact on, a geopolitically dominant country than it would to other breaching countries. China's vast clout in trade and politics[114] makes it an intimidating target for unauthorized sanctions. Countries that depend on it for trade are unlikely to retaliate, for fear of further retaliation against them. Moreover, snubbing such a large economy in a multilateral negotiation would only undermine the resulting bargain's appearance of legitimacy. Knowing all of this, China might not have acted any differently in embargoing rare earths, whereas less powerful countries might be more susceptible to deterrence by the threat of unauthorized sanctions. Professor Brewster recounts an illustrative scenario prior to the establishment of the WTO, in which the United States regularly circumvented the arbitral process "without significant fear of retaliation . . . primarily because access to the American market was more important to U.S. trading partners than any one export market was to the United States."[115] The Chinese and American examples indicate that power in international trade can immunize a country from non-institutionalized sanctions, thus undercutting soft sanctions' usefulness in resolving the free pass inefficiency.

A second institutional reform to deter the free pass would arm the DSB with the authority to issue temporary restraining orders (TROs). TROs are familiar in U.S. law,[116] and many other legal systems also make some form of temporary protection available to plaintiffs during the pendency of their claims.[117] In the trade setting, a TRO would be issued pursuant to an accelerated litigation schedule wherein the complaining country would face a heavier burden than at the panel stage. Issuance of a TRO would have injunctive effect, requiring the respondent to end its violative policy. A TRO might include giving the complaining country a right to take preliminary countermeasures; however, even without that right, the injunction might prove self-enforcing

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national community needs such verification to detect free pass abuses, given the widespread reaction to China's rare earths embargo notwithstanding a lack of DSB verification.

113 *See* DSU, *supra* note 15, art. 23.

114 *See, e.g.*, SUSAN V. LAWRENCE & THOMAS LUM, CONG. RESEARCH SERV., R41108, U.S.-CHINA RELATIONS: POLICY ISSUES 9–10 (2011).

115 Brewster, *supra* note 67, at 1137.

116 *See* FED. R. CIV. P. 65(b).

117 *See, e.g.*, SHABTAI ROSENNE, THE WORLD COURT 95 (4th rev. ed. 1989) (describing the "interim injunction" in the International Court of Justice); Fritz Baur, *Present German Practices in the Application for Temporary Relief: Attachment and Temporary Restraining Orders*, 14 AM. J. COMP. L. 247 (1965).

because a continued breach after a TRO will dig a deeper reputational hole for B, thereby increasing P, the magnitude of reputational sanctions. Moreover, a preliminary relief mechanism in the WTO would accelerate the DSB's announcement[118] to the world that the breaching country has breached and is exploiting the free pass, thereby hastening unauthorized sanctions. In so doing, the TRO would decrease A, the time between initiation of a breach and the point at which the breaching country's stage payoff reflects unauthorized sanctions.

Yet a preliminary relief instrument has many shortcomings. In light of the fact that many trade disputes emerge from good faith disagreements, there is no reason to believe a TRO process can yield accurate results any faster than the panel process can. Moreover, if a TRO process simply means accelerating the first level of DSB review, albeit with a higher burden of persuasion on the complaining party and with a check at the panel level, then the TRO must involve the same shortcomings as a policy of reducing the arbitration lag time.[119]

Taken together, these proposals and their shortcomings show the nuances of the free pass. Decreasing D through retroactive damages would be a political minefield in the midst of sovereignty fears, especially in the United States. Using unauthorized sanctions to increase P might create new inefficiencies. Decreasing A, whether by shortening the lag time entirely or by offering a TRO-like instrument, might undercut procedural values such as the encouragement of pre-litigation settlement. All of these policies also threaten to deter some countries more than others, leaving powerful countries less deterred if they can litigate more effectively and better withstand sanctions.

B. Country-Level Predictions from the Model

Just as each policy reform would affect different countries differently, a country's distinct characteristics can uniquely impact the variables in section II.C's formal model. Considering such characteristics can provide useful information about a country's potential for breach.

Each country's discount factor varies according to subjective variables, such as patience, and perception-based variables, such as the hazard rate. Regimes that view themselves as unstable should perceive themselves as less likely to reach future stages of a repeat-play game, and they should therefore discount future payoffs more heavily than stable regimes. Unstable regimes aware of their instability thus require especially strong incentives (high penalty for breach or vast gains from cooperation) in order to induce cooperation. A similar approach might be appropriate for developing countries: empirical re-

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[118] On the DSB's announcement role, see *supra* note 112.

[119] *See* notes 105–106 and accompanying text.

search suggests that poverty increases the rate of time preference and promotes hyperbolic discounting,[120] so stronger incentives may be necessary to induce cooperation from poorer countries.

Another characteristic that determines the outcome of the formal model for a given country is the transparency of trade policies in that country. To facilitate the detection of noncompliance, some international trade agreements require transparency in trade-related domestic procedures;[121] however, the extent of transparency in members' administrative procedures still varies widely.[122] Heightened transparency not only increases the accuracy of adjudication but also increases the ease of detection by third parties. Thus, highly transparent administrative procedures decrease the value of A in the third-party sanctions model; that is, the transparency accelerates the international community's opportunity to sanction abuse of the free pass. This dynamic is clear in the example of China's export embargo, which some experts believe was effectuated by customs officials and port inspectors without public process akin to notice-and-comment procedures or official promulgation.[123] Consequently, the trade community did not learn of the embargo until Japanese importers felt its effects and reported it, and even then the nature of the incident remained unclear.[124] Transparency in the embargo's adoption would have resulted in quicker detection and verification, allowing more immediate third-party sanctions. Accordingly, the model predicts — and experience confirms — that less transparent governments can benefit most from abusing the free pass.

Trends in litigation before the DSB can provide further hints concerning the future of the free pass because the gravity of the free pass depends on the pace of litigation. The countries that most frequently litigate before the WTO — which happen to be the most developed countries, led by the United States[125] — will less frequently be victims

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120 *See, e.g.*, Emily C. Lawrance, *Poverty and the Rate of Time Preference: Evidence from Panel Data*, 99 J. POL. ECON. 54 (1991); *cf.* Masao Ogaki et al., *Saving Behavior in Low- and Middle-Income Developing Countries: A Comparison*, 43 IMF STAFF PAPERS 38 (1996).

121 *See, e.g.*, Agreement on Trade-Related Aspects of Intellectual Property Rights art. 63, Apr. 15, 1994, Marrakesh Agreement, *supra* note 33, Annex 1C, 1869 U.N.T.S. 299; General Agreement on Trade in Services art. III, Apr. 15, 1994, Marrakesh Agreement, *supra* note 33, Annex 1B, 1869 U.N.T.S. 183.

122 WTO members' lack of administrative transparency has gained salience as an international issue "[w]ith the accession of non-democratic, non-market economies" into the WTO and has thus attracted new focus in WTO law in recent years. Debra P. Steger, *Introduction to the Mini-Symposium on Transparency in the WTO*, 11 J. INT'L ECON. L. 705, 710 (2008).

123 *See* Keith Bradsher, *China Is Blocking Minerals, Executives Say*, N.Y. TIMES, Sept. 24, 2010, at B1.

124 *See id.*; Keith Bradsher, *China Said to Resume Rare Earth Shipments*, N.Y. TIMES, Oct. 29, 2010, at B1.

125 *See Disputes by Country/Territory*, WORLD TRADE ORG., http://www.wto.org/english/tratop_e/dispu_e/dispu_by_country_e.htm (last visited Oct. 29, 2011).

of free pass abuses if their litigation experience allows them to streamline the process and accelerate the period of the free pass. In other words, a country considering a violation that would damage U.S. trade should calculate its expected payoff in the model using a lower value of F. As less affluent but large countries, including Brazil, India, China, and South Africa, increase their experience at DSB litigation[126] and learn to streamline the process, free passes against them might become less appealing or at least shorter in duration. Conversely, those countries with the most sophistication as DSB litigators are best positioned to string out litigation over many years[127] and therefore can achieve for themselves very high values of F, or very long periods of high, pre-retaliation payoffs. The model therefore predicts that the parties most adept at WTO litigation will be the most frequent violators and the least frequent victims of the free pass.

These preliminary observations on the individualized behavioral implications of the formal model underscore the economic and political nuances of any attempt to deter free pass abuse. They are not nearly the last word on the issue. Rather, they suggest frontiers for a developing research agenda on the free pass — research concerning how the shape of the formal model's inequality affects the predictions herein, what factors best explain the free pass behavior (albeit limited) in which WTO members have engaged, and what factors best explain the restraint most members have shown from abusing the free pass.

CONCLUSION

The free pass embodies an all too real hindrance to the WTO's discouragement of inefficient breach. The best hope for resolving that deficiency lies in recognizing the reality of the free pass and understanding its contours. To that end, it has been the project of this Note to stimulate a conversation about the phenomenon's effect on WTO members' behavior and about what levers reforms might use to alter the effect. In particular, conceiving of states' discount factors as central to their free pass strategies introduces a new lever and several potential policy reforms into the conversation. Moreover, individual states might have characteristics that make their discount factors especially conducive to breach or to cooperation. The global conversation about international trade will not soon resolve its greatest questions of compliance and institutional design, yet this Note's formal model and attendant conclusions give those questions new and formal shape.

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126 *See id.*

127 *See, e.g.*, Brewster, *supra* note 19 (manuscript at 40–44).