(Dis)trust in the Process: U.S. Foreign Policy as an Obstacle to an Efficient International Intellectual Property Regime

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Abstract

The United States has a reputation as a global hub of innovation and strives to maintain this identity on a global scale through the promotion of its intellectual property (IP) policies. While the U.S. advocates for increased cooperation and compromise to facilitate stronger and more efficient IP protection worldwide, progress thus far conforms to terms set by the United States requiring significant changes to foreign laws. However, the United States consistently opposes compromises requiring changes to American law. Despite technological progress that could facilitate communication between patent offices, there has been little change in the governing structures of international IP law. Consequently, inefficiencies during patent examination are causing significant backlog and monetary loss. In considering the current state of affairs in the international IP sphere, this Paper will analyze the history and original goals of international IP law, assess the deleterious effect of innovation nationalism on cooperation, and propose a mechanism using existing structures to build a sustainable globalized IP regime.

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I. Introduction

As early as the 1400s, governments awarded patents to incentivize innovation.[1] The patent system has become increasingly complex since the early days of patenting, but the basic principle remains the same: a patent provides its owner with exclusive rights over the patented invention for a term of years prescribed by the domestic law of the granting state.[2] In the United States, the Constitution grants Congress the power to pass laws "to promote the [p]rogress of [s]cience and useful [a]rts," empowering the government to grant patents for novel and nonobvious inventions.[3] From the 1400s to the present day, most states adopted similar patent regimes granting exclusive rights for inventions under their domestic laws.[4] In recent decades, states have developed critically important international regimes to protect and enforce patent rights.[5]

Among countless other data, the KOF globalization index, which measures the extent and influence of international economic, social, and political networks, shows that the world has been becoming increasingly globalized and interconnected.[6] With the rise of the Internet in the 1990s and the simultaneous advances in information technology, the speed of globalization and knowledge transfer has increased dramatically.[7] This trend continues to date as the capacity for international data flow

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1 John N. Adams, *History of the Patent System*, *in* RESEARCH HANDBOOK ON PATENT LAW AND THEORY 2, 2 (Toshiko Takenaka ed., 2d ed. 2019).

2 *See Frequently Asked Questions: Patents*, WORLD INTELL. PROP. ORG., https://www.wipo.int/patents/en/faq_patents.html (last visited Feb. 27, 2023). Note that, throughout this Paper, state refers to an individual nation-state and domestic law refers to the internal law of that state.

3 U.S. CONST. art. 1, § 8, cl. 8; *see* 35 U.S.C. § 1, 101–03 (2023).

4 Adams, *supra* note 1, at 2.

5 *See Protecting Intellectual Property Rights (IPR) Overseas*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/ip-policy/ipr-toolkits (last visited Oct. 30, 2023) (explaining strategies for the international protection of U.S. patents); *The PCT Now Has 157 Contracting States*, WORLD INTELL. PROP. ORG., https://www.wipo.int/pct/en/pct_contracting_states.html (last visited Oct. 30, 2023) (emphasizing widespread international participation in patent treaty); Vitor Gaspar, Sean Hagan & Maurice Obstfeld, *Steering the World Toward More Cooperation, Not Less*, INT. MONEY FUND: IMF BLOG, https://www.imf.org/en/Blogs/Articles/2018/09/06/blog-global-cooperation (last visited Mar. 25, 2023) (discussing importance of global cooperation generally).

6 Savina Gygli et al., *The KOF Globalisation Index – Revisited,* 14 THE REV. INT'L ORGS. 543, 560 (2019).

7 *Id.*; Johannes Eugster et al., *How Knowledge Spreads*, 55 FIN. & DEV. 52, 52–53 (2018) ("A more formal analysis of these cross-patent citations—to estimate the intensity of knowledge diffusion—

also continues to improve. The speed of the international Internet bandwidth, for example, has grown by almost 45 times between 2005 and 2014.[8] As more information can now be transmitted internationally, globalization has accelerated through the instantaneous cross-border transfers of knowledge, goods, and services.[9] The ubiquity of the Internet in recent decades has also enabled greater participation in global activity through the conduct of actors other than multinational enterprises and governments. Smaller ventures and even individuals can now engage at the international level, further facilitating globalization, including on a micro-scale.[10] Increased interconnectivity has resulted in increased patenting activity and a concurrent increase in international technology exchange and knowledge production, which, in turn, creates a positive feedback loop that further accelerates globalization.[11]

Globalized patents protected by the laws of multiple nations have significantly higher effects on innovation, with two to three times the impact compared with patents only operating at the local level.[12] Because increased globalization and collaboration affect innovation, it is striking that the international intellectual property (IP) law regime has remained disjointed and inefficient, with prohibitive costs arising between the first filing for a patent and subsequent office actions and with excessively long pendencies of up to a year-and-a-half passing before the application receives any consideration.[13] Although some backlog-mitigation programs have shown a modicum of success, these programs operate as short-term patches rather than long-term solutions.[14] Influxes of duplicative foreign patents also

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also shows that the share of knowledge spreading from the G5 technology leaders to emerging market economies . . . has increased over the past two decades.").

8 *Digital Globalization: The New Era of Global Flows*, MCKINSEY GLOB. INST., March 2016, at 4 (measuring international Internet bandwidth based on terabits of data transferred across borders per second).

9 *Id.* at 23, 41.

10 *Id.* at 41, 43 ("[D]igitization has dramatically reduced the minimum scale required to do business across borders . . . . Instead of waiting for the benefits of globalization to trickle down from large corporations, [small and medium-sized enterprises] can become micro-multinationals in their own right, and startups can be 'born global.'").

11 *See* Bo Bian, Jean-Marie Meier & Ting Xu, *Cross-Border Institutions and the Globalization of Innovation* 38 (Goethe Univ., LawFin Working Paper No. 23, 2023) (identifying "strong cross-border institutions as a driver for the globalization of innovation"); Carsten Fink, Mosahid Khan & Hao Zhou, *Exploring the Worldwide Patent Surge* 2 (World Intell. Prop. Org., Econ. Rsch. Working Paper No. 12, 2013) (describing "historically unprecedented levels" of patenting activity).

12 Bian, *supra* note 11, at 10–11 (based on frequency cited in later patents).

13 *See* Vic Lin, *How Long is the US Patent Application Process*, PATENT TRADEMARK BLOG https://www.patenttrademarkblog.com/how-long-us-utility-patent-application-process/ (last visited Feb. 27, 2023) (describing a 14.8 month wait for first office action in Nov. 2019 and a 17.2 month wait for first office action in Nov. 2021); *Patents Pendency Data January 2023*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/dashboard/patents/pendency.html (last visited Feb. 27, 2023) (long pendency in June 2022 averaging 20.5 months and current pendency in Dec. 2022 averaging 16.4 months; December's average pendency still an overall increase from 2019).

14 *See USPTO Meets Critical Goals to Reduce Patent Examination Pendency*, U.S. PAT. & TRADEMARK OFF. DIRECTOR'S BLOG (Oct. 9, 2019), https://www.uspto.gov/subscription-

continue to overwhelm patent offices to the point where it is uncertain whether the quality of substantive examination can be maintained, resulting in both major backlogs within national patent offices and major economic losses worldwide.[15]

It is both possible and prudent to reform the international IP system to mitigate these inefficiencies. But despite efforts to develop a more comprehensive international framework, to date, no adequate system has emerged. This Article analyzes why the disconnect between international IP law, on the one hand, and the globalization of innovation, on the other, persists. It then suggests a way to move towards greater efficiency and cooperation on an international scale.

Part II reviews how the current unwieldy system evolved, providing insight into the development of the global power dynamics responsible for the current inefficiencies. Part III then examines, in particular, the contribution to these dynamics made by the American national identity. Part IV then describes how existing structures and forums can be utilized in tandem with rapidly evolving technology to modernize the global intellectual property regime to suit the needs of an increasingly interconnected society. The Article concludes by suggesting that, although currently the international system is fraught with inefficiencies, the roadblocks against creating a cooperative system can be overcome without any undue burden to realize a positive outcome for the modern world's intellectual property regime.

II. History and Harmonization

The first modern patent law vesting inventors with exclusionary rights originated in Venice in 1474. It protected the inventions of "every person who shall build any ingenious device in this City, not previously made in our Commonwealth."[16] From the outset, as this example suggests, patent law thus fell within the ambit of territorial jurisdiction and national law. International trade and relations were extremely limited during IP law's nascent stages.[17] Consequently, each state decided upon its own standards and procedural mechanisms to protect IP, culminating in inherently territorial legal frameworks.[18] Yet today, despite the increasing transnational interconnectivity of trade and communications, patent law inefficiently retains these deep roots in national law. Each state maintains strong control and oversight over its

center/2019/uspto-meets-critical-goals-reduce-patent-examination-pendency (achieving goal of reducing time of pendency between first filing and first office action to under 15 months in 2019).

15 *See* Shinjiro Ono, *Trilateral Cooperation Evolving into Global Cooperation*, *in* RESEARCH HANDBOOK ON PATENT LAW AND THEORY 88, 90 (Toshiko Takenaka ed., 2d ed. 2019) (describing backlog and duplicative filing as unprecedented threat to patent examination); Dongwook Chun, *Patent Law Harmonization in the Age of Globalization: The Necessity and Strategy for a Pragmatic Outcome*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 127, 135 (2011) (estimating application processing delay's cost to global economy to be 11.4 billion annually in 2010).

16 Adams, *supra* note 1, at 2.

17 *Id.*

18 *Frequently Asked Questions, Patents*, *supra* note 2 ("Patents are territorial rights. In general, the exclusive rights are only applicable in the country or region in which a patent has been filed and granted, in accordance with the law of that country or region.").

respective patent institutions.[19] In the United States, for example, the United States Patent and Trademark Office (USPTO) is not only a self-governing body providing incentives for innovation; it is also a subordinate agency regulated by the national legislature and the Department of Commerce specifically to promote American interests.[20] Foreign national laws, similarly, constrain patent systems under their respective national laws, and patent offices derive their power from national government charters, statutes, and at times, intergovernmental regional agreements.[21]

Because of patent law's inherent territoriality, the field of international IP law arose primarily through carefully negotiated treaties and conventions subsequently adopted by national law rather than through organic collaboration. States intended these treaties to establish a common foundation for the diverse national and regional IP systems, while still preserving national interests.[22] The historically rooted territoriality of IP law does not undermine its importance on an international scale. To the contrary, the long history of multilateral IP agreements since the 1800s demonstrates the importance of—indeed, the need for—international collaboration in this field of law.[23] These multilateral treaties directly address international issues that require agreements, including cross-border trade and economic relations that would be impossible to address solely with national law.[24]

States intended these treaties to facilitate the harmonization of IP law across and among diverse national legal systems. Harmonization is the process by which national legal systems are brought into accordance with one another.[25] It requires states to set

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19 MCKINSEY GLOB. INST., *supra* note 8, at 21, 43; JAY DRATLER, JR., *Overview of Intellectual Property Law*, in INTELLECTUAL PROPERTY LAW: COMMERCIAL, CREATIVE, AND INDUSTRIAL PROPERTY, at §1.09.

20 35 USC. § 1 ("In carrying out its functions, the United States Patent and Trademark Office shall be subject to the policy direction of the Secretary of Commerce, but otherwise shall retain responsibility for decisions regarding the management and administration of its operations . . . .").

21 While intergovernmental agreements at first blush seem to represent the kind of cooperation this note is advocating for, the international agreements governing domestic patent law are more akin to "patches" in the law allowing domestic patent offices to examine patents from outside of their borders than a comprehensive collaborative system. *E.g. Intellectual Property Office*, GOV.UK, https://www.gov.uk/government/organisations/intellectual-property-office (being sponsored by the Department for Science, Innovation, and Technology); *Governance*, EUROPEAN PATENT OFFICE, https://www.epo.org/about-us/governance.html (being established by treaty and governed by Administrative Council); *Mission, Vision and Values (MVV)*, JAPAN PATENT OFFICE https://www.jpo.go.jp/e/introduction/tokkyo_mvv.html (being under the directive of the Ministry of Economy, Trade and Industry).

22 Thomas Cottier, *Industrial Property, International Protection*, *in* MAX PLANCK ENCYCLOPEDIAS OF INTERNATIONAL LAW ¶ 7 (2021).

23 *See* Frederick M. Abbott, *Intellectual Property, International Protection*, *in* MAX PLANCK ENCYCLOPEDIAS OF INTERNATIONAL LAW ¶¶ 21–24 (2022) (outlining the development of multilateral regulation of intellectual property and discussing potential for future developments).

24 Tomoko Miyamoto, *International Treaties and Patent Law Harmonization: Today and Beyond*, in RESEARCH HANDBOOK ON PATENT LAW AND THEORY 27, 29 (Toshiko Takenaka ed., 2d ed. 2019).

25 *Harmonization*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/ip-policy/patent-policy/harmonization (last visited Nov. 1, 2023) (defining harmonization as "the alignment of laws

similar standards and establish similar procedures for obtaining protection for patents and other IP rights.[26] Three major multilateral treaties have facilitated the harmonization of patent law: the Paris Convention, the Patent Cooperation Treaty, and the TRIPs Agreement.[27] Each of these agreements furthers the goal of promoting a set of common principles and a shared legal framework for patent protection on a global scale.[28]

The ultimate goal of harmonization is supposedly to create a single unified system of IP law.[29] Some scholars argue that such unification is "desirable because it would promote the enhancement of global welfare," and the World Intellectual Property Organization (WIPO) has described "unification [as] the expected outcome of certain harmonization processes that have been operating for well over a century."[30] One view argues that international patent law has already become so predominant that national patent law is minimally effective by comparison, considering the cross-border nature of innovation and the frequent practice of duplicative filing.[31] But in truth, this theory has yet to be either tested or adopted through the implementation of a primarily international system.

In fact, the probability that a singular unified system will ever emerge is doubtful. International standards and procedures are more unified and harmonized than ever before. Yet, complications arising from conflicts of national law based on territoriality have frustrated progress toward international cooperation, where state actors have consistently believed the exclusivity of their territorial control over intellectual property rights to be an incontrovertible truth, superseding the necessity for private international law.[32] Complications have also delayed, if not completely arrested, the further harmonization of international IP law for nearly two decades.[33] To understand why, we must assess earlier milestone international agreements governing IP law and their contributions toward harmonization.

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and procedures among intellectual property systems to ensure consistency and clarity of rights for the world's innovators").

26 *Id.*

27 Paris Convention of 1883, March 20, 1883, 828 U.N.T.S. 107 [hereinafter Paris Convention]; Patent Cooperation Treaty, June 19, 1970, 1160 U.N.T.S. 231; TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 1869 U.N.T.S. 299 [hereinafter TRIPs]; Phillippe Baechtold, Tomoko Miyamoto & Thomas Henninger, *International Patent Law: Principles, Major Instruments and Institutional Aspects*, in INTERNATIONAL INTELLECTUAL PROPERTY 37, 37 (Daniel J. Gervais ed., 2015).

28 Baechtold, Miyamoto & Henninger, *supra* note 27, at 56.

29 *Id.* at 45.

30 Graeme Gooday & Steven Wilf, *Diversity Versus Harmonization in Patent History*, in PATENT CULTURES 1, 4 (2020).

31 Amir H. Khoury, *The End of the National Patent Office*, 52 IDEA 197, 216, 238 (2012).

32 Lydia Lundstedt, *Territoriality in International Intellectual Property Law* 5, 7 (2016) (Dissertation, Stockholm University), https://su.diva-portal.org/smash/get/diva2:972658/FULLTEXT01.pdf.

33 *Patent Law Harmonization*, WORLD INTELL. PROP. ORG., https://www.wipo.int/patent-law/en/patent_law_harmonization.htm (last visited Nov. 1, 2023).

A. The Paris Convention of 1883

The Paris Convention of 1883 was the first major multilateral treaty governing international IP;[34] before it, there were many bilateral treaties related to international IP but no multilateral international framework.[35] The Paris Convention served to replace scattered bilateral agreements with a single comprehensive international agreement that would promote trade between member states.[36] According to its preamble, the drafting parties were "unanimously moved by the desire to protect in as effective and uniform a manner as possible industrial property rights," and the Convention set forth the lofty long-term goal of a unified body of harmonized IP law.[37]

The Paris Convention provided three bases that constitute the foundation of international IP law. The original foundation of international IP law bound states to respect the rights of national treatment, priority, and independence of patents.[38] Protection of national treatment ensures that "nationals of each of the countries of the Union [established by agreement to the Convention] shall . . . enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals," and it further extends this provision to nationals of non-union states.[39] Adoption of such a broad national treatment standard indicated that states desired further harmonization to facilitate international trade and cooperation.[40] Crucially, however, the Convention explicitly preserved the rights of priority and independence of patents relative to national territory in deference to member state preferences—notwithstanding the overarching, if idealistic, objective of unifying the IP system.[41] By overly deferring to the territorial interests of member states, the Paris Convention further cemented the historic national self-interest of IP law.[42] For example, because the Paris Convention was created during a time where international cross-border trade was only beginning to increase, member states failed to contemplate the consequences of future interconnectivity of a global trade network, permanently locking the understanding of IP law into the territorial framework by ensuring that IP rights were individually defined within national borders.[43] While the Paris Convention laid the foundation for further international cooperation, unresolved territorial conflicts concerning heterogeneous patent practices and subsequent patent usage set the stage for the stagnation in international patent law we see today.[44]

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34 Baechtold, Miyamoto & Henninger, *supra* note 27, at 42, 45.
35 *Id.* at 41–42.
36 *Id.* at 42; DRATLER, *supra* note 19.
37 Paris Convention, *supra* note 27.
38 Abbott, *supra* note 23.
39 Paris Convention, *supra* note 27, at art. 2(1).
40 Baechtold, Miyamoto & Henninger, *supra* note 27, at 46.
41 Paris Convention, *supra* note 27, at art. 4(bis).
42 Baechtold, Miyamoto & Henninger, *supra* note 27, at 45.
43 Lundstedt, *supra* note 32, at 86–87.
44 Gabriel Galvez-Behar, *The 1883 Paris Convention and the Impossible Unification of Industrial Property*, *in* PATENT CULTURES: DIVERSITY AND HARMONIZATION IN HISTORICAL PERSPECTIVE 38,

B. Patent Cooperation Treaty

The Patent Cooperation Treaty (PCT), signed at a 1970 conference in Washington, D.C., that was attended by 78 states and representatives of 22 international organizations, took the next steps towards unifying international patent law.[45] Its preamble sets forth the goals of improving legal protections for inventions, simplifying the process of obtaining patent protection, and facilitating access to the technical information contained within patents.[46]

In effect, the PCT streamlines the process of filing for patents on a global scale by creating a framework standardizing the form and content of applications.[47] Under the PCT system, applicants file a single international patent application. Subsequently, they must navigate various national processes at local patent offices to obtain protection within foreign jurisdictions, thereby providing global protection.[48] By filing an application through the PCT, applicants can later enter the national stage in any other PCT member state.[49]

The PCT is widely considered the most successful of the patent harmonization treaties, with 157 member states as of May 29, 2023.[50] But while the PCT has been positively received, the treaty only governs a *procedural* framework facilitating the international patent application process, leaving substantive patent law governing the requirements of patentability to individual state jurisdiction.[51] The PCT does provide a mechanism for an international patentability search to investigate whether an invention is novel and non-obvious. But the results of this search are non-binding, vitiating any progress towards substantive harmonization.[52] Following the precedent set by the PCT, future negotiations likewise focused primarily on the harmonization of international patent registration systems rather than substantive IP law, where, despite progress towards procedural harmonization, patent applications must still be thoroughly examined at each national patent office due to differences in substantive law, which continues to stunt international cooperation.[53]

C. TRIPs

States adopted the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs) in 1995 as a part of the Marrakesh Agreement Establishing the World Trade

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50, 67–68 (Graeme Gooday & Steven Wilf eds., 2020) (describing how the Paris Convention "did not erase [territorial] tension" but "only framed it anew," leading to further downstream challenges).

45 Patent Cooperation Treaty, *supra* note 27; Cees A.M. Mulder, *The Patent Cooperation Treaty*, *in* INTERNATIONAL INTELLECTUAL PROPERTY 312, 313 (J. Daniel Gervais ed. 2015); JOHN P. SINNOTT ET. AL., BAXTER WORLD PATENT LAW & PRACTICE § 10.19; Miyamoto *supra* note 24 at 33.

46 Patent Cooperation Treaty, *supra* note 27, at Preamble.

47 Miyamoto, *supra* note 24, at 34; Baechtold, Miyamoto & Henninger, *supra* note 27, at 47.

48 *Id.*

49 SINNOTT, *supra* note 45, at §10.19.

50 *The PCT Now Has 157 Contracting States*, *supra* note 5.

51 Anneliese M. Seifert, *Will the United States Take the Plunge into Global Patent Law Harmonization–A Discussion of the United States' Past, Present, and Future Harmonization Efforts*, 6 MARQ. INTELL. PROP. L. REV. 173, 184 (2002); Mulder, *supra* note 45, at 317.

52 Baechtold, Miyamoto & Henninger, *supra* note 27, at 46–47.

53 Cottier, *supra* note 22.

Organization (WTO).[54] TRIPs is arguably the most comprehensive multilateral treaty in its field. Among other things, it establishes substantive minimum standards of patentability related to novelty, non-obviousness, and invention disclosure.[55] The TRIPs agreement seeks "to reduce distortions and impediments to international trade" by providing adequate standards and principles for IP rights.[56] However, these adequate patentability standards and the terms describing them were notably left undefined, leaving plenty of room for territorial interests to influence their application and enforcement.[57]

For example, Article 27 of the TRIPs agreement permits countries significant flexibility insofar as it requires them to modify national law to comply with the agreement on key patentability standards, resulting in imperfect harmonization.[58] This flexibility developed through the negotiation strategies of smaller and less developed countries, which had enough power in the aggregate to influence the agreement despite lacking the power to control the negotiations in their favor more generally.[59] Controversies stemming from the negotiations are well-documented, with vocal opposition to the inclusion of substantive IP provisions from Brazil and India, who were concerned about the effects of TRIPs on their industries, particularly in relation to how the original TRIPs proposal would harm India's generic pharmaceutical industry.[60] India's statement specifically referenced concerns about the relevance of a universal agreement while the United States was unilaterally implementing bilateral, coercive, and aggressive strategies in engaging in trade with lesser-developed countries, where an additional agreement imposing further requirements would injure both the national economies and the quality of life afforded to citizens of these lesser-developed countries.[61] Accordingly, it is unsurprising that the flexibilities of Article 27, which allowed individual states to adopt measures implemented by TRIPs at their own pace and permitted categories of inventions to be exempted from TRIPs compliance, were implemented to facilitate the ratification of the TRIPs agreement.[62]

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54 TRIPs, *supra* note 27; Miyamoto, *supra* note 24, at 39.

55 Baechtold, Miyamoto & Henninger, *supra* note 27, at 53; Cottier, *supra* note 22; Abbott, *supra* note 23.

56 TRIPs, *supra* note 27.

57 *Id.*

58 Evan H. Tallmadge, *Nationalizing TRIPS: An Examination Through Exceptions*, 18 J. MARSHALL REV. INTELL. PROP. L. 285, 290–91 (2019); John E. Giust, *Noncompliance with TRIPs by Developed and Developing Countries: Is TRIPs Working?*, 8 IND. INT'L & COMP. L. REV. 69, 70 (1997).

59 *See* Pan Xichun, *Flexibility of the TRIPS Agreement with Regard to Patent Protection* (Spring 2002) (Master's Thesis, University of Lund), http://lup.lub.lu.se/student-papers/record/1554607 (discussing how developing countries can and have banded together to influence change of international law).

60 Peter K. Yu, *The Objectives and Principles of the TRIPS Agreement*, 46 HOUS. L. REV. 979, 987 (2009).

61 *Id.* at 987, 989–91.

62 *See* Suma Athreye, Lucia Piscitello & Kenneth C. Shadlen, *Twenty-Five Years Since TRIPS: Patent Policy and International Business*, 3 J. INT'L BUS. 315, 320–21 (2020) (discussing the problems countries faced in complying with TRIPS).

TRIPs nonetheless brought IP to the forefront of international economic law and increased its prominence in international law generally.[63] Member states must adopt the WTO as a governing body to ensure compliance with the adoption of minimum patentability standards as defined by the agreement.[64] TRIPs also effectively laid the foundation for international patent protection in the modern age.[65] Even so, and despite finally attempting to harmonize substantive patent law, the agreement's unclear substantive standards—particularly those flexible standards provided within Article 27—have clouded the understanding of a comprehensive international IP regime.[66]

D. Failed Attempts at Further Harmonization

More recently, efforts to clarify international patent law through harmonization have continued, but they have either been met with opposition or failed completely.[67] Between 1995 and 2000, the World Intellectual Property Organization (WIPO) tried to negotiate an international Patent Law Treaty (PLT) to further harmonize procedural aspects of international patent law beyond the standards generally accepted and agreed to in the PCT.[68] Although states eventually ratified the PLT in 2000, it faced opposition throughout its negotiation, and it did not achieve global compliance following ratification.[69] Another part of the PLT was intended to harmonize patent specifications to ensure that the written descriptions of inventions were standardized worldwide, but this attempt never made it into the ratified version of the treaty because of the lack of global support for it.[70]

Furthermore, demonstrating a greater failure after the PLT, the WIPO drafted the Substantive Patent Law Treaty (SPLT) to build upon the foundation set by TRIPs to harmonize substantive patent law.[71] The SPLT was intended to clearly define the application of prior art to evaluate patentability based on novelty and non-obviousness, as well as to resolve the confusion engendered by the TRIPs agreement as to the definitive standards that set a baseline for patentability.[72] Following six years of negotiations, the SPLT was put on hold, and although discussions resumed in 2008,

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63 Cottier, *supra* note 22.

64 Adam Isaac Hasson, *Domestic Implementation of International Obligations: The Quest for World Patent Law Harmonization*, 25 B. C. INT'L COMP. L. REV. 373, 377 (2002).

65 *Id.*

66 Susan K. Sell, *TRIPs Was Never Enough: Vertical Forum Shifting, FTAS, ACTA, and TPP*, 18 J. INTELL. PROP. L. 447, 448 (2011).

67 Cottier, *supra* note 22.

68 Gooday & Wilf, *supra* note 30, at 6.

69 *Id.* at 7 ("Yet even this relatively modest ambition to regularize the formalities of patent applications did not meet with global compliance. To date only thirty-five nations have signed up to this minimal treaty . . . .").

70 *Id.* ("Evidently, the deeply entrenched and profound national differences on interpreting and applying these central facets of patenting practice led to irreconcilable difficulties in achieving agreement."); Jerome H. Reichman & Rochelle Cooper Dreyfuss, *Harmonization Without Consensus: Critical Reflections on Drafting a Substantive Patent Law Treaty*, 57 DUKE L. J. 85, 98 (2007).

71 Miyamoto, *supra* note 24, at 43.

72 *Id.*

they have been limited to procedural matters relating to the timeline and process of applying for patent protection rather than substantive matters relating to patentability.[73] These discussions have explicitly provided that the Standing Committee on the Law of Patent (SCP) will focus only on fact-finding and avoid any discussion of harmonization.[74] With these limitations, what was originally intended to be a significant step towards international patent law harmonization became just another roadblock.[75]

E. U.S. Adoption of AIA and the Current State of Harmonization

In 2011, the United States passed the America Invents Act (AIA).[76] It brought U.S. patent law into greater harmony with the rest of the world by unilaterally adopting a first-to-file system similar to that used in a majority of other states, where the start date of the exclusivity of patent rights begins on the date of submission of a patent application to the patent office.[77] This act was unusual in light of the United States' normal resistance to legal change, and it seemed to indicate an increased willingness to compromise to further IP law harmonization.[78] Specifically, the standards adopted by the AIA were the same as those contemplated in a 1991 Diplomatic Conference on the creation of an international harmonized system via the PLT/SPLT.[79] In the 1991 Conference, the lack of agreement in the U.S. to implement a first-to-file system was one of the main reasons discussions fell apart.[80] Before the passage of the AIA, only external international pressures influenced the United States to change its domestic law, so this voluntary change seemed to signal a change in the pattern of U.S. intransigence.[81]

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73 *Id.* at 44.

74 *Id.* (noting that "[e]ach time the SCP meets, member states explicitly renew their understanding that the work of the SCP is confined to fact-finding and does not seek to lead to harmonization," halting progress before it can even be considered).

75 Gooday & Wilf, *supra* note 30, at 7 ("Such are the divergences between national patenting practices, it is unclear whether any resolution could be achieved; accordingly the framework for agreed patent practices remains at the subglobal level . . . just as it did in the period 1830–1967.").

76 Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

77 Prior to the AIA, the time period for exclusive rights was determined by invention date. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011); Roberto Rosas, *Foreign Patent Decisions and Harmonization: A View of the Presumption Against Giving Foreign Patent Decisions Preclusive Effect in United States Proceedings in Light of Patent Law International Harmonization*, 18 J. MARSHALL REV. INTELL. PROP. L. 1, 19 (2018).

78 William G. Barber, *Global Patent Harmonization: An Idea Whose Time Has Come*, MAX PLANCK INST. FOR INTELL. PROP. & COMPETITION L., Jan. 24, 2013, at 2.

79 *Id.* at 3.

80 Rosas, *supra* note 77, at 25; Barber, *supra* note 78.

81 Rosas, *supra* note 77, at 19; Barber, *supra* note 78; Edward C. Luck, *American Exceptionalism and International Organization: Lessons from the 1990s*, *in* US HEGEMONY AND INTERNATIONAL ORGANIZATIONS: THE UNITED STATES AND MULTILATERAL INSTITUTIONS 25, 27 (Rosemary Foot ed., 2003) (defining exceptional states, including the United States, as "less willing than others to compromise in multilateral forums" due to tendencies to look inwards towards the nation's self-interests).

Indeed, the U.S. did take a stronger stance on promoting harmonization via treaties following the passage of the AIA.[82] Ironically, scholars even criticized foreign patent offices as being "behind the times," calling for the rest of the world to put aside controversy and objections and join the United States in adopting a harmonized international system, though it was the United States' initial inability to compromise that had stalled international patent law harmonization.[83]

Instead, even in recent history, the United States resisted efforts to reform international patent law on numerous occasions. In 1984, the refusal of the U.S. to alter its patent application process directly contributed to the failure of negotiations that would have modernized the Paris Convention.[84] In the 1990s, during the TRIPs and PLT/SPLT negotiations, the U.S. resisted including any exceptions to patentability that were not already included in its domestic framework.[85] In 1999, the Seattle meeting of the WTO in relation to the SPLT fell apart when the U.S. refused to compromise on its intentions of imposing its standards of patentability indiscriminately on all member states.[86]

Alas, despite recent changes in United States patent law and calls for the further harmonization of IP regimes, no international harmonized system has been realized. Over a decade into the adoption of the AIA, it seems unlikely that a single comprehensive international framework will be adopted. We are left to wonder why this is so, despite the supposed "best efforts" toward cooperation between states.[87]

III. Innovation Nationalism in the United States and International Effects

One reason for such an arrest in harmonization efforts may be the United States' cultivated national identity, where the focus is on America's innovative capacity, and there is a deliberate effort by the government to intertwine this identity with the domestic patent law framework.[88] While originally the rewards of patents were granted to incentivize public disclosure, this goal is now combined with, and even overshadowed by, the goal of promoting a carefully manufactured identity of innovativeness, both domestically and abroad.[89] This identity provides the United States with a competitive edge in the global economy, as it results in a collective encouragement of technological innovation and a support of research and

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82 Miyamoto, *supra* note 24, at 48; *Harmonization*, *supra* note 25 (describing harmonization policies promulgated following AIA's passage).

83 Barber, *supra* note 78.

84 Carlos M. Correa, An Agenda for Patent Reform and Harmonization for Developing Countries 1–2 (Oct. 26, 2005) (unpublished manuscript), https://www.iprsonline.org/unctadictsd/bellagio/Bellagio2005/CorreaPiece_REV.pdf.

85 Reichman & Dreyfuss, *supra* note 70, at 99–100.

86 Keith E. Maskus, *TRIPS: Controversies and Potential Reform* (Feb. 5, 2002) (unpublished manuscript) (on file with the Texas Intellectual Property Law Journal).

87 Miyamoto, *supra* note 24, at 31.

88 Sapna Kumar, *Innovation Nationalism*, 51 CONN. L. REV. 205, 230–31 (2019).

89 *Id.* at 225.

development funding, theoretically creating a positive feedback loop of innovation to contribute to domestic and international markets.[90]

In the discussion of the interplay of national identity, self-interest, and global cooperation, it is crucial to remember that all nations are self-interested and seek to promote their own objectives on the global stage.[91] This analysis is not intended as a scathing criticism of the character of the United States nor of the inherent self-interest of nation-states, but it is rather an examination of how policies of self-interest wielded by powerful nations disrupt the cooperative ideals put forth in the international IP arena. While here we focus on the United States' hegemony and strictly nationalistic policies as the catalyst leading to distrust and a lack of cooperation between states, crucially, the specific nation imposing self-interested policies is irrelevant. Whichever nation had the power and capability to implement policies in their interest globally would have taken the steps to do so, leading to the development of similar patterns of distrust impeding cooperation.[92] Consequently, regardless of which nation triggered a cycle of distrust in attempting to modernize the international IP system, developing sufficient reciprocally collaborative connections may be a difficult hurdle to overcome.

A. Innovative Nationalism and Development of a Strongly Self-Interested Foreign Policy

Innovation nationalism evolved out of economic nationalism, where domestic policies are used to preferentially benefit a nation's own financial interests and bolster both its prestige and national identity.[93] Innovation nationalism specifically is the use of domestic policies related to the IP sector to encourage the promotion and prioritization of inventiveness to maximize economic benefits and promote the nation, both domestically and on the global stage.[94] Ideals of innovative nationalism drive foreign policy towards self-interest in promoting these ideals. Moreover, innovative nationalism and innovative identity enhance each other in reciprocal positive feedback loops, reinforcing the conception of an innovative identity while strengthening the emphasis placed on promoting the American IP regime at home and abroad.

Politicians perpetuate this innovative identity through their statements on the United States' IP system, promoting the American system as an ideal to be strived toward globally while simultaneously criticizing foreign systems to maintain a

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90 Subhash C. Jain, *Problems in International Protection of Intellectual Property Rights*, 4 J. INT'L MKTG. 9, 10, 21 (1996) (outlining the benefits of supporting innovation, compared with the detriments of failing to do so, in an economic context).

91 E. William Colglaizer, *National Interest, Global Interest, and Science*, AAAS CTR. FOR SCI. & DIPL. (Jan. 22, 2021), https://www.sciencediplomacy.org/editorial/2021/national-interest-global-interest-and-science (reflecting on self-interest as a motivating factor of all nations in a recent global health context).

92 Dale T. Miller, *The Norm of Self-Interest*, 54 AM. PSYCH. 1053, 1053 (1999) (discussing self-interest as a powerful determinant of behavior).

93 Kumar, *supra* note 88, at 213–14.

94 Gooday & Wilf, *supra* note 30, at 8.

position of power through this rhetoric.[95] At a 2014 hearing, the Honorable John Conyers, Jr., of Michigan succinctly demonstrated the now nearly inextricable overlap between the United States' IP system and the nation's innovative identity, both describing how "[America's] intellectual property system is the envy of the world because it forms the foundation for our inventiveness and dynamic business culture" and attributing this innovativeness to the national patent system rather than to the efforts of the American people.[96] This attribution demonstrates a shift away from seeing the patent system as a regulatory tool to promote innovation and toward viewing it as an inviolable symbol of the nation's innovative identity.

The United States is strongly attached to its identity as the most innovative nation, as it consistently constructs and maintains this identity.[97] Although the interrelation between the patent system and the American identity is somewhat of a constructed fiction, the conception of the U.S. as the most innovative nation has had a strong influence on U.S. foreign policy. Nearly seven in ten Americans prioritize being a global leader in science and technology, and a majority of Americans believe the United States' scientific contribution to be either above average or the best globally.[98]

Yet, the idea of the United States as the most innovative nation falls apart once we consider that over half of the patent applications filed in the U.S. are not filed by U.S. citizens but by foreign innovators.[99] In reality, the United States may not be the most innovative country but may instead have the influence to induce inventors worldwide to seek protection through its IP framework to gain access to cutting-edge innovation.[100]

To maintain this status and promote its economic interests, the United States' domestic policies have sought to provide strong incentives to patent within the nation

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95 *US Patent and Trademark Office: The America Invents Act and Beyond, Domestic and International Policy Goals: Hearing Before the Subcomm. on Cts., Intell. Prop. & the Internet of the Comm. on the Judiciary*, 113th Cong. 4 (2014) [hereinafter *The AIA and Beyond Hearing*]; *"Violations of Intellectual Property Right: How Do We Protect American Ingenuity?": Hearing Before the Comm. on Int'l Rels.*, 106th Cong. 26 *(*1999) [hereinafter *Protecting American Ingenuity Hearing*].

96 *The AIA and Beyond Hearing*, *supra* note 95.

97 Kumar, *supra* note 88, at 208.

98 Cary Funk et al., *Americans Prioritize Being a World Leader in Scientific Achievements More Than Other Global Publics*, PEW RSCH. CTR. (Sept. 29, 2020), https://www.pewresearch.org/fact-tank/2020/09/29/americans-prioritize-being-a-world-leader-in-scientific-achievements-more-than-other-global-publics/.

99 *Statement of Senator Patrick Leahy, Hearing on "Pride In Patent Ownership: The Value of Knowing Who Owns a Patent"* (Oct. 19, 2021), https://www.leahy.senate.gov/press/statement-of-senator-patrick-leahy-hearing-on-pride-in-patent-ownership-the-value-of-knowing-who-owns-a-patent [https://web.archive.org/web/20221222144513/https://www.leahy.senate.gov/press/statement-of-senator-patrick-leahy-hearing-on-pride-in-patent-ownership-the-value-of-knowing-who-owns-a-patent]. Senator Leahy's original site has since been taken down after his retirement.

100 *See* B. Zorina Khan, *One for All? The American Patent System and Harmonization of International Intellectual Property Laws*, *in* PATENT CULTURES: DIVERSITY AND HARMONIZATION IN HISTORICAL PERSPECTIVE 69, 73 (Graeme Gooday & Steven Wilf eds., 2020) (describing how the current international system of strong patent protection developed from underlying economic pressures from the strongest states).

at the USPTO to reinforce its innovative national identity, while foreign policy has developed to promote the protection of U.S. IP abroad.[101] Delving into both the domestic and international policies is necessary to understand the impact of U.S. innovative nationalism on international patent law as "[e]ven neutrally applied domestic patent laws can advance an economically nationalist agenda."[102]

Nationalistic and self-interested motivations have been shaping U.S. policy since the birth of the nation. These motivations include the push for intellectual harmonization between the Paris Convention and the PCT.[103] However, innovative nationalism has become an especially powerful driving force underlying current developments since at least the mid-1980s, concurrently with the rise of neoliberalism in the United States, which favored the promotion of economic self-interest as a top priority in developing domestic and foreign policy.[104] At this time, the United States first began integrating its IP rights policies with its trade policies.[105] In 1988, Congress went so far as to prioritize the protection of IP rights as a principal objective of the Trade Promotion Authority.[106] It is only natural that the relationship between IP rights and trade would become inextricable with the omnipresent miasma of rhetoric as to the importance of their connection.[107]

The Trump Administration's rhetoric only further drove the nation's policies on intellectual policy and trade rights towards self-interested isolationism. The 2021 Intellectual Policy Report released before President Trump left office set forth the United States' position on IP policy:

> The Trump Administration continues to build on past strategic efforts in all areas of intellectual property policy . . . . [but] also recognizes that for the United States to maintain its future economic competitiveness, we need to think strategically and shift the paradigm to one where we not only place America First, but regard America's inventive and creative capacity as something that we must protect, promote, and prioritize.[108]

Despite the change in administrative leadership since the election of President Biden in 2020, the aggressive promotion of America's innovative identity persists, as most recently demonstrated by the strategic plan from the U.S. Department of Commerce, which describes how driving innovation and global competitiveness is the number

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[101] SHAYERAH ILIAS AKHTAR, LIANA WONG & IAN F. FERGUSSON, CONG. RSCH. SERV., RL34292, INTELLECTUAL PROPERTY RIGHTS AND INTERNATIONAL TRADE 1, 15 (2020) [hereinafter CONG. RSCH. SERV., RL34292].

[102] Kumar, *supra* note 88, at 230–31.

[103] Khan, *supra* note 100, at 85 (describing how the U.S. pushed for harmonization to benefit its patent owners seeking to penetrate international markets).

[104] CONG. RSCH. SERV., RL34292, *supra* note 101, at 15; Donald P. Harris, *The Power of Ideas: The Declaration of Patent Protection and New Approaches to International Intellectual Property Lawmaking*, 6 U.C. IRVINE L. REV. 343, 347 (2016).

[105] CONG. RSCH. SERV. RL34292, *supra* note 101, at 15.

[106] SHAYERAH ILIAS AKHTAR & LIANA WONG, CONG. RSCH. SERV., IF10033, INTELLECTUAL PROPERTY RIGHTS (IPR) AND INTERNATIONAL TRADE (2022) [hereinafter CONG. RSCH. SERV., IF10033].

[107] *Intellectual Property Rights*, OFF. U.S. TRADE REP., https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-chapter-chapter-negotiating-9 (last visited Jan. 9, 2024).

[108] OFF. OF THE U.S. INTELL. PROP. ENF'T COORDINATOR, ANNUAL INTELLECTUAL PROPERTY REPORT TO CONGRESS 1 (2021).

one priority for the years 2022 through 2026.[109] This recent development yet again displays that within the hierarchy of American values, having an innovative reputation is paramount to the furtherance of economic self-interest.

Generally characterized, the United States' domestic and foreign policy in relation to IP law is a policy of protection at home and expansion abroad to maintain dominance in the global order. Domestically, its concern is in maintaining and promoting innovation in the United States and obtaining technologies from abroad without sacrificing the nation's innovative identity. Modern proposals embody fears that foreign technological innovativeness will overshadow American innovation.[110] Specifically, politicians on both sides of the political aisle worry about foreign ownership of patents issued in the United States. They have proposed a requirement where the identity of the patent owner, and any changes thereof, must be disclosed to the USPTO in the rather aggressively named Pride in Patent Ownership Act.[111] Fear of disruption of the innovative identity is likely one motivation for these nationalistic policies.[112]

On the international stage, the United States focuses on promoting its innovative identity, using its power and influence to maximize rights for United States' patents to the exclusion of the interests of its trading partners.[113] The application of nationalistic policies at the global level has unsurprisingly led to foreign policy challenges, which arise from this narrow conception of state sovereignty and self-protection firmly rooted in the domestic collective identity of innovativeness.[114] Criticisms of the United States' policies have been especially prominent in the context of the North-South debate of global patent law, where the interests of developing countries have been ignored and subordinated to the dominant interests of developed northern nations.[115] Specifically, since the 1980s, America has been using its influence to promote "harmonizing the world's intellectual property laws in its image" by applying economic pressures to "persuade" foreign nations to adopt IP laws favorable to the U.S. in exchange for entering into free trade agreements.[116] While the United States government describes these efforts as engagements in "building stronger, more streamlined, and more effective systems for the protection and enforcement of IP," this is essentially the politically correct way of describing the coercive actions taken by the U.S.—such as using its economically dominant

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[109] *See* U.S. DEP'T OF COM., 2022–2026 STRATEGIC PLAN 9 (2022) (explaining the first strategic goal is to advance "U.S. innovation and competitiveness").

[110] *See, e.g.*, S. 2774, 117th Cong. (2021).

[111] *Id.*

[112] *See id.*

[113] *See* Sean M. Flynn et al., *The U.S. Proposal for an Intellectual Property Chapter in the Trans-Pacific Partnership Agreement*, 28 AM. U. INT'L L. REV. 105, 203 (2012).

[114] Nayef Al-Rodhan, *The Future of International Relations: A Symbiotic Realism Theory*, *in* THERE'S A FUTURE: VISIONS FOR A BETTER WORLD 337, 337 (2013).

[115] Gene M. Grossman & Edwin L.-C. Lai, *International Protection of Intellectual Property*, 94 AM. ECON. REV. 1635, 1635 (2004).

[116] Flynn et al., *supra* note 113, at 106–07; Kumar, *supra* note 88, at 205; Jean-Frédéric Morin & Edward R. Gold, *An Integrated Model of Legal Transplantation: The Diffusion of Intellectual Property Law in Developing Countries*, 58 INT'L STUD. Q. 781, 782 (2014).

position to drive negotiations with less developed nations—to implement these policies for its own benefit.[117]

In practice, the United States' foreign policy in relation to IP rights has been directed towards selectively exporting enforcement mechanisms from its own patent law abroad to enable differential growth of both economic and military strength to maintain superiority and dominance on a global stage.[118] U.S. influence is particularly noticeable on a broader scale in the development of the TRIPs agreement, where all signatories were compelled to change their patent law to comply with TRIPs, wherein the standards for minimum protection were strongly derived from U.S. law.[119] U.S. influence is further revealed in the draft of the Trans-Pacific Partnership (TPP) trade agreement as compared with the final version accepted following the United States' withdrawal from negotiations.[120] Where the draft contained eighteen pages of IP provisions rooted in U.S. policy, these pages were deleted from the final version of the agreement, evidencing the tremendous power the United States exerts in treaty negotiations.[121]

B. Enforcing American Ideals Abroad

An important strategic victory towards U.S. ambitions of dominance over the global IP regime was the shift of international IP law from the WIPO to the WTO, as stipulated by the TRIPs agreement, allowing the United States to become a primary enforcer of IP rights globally. By facilitating a shift from the relatively impartial WIPO to the developed-country-favoring WTO, the United States was able to obtain a forum for IP enforcement that allowed it to use its established trade superiority to facilitate the development of international IP in its favor.[122] The extraterritorial imposition of U.S. influence on the enforcement of global IP rights allows the perpetuation of U.S. hegemony, often to the detriment and at the expense of less-developed countries, as self-interested U.S. neoliberalist strategies are implemented.[123]

While the WTO is theoretically an organized body governed by the consensus of all members to direct and regulate global trade relations, it has become an infrastructural tool for the imposition of U.S. enforcement abroad.[124] While

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117 OFF. OF THE U.S. TRADE REP., 2022 SPECIAL 301 REPORT 85 (2022).

118 Herman Mark Schwartz, *American Hegemony: Intellectual Property Rights, Dollar Centrality, and Infrastructural Power*, 26 REV. INT'L POL. ECON. 490, 506–07 (2019).

119 Hasson, *supra* note 64, at 379.

120 Kumar, *supra* note 88, at 241.

121 *Id.*

122 Harris, *supra* note 104, at 347.

123 David Harvey, *Neoliberalism as Creative Destruction*, 610 ANNALS AM. ACAD. 22, 32 (2007) ("The creation of new institutional practices, such as those set out by the IMF and the WTO, provided convenient vehicles through which financial and market power could be exercised . . . one effect of which was to permit the U.S. upper classes to exact financial tribute and command rents from the rest of the world . . . .").

124 Gautam Sen, *The United States and the GATT/WTO System*, *in* US HEGEMONY AND INTERNATIONAL

masquerading as an impartial organization for global cooperation, it is disproportionately influenced by power.[125] Since the TRIPs agreement, the United States has been the most frequent user of the WTO's dispute resolution body, where a favorable decision allows the petitioning country to take unilateral enforcement action.[126] While, in theory, the U.S. is also bound by the decisions of the WTO, in practice, because the WTO lacks inherent power to enforce its disciplinary measures, the actions taken against the U.S. are less influential in comparison.[127] Furthermore, the United States' position of power allows it to be a "rule maker" rather than a "rule taker." This translates to influence within the regulatory body of the WTO that is over-extended, to the point where the U.S. essentially exercises an unofficial veto power over international trade relations.[128]

Within this WTO framework, the U.S. gained a reputation for the aggressive negotiation and enforcement of IP rights.[129] Specifically contributing to this conception was the enforcement of IP law worldwide via the Special 301 Reports, authorized by U.S. domestic trade law and permitted by the WTO.[130] The Special 301 Reports are described by the United States Trade Representative (USTR) as "annual review[s] of the global state of intellectual property (IP) rights, protection, and enforcement . . . . to encourage and maintain enabling environments for innovation . . . in markets worldwide, which benefit not only U.S. exporters but the domestic IP-intensive industries in those markets as well."[131] From the American perspective, nations deemed to be lacking in their protections are placed on either the "Watch List" or the "Priority Watch List," allowing the United States government to intervene in shaping and changing the IP regimes in these foreign nations.[132] Essentially, the U.S. is taking on the responsibilities of global surveillance, wherein any nation deemed insufficient by the American domestic government is subject to sanctions within their home country.[133]

ORGANIZATIONS: THE UNITED STATES AND MULTILATERAL INSTITUTIONS 115, 130–31 (Rosemary Foot ed., 2003).

125 *Id.* at 131 ("[I]t would not be an exaggeration to suggest that the WTO bureaucracy is sensitive to the views of the US. The US enjoys an unspoken veto over the appointment of the director-general of the WTO and key staff. . . . The economic liberalism of the WTO, combined with a legalistic deference towards 'escape clauses,' also suits US needs more than that of other members.").

126 *Id.* at 130.

127 *Id.* at 133.

128 *Id.* at 131.

129 Kumar, *supra* note 88, at 239.

130 19 U.S.C. § 2242.

131 *Special 301*, OFF. U.S. TRADE REP., https://ustr.gov/issue-areas/intellectual-property/special-301 (last visited Feb. 27, 2023).

132 Request for Comments and Notice of a Public Hearing Regarding the 2022 Special 301 Review, 86 Fed. Reg. 70885 (Dec. 13, 2021).

133 Maira Sutton, *Special 301 Report 2012: The USTR's Bogus List of Countries That "Don't Enforce" Copyrights*, ELEC. FRONTIER FOUND. (May 2, 2012), https://www.eff.org/deeplinks/2012/05/special-301-report-2012-ustrs-absurd-list-international-disappointments; *Trade Relations: Sending in the Big Guns*, WORLD INTELL. PROP. REV. (Nov. 4, 2019), https://www.worldipreview.com/contributed-article/trade-relations-sending-in-the-big-guns.

In addition to regulating and enforcing the IP regime from afar, the U.S. has deployed a "boots on the ground" approach to its global IP enforcement policy through the IP Attaché program. Agents are strategically positioned worldwide to educate and influence government officials to promote U.S. IP interests.[134] The goals of the IP Attaché program are aimed towards "raising issues with foreign government officials," "providing training on IP law, enforcement, and administration," "conducting public awareness programs," and "presenting and explaining U.S. government positions."[135] The goals are further described as "delivering intellectual property information and education worldwide," exemplifying U.S. imposition of its own standards abroad through persistent campaigning.[136] With the threat of trade sanctions resulting from the annual Special 301 Reports and the continual extraterritorial surveillance imposed upon foreign nations via the IP Attaché program, it is no surprise that foreign nations consider the U.S. overly aggressive in its approach to international IP law.

C. Distrust and a Lack of Cooperation

The aggressive implementation and enforcement of the United States' foreign policy may be a root cause of the lack of cooperation between nations. The law is a creature of human creation and is thereby prone to human frailties, so here we can look to cognitive psychology for some insight.[137] In particular, we can look to the perceptual frameworks of trust and distrust that facilitate and impede cooperation, respectively.[138]

Bonds of trust facilitate more frequent cooperation and friendly relations at the individual level, where greater levels of trust predict greater cooperative activity.[139] Conversely, the less trust that is shared between individuals, the less frequently they will cooperate.[140] If individuals are involved in a distrustful relationship, there will not only be less frequent cooperation but also an avoidance of cooperation with the distrusted party altogether.[141] While levels of trust operate on a continuum, distrust is a distinct cognitive framework that operates as a filter through which the actions of a distrusted party are perceived.[142] Specifically, once a relationship has passed a

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134 *IP Attaché Services*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/ip-policy/ip-attache-program/ip-attache-services (last visited Feb. 28, 2023).

135 Bratislav Stankovic & Dominic Keating, *Serving America: The USPTO's IP Attaché Program*, 101 J. PAT. & TRADEMARK OFF. SOC'Y 441, 444 (2021).

136 *Id.* at 453.

137 Peter K. Yu, *The Trust and Distrust of Intellectual Property Rights*, 18 REVUE QUÉBÉCOISE DE DROIT INT'L 107, 125 (2005).

138 *Id.*

139 Roy J. Lewicki, Daniel J. McAllister & Robert J. Bies, *Trust and Distrust: New Relationships and Realities*, 23 ACAD. MGMT. REV. 438, 445–46 (1998).

140 *Id.* at 446.

141 Nicole S. Harth & Tobias Regner, *The Spiral of Distrust: (Non-)Cooperation in a Repeated Trust Game is Predicted by Anger and Individual Differences in Negative Reciprocity Orientation*, 52 INT'L J. PSYCH. 18, 18 (2017).

142 Katinka Bijlsma-Frankema, Sim B. Sitkin & Antoinette Weibel, *Distrust in the Balance: The*

threshold from low trust to distrust, all actions are viewed through this negative lens across all contexts, which in turn triggers disproportionate reactions to any negative activity and prevents positive judgments from being made even in response to well-intentioned, trust-focused actions.[143] When both sides of a relationship are characterized by distrust, it leads to a negative reciprocity spiral that promotes the intensification of distrust and perceived value differences, leading to a lack of cooperation in both formal and informal settings.[144]

Distrust has also been found to develop in group contexts, where distrust between communities developed as parties perceived each other as competitors, and competing groups avoided cooperation with other groups even to their detriment.[145] Specifically, intergroup distrust has been defined as "the shared unwillingness of a group to accept vulnerability, based on pervasive negative perceptions and expectations of the other group's motives, intentions, or behaviors."[146] It is quite possible that the shift from low trust towards the United States to a framework of distrust emerged following the imposition and enforcement of the TRIPs agreement and only escalated thereafter.

In this case of foreign relations concerning international IP, the stage was set to launch the world into a cycle of distrust against the United States as early as the late 1800s with the Paris Convention, where unresolved territorial issues laid the foundation for discord within the international community.[147] As the United States was highly involved in shaping and developing multilateral treaties related to IP, the influence the United States exerted while simultaneously refusing to cooperate or compromise created the necessary conditions for low trust to develop, as frustrations mounted with American exceptionalism delaying cooperation.[148] This is most poignantly demonstrated by the failed discussions concerning substantive patent law harmonization in 1991 in which the United States refused to consider a first-to-file system that would have brought its law into accord with the majority of the world, causing negotiations to crumble.[149] As the United States continually prioritized its domestic interests over cooperation and only deigned to comply with the literal

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Emergence and Development of Intergroup Distrust in a Court of Law, 26 ORG. SCI. 1018, 1020 (2015).

143 *Id.* at 5, 11, 14, 17 ("Once the tipping point has been reached, the parties enter stage 2 [distrust], in which disproportionate reactions to violations and a nonlinear, self-amplifying dynamic ensue. The process changes from loose to tight coupling between domains and between cognitive, behavioral, and affective factors.").

144 *Id.* at 14, 16 ("The case data show that the negative actions and reactions of the groups appear to take two forms: *diminished cooperation in the realm of formal, organizationally prescribed relations* and the *avoidance of interaction in the realm of informal relations*.").

145 Ann-Marie Ingrid Nienaber, Andree Woodcock & Fotis K. Liotopoulos, *Sharing Data - Not With Us! Distrust as Decisive Obstacle for Public Authorities to Benefit From Sharing Economy*, FRONTIERS IN PSYCH., Jan. 2021, at 1, 2, 7, 8, 11 (describing, notably, the effects of community distrust in sharing economies as a root cause for the lack of cooperation between public authorities, where a lack of belief in shared values led to a belief that cooperation with others would cause harm).

146 Bijlsma-Frankema, Sitkin & Weibel, *supra* note 142, at 3.

147 Baechtold, Miyamoto & Henninger, *supra* note 27, at 45.

148 *See* Gooday & Wilf, *supra* note 30, at 7.

149 *Id.*; Miyamoto, *supra* note 24, at 35–36.

language of treaties rather than act in accordance with the spirit of the treaties, the trust and faith placed in the United States further eroded.[150]

The shift to distrust likely occurred during the negotiation and implementation of the TRIPs agreement, which faced severe criticism from developing nations as a "coercive strategy on behalf of the United States to force under-developed countries to pass laws that would protect U.S. patents," specifically citing the abuse of TRIPs to assert unilateral property claims against poor nations.[151] Combined with America's continual surveillance and interference in foreign IP systems as previously described in relation to the Special 301 Reports and IP Attaché Program, it is no wonder that the cycle of distrust has been entered and amplified since the implementation of TRIPs.[152] Other nations have entered a state of community distrust with the United States, likely serving as the main obstacle against progress toward a more unified and harmonized IP system, despite the mutual benefits of cooperation.[153] Such a lack of cooperation is demonstrated through the continuing failure of SPLT negotiations to harmonize patent law in our modern technological era.[154] Unfortunately, had the United States worked towards cooperation earlier rather than committing dogmatically to its ideas of innovative nationalism and American exceptionalism, perhaps we would not be left in the current stalemate of international IP law, where the very detriments to the innovative economy feared by the American government, such as a weakening of patents and an increase in deadweight losses, are rapidly emerging.[155]

While here we focus on the deleterious role of excessive U.S. influence in recent developments in international IP law, again, remember that the United States simply had power and leveraged that power following typical patterns of logical self-interest. There is nothing objectionable about nations attempting to maximize protection for their IP on the international stage, but the power dynamics of doing so may make future negotiations more difficult, as is the case here. At this point, the conditions of distrust have stunted negotiations to work towards a more harmonized and efficient system for international patent law, which, in our increasingly globalized world, is leading to immense deadweight economic loss, substantial backlog in the patent offices, and significantly lower-quality patents.[156] Although attributable to the United

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150 *See* Anya Wahal, *On International Treaties, the United States Refuses to Play Ball*, COUNCIL ON FOREIGN RELS. BLOG (Jan. 7, 2022), https://www.cfr.org/blog/international-treaties-united-states-refuses-play-ball (discussing the U.S. prioritizing "its perceived national interests over international cooperation"); Seifert, *supra* note 51, at 188–89 (describing how the U.S. "has complied with the literal language of the treaty [TRIPS] only as far as necessary"); Al-Rodhan, *supra* note 114, at 340 (noting unilateral decisions further erode credibility and trust in nations within the context of a multilateral framework).

151 Hasson, *supra* note 64, at 384, 388.

152 Yu, *supra* note 137, at 126.

153 Nienaber, Woodcock & Liotopoulos, *supra* note 145, at 4.

154 Gooday & Wilf, *supra* note 30, at 7; Miyamoto, *supra* note 24, at 31.

155 Chun, *supra* note 15, at 163.

156 Chun, *supra* note 15, at 135; Julie Samuels, *Fixing Why USPTO Issues Low-Quality Patents Should*

States, it is almost irrelevant and indeed counterproductive to focus on which nation is to blame for starting the cycle of distrust. Instead, we must look forward to solutions to overcome the distrust between nations in the IP forum to move towards a more effective system characterized by cooperation to better serve an increasingly globalized society.

IV. Overcoming Distrust to Create a More Efficient International Patent Regime

At this point, we can see two conclusions. First, the current status quo of the international patent system in the modern globalized age is inefficient, and second, the distrust that has developed between nations has reached a point that impedes further progress towards harmonization.[157] This would seem to pose an insurmountable dilemma where no progress could be made to improve the current regime. At the very least, this problem makes prior proposals suggesting a singular unified international patent system impracticable.[158] However, to prevent the international patent system from overloading to the point where it becomes ineffective and obsolete, we must find a practical solution that will not be so incompatible with the sensibilities of any particular nation.[159] Only if such a path can be charted can global innovation continue to make significant progress.

Despite the rather bleak prospects of developing an international patent system to serve the interests of various nations that distrust one another, hope is not lost. Various tools for international patent cooperation have been created over the past two hundred years in pursuit of further patent law harmonization.[160] Even though the current system is not fully harmonized, the treaties created thus far have provided a strong baseline for further development. Despite the distrust that is preventing further progress toward cooperation, nations are meeting frequently, demonstrating the availability of adequate forums and procedures for communication, negotiation, and compromise through the WIPO, WTO, and other smaller collaborative groups.[161]

Rather than focus on trying to rebuild trust to put together a comprehensive unified international law framework or to implement short-term solutions to avoid imminent patent office backlog, emphasis should be placed on repurposing the cooperative tools and enhanced technological capabilities of the modern age to develop a decentralized patent system. Emphasis should also be placed on

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Be Oversight Hearing's Focus, THE HILL: CONG. BLOG (Sept. 13, 2016, 7:29 AM), https://thehill.com/blogs/congress-blog/technology/295542-fixing-why-uspto-issues-low-quality-patents-should-be/.

157 Chun, *supra* note 15; Nienaber, Woodcock & Liotopoulos, *supra* note 145.

158 Ben McEniery, *The Time Is Nigh: A Proposal for an International Patent System*, 16 CHI.-KENT J. INTELL. PROP. 167 (2016).

159 Khoury, *supra* note 31, at 238.

160 *Patent Law Harmonization*, *supra* note 33.

161 *See, e.g.*, *Standing Committee on the Law of Patents (SCP): Meetings*, WORLD INTELL. PROP. ORG., https://www.wipo.int/meetings/en/topic.jsp?group_id=61 (last visited Jan. 9, 2024) (showing meeting sessions generally held twice per year); *IP5 Heads of Office and IP5 Industry M*, FIVEIPOFFICES, https://www.fiveipoffices.org/industry-consultation/headsandindustry (last visited Jan. 9, 2024) (showing meeting sessions generally held annually).

encouraging nations to subscribe to this collaborative system based upon principles rooted in their own self-interest. Below, I will outline which tools are available to construct such a system, how to implement the system from both legal and practical perspectives, and, finally, how adopting this decentralized patent system would be a beneficial long-term solution for the international patent regime.

A. Cooperative Tools at Our Disposal

First, we can rely upon existing treaties as a stable baseline for further development.[162] For the international patent system to work properly, there is a great benefit to having harmonized patentability standards, but the baseline standards are already provided by the current standards implemented by the PCT and TRIPs.[163] With the procedural standards of the PCT, patentability applications are all in a generally accepted format, so no further negotiations would be needed to ensure uniformity of the structure of the documents themselves.[164] With substantive baseline patentability standards provided by TRIPs concerning novelty and non-obviousness, there is a minimum floor for what can be considered patentable.[165] With both the procedural and substantive legal frameworks moderately harmonized at this baseline level, both the structure and content of a patent application are similar enough that there should be little difficulty in structuring a framework around these baselines.[166] In fact, this framework based upon agreed and previously negotiated standards was exactly what was originally considered at the 1991 Diplomatic Conference that only fell apart because the United States refused to consider switching to a first-to-file system.[167] Now that the United States has switched to the first-to-file system with the implementation of the America Invents Act, it should be feasible to reach the kind of efficiency-promoting agreement first contemplated in 1991.[168]

In addition, the proper use of currently implemented work-sharing programs can facilitate an easy transition to a collaborative system. Starting in 2006, agreements between the United States and the Japanese Patent Office allowed for fast-tracked patent application processing via the Patent Prosecution Highway (PPH), whereby once an application was granted by one office, it would be advanced to the front of the queue at the second office.[169] When an application was granted at the first office, that office would forward the application to the second office along with the work

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[162] *Overview: the TRIPs Agreement*, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm (last visited Mar. 25, 2023) (stating how "[t]he TRIPS Agreement is a minimum standards agreement, which allows Members to provide more extensive protection of intellectual property if they so wish").

[163] Patent Cooperation Treaty, *supra* note 27; TRIPs, *supra* note 27, at art. 27.

[164] Patent Cooperation Treaty, *supra* note 27.

[165] TRIPs, *supra* note 27, at art. 27.

[166] *See id.*; Patent Cooperation Treaty, *supra* note 27.

[167] *Text of the Basic Proposal for the Treaty and the Regulations As Submitted to the Diplomatic Conference for the Conclusion of a Treaty Supplementing the Paris Convention As Far As Patents Are Concerned, The Hague, June 3 to 28, 1991,* WORLD INTELL. PROP. ORG. STANDING COMM. ON L. OF PATS. (Oct. 2, 2000), https://www.wipo.int/edocs/mdocs/scp/en/scp_4/scp_4_3.pdf.

[168] *See id.*; Leahy-Smith America Invents Act, *supra* note 76.

[169] Ono, *supra* note 15, at 94.

product produced during the prior art search conducted at the office of the first examination to expedite the application process and limit duplicative searching.[170] To deal with the inefficiencies in the current international patent regime, this program has since been expanded and adopted by more nations via the PCT-PPH program for international work products in 2010 and the PPH MOTTAINAI program in 2014, reducing both the time and associated costs of obtaining a patent.[171] Currently, thirty-six countries and regions are participating in PPH programs to ease their workload burden.[172] With more nations becoming comfortable with work sharing, at the level of sharing prior art searches and giving weight to each other's decisions as to patentability, there is a basis for the extension of such work-product sharing to decision sharing wherein one patent office's decision becomes presumptively valid in all participating nations.[173]

There is some basis for such decision sharing already in practice within regional systems, which work smoothly due to the implementation of an efficient system while maintaining individual nations' sovereignty and control over IP.[174] The African Regional Intellectual Property Organization (ARIPO) and the African Intellectual Property Organization (OAPI) regional systems were implemented in the early 1980s and continue to function successfully today.[175] Under these systems, a patent application is filed within one of the member states and receives presumptive validity in all other member states.[176] However, sovereignty is preserved in two ways within these systems.[177] Individual nations retain the right to dismiss granted patents as invalid if they find them not to rise to the level of protection provided in their national law, or they may instead invalidate patents during domestic litigation.[178] This system is capable of being applied at a global level based on the PCT agreement, where preliminary patentability examinations conducted using the TRIPs minimum baseline standards would become binding on all member states unless the member state determined the patent was insufficient post hoc.[179] This would allow individual

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[170] *PPH*, JAPAN PAT. OFF., https://www.jpo.go.jp/e/toppage/pph-portal/pph.html (last visited Jan. 9, 2024).

[171] *PPH Network*, JAPAN PAT. OFF., https://www.jpo.go.jp/e/toppage/pph-portal/network.html (last visited Mar. 26, 2023) (showing fifty-five participating patent offices); Ono, *supra* note 15, at 97–99 (describing PCT-PPH and PCT MOTTAINAI programs and discussing shortened time periods, a reduced number of office actions, increased patent grant rates, and an overall cost reduction).

[172] Ono, *supra* note 15, at 99.

[173] *See PPH Network*, *supra* note 171; *Collaborative Search Pilot*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/patents/search/international-protection (last visited Mar. 26, 2023).

[174] Zion H. Park, *What the PCT Can Learn from Two African Systems*, 6 J. MARSHALL REV. INTELL. PROP. L. 693, 703 (2007).

[175] *See generally* Adebambo Adewopo, *The Global Intellectual Property System and Sub-Saharan Africa—A Prognostic Reflection*, 33 U. TOL. L. REV. 749, 765–67 (2001) (discussing the histories of ARIPO and OAPI); Y. Mupangavanhu, *African Union Rising to the Need for Continental IP Protection? The Establishment of the Pan-African Intellectual Property Organization*, 59 J. AFR. L. 1, 23 (2015) (endorsing ARIPO and OAPI as models for a hypothetical pan-African intellectual property regime).

[176] Park, *supra* note 174, at 703–04.

[177] Adewopo, *supra* note 175, at 767–68.

[178] Park, *supra* note 174, at 703.

[179] *Id.* at 705.

nations to maintain control of their IP regimes while increasing the efficiencies and innovative capacities of the patent system by reducing redundant examinations.

B. Legal Implementation

Multilateral institutions such as the WIPO and WTO already provide forums for international cooperative discussions related to global IP.[180] Smaller consortiums such as the Trilateral Offices and IP5 also meet regularly to discuss the plans for the future of international IP law.[181] Discussions from the failed SPLT conferences continue annually, even if the SCP is cabined to solely procedural topics.[182] These meetings can be used as convenient forums to discuss the future of a decentralized global IP regime via multilateral agreement, without needing to create a special convention for these discussions.[183] Increased cooperation is made feasible by these preexisting multilateral entities, as symbiotic relationships between nations are underpinned by increased interdependence and shared common interests.[184] The groundwork is already in place to move further toward a more efficient system.

The issue is not one of logistics but of distrust and lack of cooperation between nations. The challenge is not how to get countries to convene to discuss the issues with the international patent system but instead how to overcome the distrust fostered by decades of the United States' exercise of its influence to fashion the global patent system in its own image.[185] Once a cognitive state of distrust is entered, it is very difficult to rebuild trust, as everything, including trust-fostering actions, is still seen through "blood-colored lenses."[186] With that being so, any new multilateral agreement will need to be motivated by a force strong enough to displace the distrust impeding cooperation.[187] National self-interest, although previously obstructing the development of an international patent regime and leading to the development of distrust in the first instance, can outweigh that distrust and be repurposed to facilitate cooperation and agreement to a multilateral treaty so long as national interests are protected and benefitted through cooperation.[188]

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[180] *Conferences, Meetings and Seminars*, WORLD INTELL. PROP. ORG., https://www.wipo.int/meetings/en/ (last visited Mar. 26, 2023); *Interactive Meetings Calendar 2023*, WORLD TRADE ORG., https://www.wto.org/english/news_e/events_e/events_e.htm (last visited Mar. 26, 2023).

[181] *About Us*, TRILATERAL, https://www.trilateral.net/about (last visited Mar. 26, 2023); *About IP5 Co-operation*, FIVEIPOFFICES, https://www.fiveipoffices.org/about (last visited Mar. 26, 2023).

[182] *Standing Committee on the Law of Patents (SCP): Overview*, WORLD INTELL. PROP. ORG., https://www.wipo.int/policy/en/scp/ (last visited Mar. 26, 2023).

[183] *See* Park, *supra,* note 174, at 703; *id.*

[184] Al-Rodhan, *supra*, note 114, at 342.

[185] Flynn et al., *supra* note 113; Yu, *supra* note 137.

[186] Bijlsma-Frankema, Sitkin & Weibel, *supra* note 142, at 1034.

[187] Stephen Ezell & Nigel Cory, *The Way Forward for Intellectual Property Internationally*, INFO. TECH. & INFO. FOUND. 2 (2019), https://www2.itif.org/2019-way-forward-ip.pdf ("A new way ahead is needed to overcome and move beyond the status quo stalemate that defines the intellectual debate over IP in the global economy, which remains starkly and deeply divided along developed-developing country lines . . . .").

[188] Michael N. Stagnaro, Yarrow Dunham & David G. Rand, *Profit Versus Prejudice: Harnessing Self-*

In general, it has been shown that national self-interest motivates countries to engage in cooperation relating to public goods, from environmental protection to global economic security.[189] Since IP as a concept involves transforming public knowledge goods into privatized goods, it stands to reason that self-interest is capable of motivating cooperation in this field.[190] Here, the relevant national interests are to protect the inventions of the nation's own citizens while obtaining access to innovative technology from around the world.[191] There is no reason that the motivation for cooperation needs to be rooted in morality for greater access for all when practical considerations have long provided the basis for engaging in cooperative behavior without suggesting a moral deficit.[192] Self-interested motivations are just as valid and productive as sentimental ones, as they can serve to provide the initial motivation for nations to engage in cooperative agreements, which can then further develop and stabilize beyond the initial self-interest-driven cooperation into a more cohesive whole as distrust dissipates with the passage of time and the benefits of cooperation are realized.[193]

C. Practical Implementation

From a practical standpoint, we are fortunate that modern technology can facilitate the development of a decentralized patent system. The proposed system here consists of three phases: a submission and distribution phase, an examination phase, and an enforcement phase. The patent owner will only need to file a singular patent to a central server, which will then distribute applications amongst capable patent offices for examination, which will be conducted according to baseline standards established by TRIPs. A patent granted under this system will provide presumptive validity in all member states of the multilateral agreement until either dismissed as inadequate by local government or invalidated during litigation. The result of any invalidity proceedings will only have an effect within the relevant jurisdiction declaring invalidity. This decentralized system will save the patent offices from redundant patent applications and thereby provide more time for thorough substantive examination of individual patents.

During the submission and distribution phase, patent owners will be able to upload applications to a central server that controls task management. There is precedent that building such a centralized server is feasible, as evidenced by the

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Interest to Reduce In-Group Bias, 9 SOC. PSYCH. & PERS. SCI. 50, 55 (2018) (demonstrating how self-interest outweighed in-group bias in controlled experimental setting; "[i]n particular, when strategic concerns are heightened, as they are in multilateral interactions where the parties must come to an agreement and failing to do so is both salient and costly . . . self-interest has the opportunity to mitigate biased behavior").

189 Garrett Wallace Brown & Joshua Hobbs, *Self-Interest, Transitional Cosmopolitanism and the Motivational Problem*, 19 J. INT'L POL. THEORY 64, 73 (2023).

190 *See* Russell Cropanzano, Barry Goldman & Robert Folger, *Self-Interest: Defining and Understanding a Human Motive*, 26 J. ORG. BEHAV. 985 (2005) (describing self-interest as motivator across various disciplines).

191 Ezell & Cory, *supra* note 187, at 1, 14 (describing importance and benefits of interconnected world for technological advances).

192 Brown & Hobbs, *supra* note 189, at 16–17.

193 *Id.* at 14, 16–17 (discussing initial participation and transitional value).

growth of the Global Dossier Initiative that links the information technology systems of several IP offices to enable information sharing related to patents, applications, and examination files.[194] This kind of system would simply be expanded to include more member offices. Using this system as a base for accepting, recording, and controlling application files, the centralized server would then utilize a distribution algorithm to ensure an optimal assignment of applications to participating examination offices.[195] Notably, the algorithm can be programmed and weighted to take into account dynamic changes both in examining office capacity, as the current number of open patent applications fluctuates, as well as in relation to the competencies of each office with respect to each technological field.[196] After the proper assignment is determined, the application will need to be translated into the proper language for the examining office in question. Although machine translation has previously been criticized as lacking the nuance required for accurate translations, this technology is consistently improving as neural machine learning algorithms have replaced statistical machine translations.[197] Machine translations of technical articles have proven to be very accurate, even across languages with different grammatical structures, boding well for the future of machine translation of patent documents.[198]

During the examination phase, the relevant baseline patentability standards set up by the TRIPs agreement will provide the standards for patent examination across all participating offices. Aside from the cognitive hurdle obstructing the idea of giving effect to patents granted outside of the domestic jurisdiction, there is no real difficulty with allowing competent foreign patent offices to perform the actual examination.[199] In relation to national sovereignty and interest in maintaining control over innovations developed domestically, the country of origin would be filed with

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194 Ono, *supra* note 15, at 102.

195 *See, e.g.*, Jin Cheong, *Maximizing Group Happiness in White Elephants Using the Hungarian Optimal Assignment Algorithm*, TOWARDS DATA SCI. (2019), https://towardsdatascience.com/maximizing-group-happiness-in-white-elephants-using-the-hungarian-optimal-assignment-algorithm-17be4f112746; Bogdan Pop & Florian Boian, *Algorithms for Automating Task Delegation in Project Management*, *in* PROC. OF THE 2014 FEDERATED CONF. ON COMP. SCI. & INFO. SYS. 1191, 1193 (2014); H. W. Kuhn, *The Hungarian Method for the Assignment Problem*, 1 NAVAL RSCH. LOGISTICS 83 (1955).

196 *See, e.g.*, Ivanda Zevi Amalia, Ahmad Saikhu & Rully Soelaiman, *A Fast Dynamic Assignment Algorithm for Solving Resource Allocation Problems*, 6 JURNAL ONLINE INFORMATIKA 118, 121–22 (2021); P.A. Chentsov, *Distribution of Assignments Among Participants Under Conditions of Constraints*, 72 AUTOMATION & REMOTE CONTROL 1690, 1690 (2011); Pop & Boian, *supra* note 195, at 1193.

197 *Rule-Based vs. Statistical vs. Neural Machine Translation,* SUMMA LINGUAE https://summalinguae.com/language-technology/rule-based-machine-translation-vs-statistical-and-neural-machine-translation/ (Aug. 25, 2021).

198 *See, e.g.*, Yosuke Takasugi et. al, *Validation of the Reliability of Machine Translation for a Medical Article From Japanese to English Using DeepL Translator*, 13 CUREUS, no. e17778, at 1, 3 (2021) (describing machine learning translation between Japanese and English for one complicated medical article to be 94% accurate).

199 John F. Duffy, *Harmony and Diversity in Global Patent Law*, 17 BERKELEY TECH. L.J. 685, 725 (2002); Sung Pil Park, *The Coordinating Role of Public International Law: Observations in the Field of Intellectual Property*, 9 J. E. ASIA & INT'L L. 321, 335 (2016).

the patent application, mitigating the concern of pushback stemming from innovation nationalist ideologues.[200] In relation to the quality of the issued patents, quality will be assured through a variety of intersecting means.[201] First, there will already be assurances and safeguards based on the multilateral treaty framework.[202] Second, the TRIPs agreement, for better or worse, already has enforcement mechanisms ensuring compliance with the minimum standards set forth by the agreement.[203] Finally, in allowing other countries to examine patents indiscriminately, the quality of examination will be ensured via reciprocity, as there is a pressure to behave fairly when self-interest is integral to cooperation.[204] The risks of engaging in this work-sharing framework are also demonstrably low based on the successes of the PPH programs since their implementation.[205]

Domestic review and enforcement of patents granted through this system will protect sovereign national interests, allowing states to benefit from the efficiencies of a sharing economy for patent prosecution while maintaining control over their own IP regimes. As noted earlier, this type of framework has demonstrated success in the ARIPO and OAPI regional systems.[206] Furthermore, this system would enable the tailoring of enforcement by jurisdiction, accounting for differences amongst nations that arise due to local variations and allowing the patent regime to function most effectively at a local level while still easing the backlog across patent offices.[207] By allowing individual nations to regulate their own IP regimes at the domestic level while ensuring greater efficiency of the global patent infrastructure, the system will be able to gracefully navigate around the obstacles of distrust to a framework more suited to the current globalized and technologically advanced age. This framework prioritizing efficiency and cooperation while protecting sovereign interests may just be able to turn what was considered a zero-sum game of IP protection into one that can effectively benefit all participating states.

V. Conclusion

While since the 1880s cooperative international patent regimes have been often contemplated, no such system had seen any success in implementation, even as globalization and technological advances made international cooperation simultaneously more advantageous and feasible. A historical analysis of the development of multilateral IP frameworks reveals that self-interested foreign policies originating from the United States' constructed identity as the most innovative nation have stalled the development of a more efficient international IP regime. As the United States aggressively promoted its own national interests, distrust

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200 Kumar, *supra* note 88, at 208.
201 Duffy, *supra* note 199, at 725.
202 *Understanding International Law: Fact Sheet #5*, UNITED NATIONS TREATY COLLECTION, https://treaties.un.org/doc/source/events/2010/press_kit/fact_sheet_5_english.pdf (last visited Jan. 9, 2024).
203 TRIPs, *supra* note 27, at pt. III.
204 Stagnaro, Dunham & Rand, *supra* note 188.
205 Ono, *supra* note 15, at 99.
206 Park, *supra* note 174, at 703–04.
207 Duffy, *supra* note 199, at 686, 689.

developed within the international community, precluding further cooperation even as patent application backlogs rose while the quality of granted patents fell. A solution to the current stalemate in international cooperation may be found by repurposing national self-interest to overcome the distrust between nations to create a new framework based on work-sharing and reciprocity to combat inefficiencies in the patent system. While national interests still may prove an obstacle to progress, these too can be overcome so long as sovereignty is maintained within the international framework as suggested here. Cooperation in the patent law regime has proven especially difficult over the past decades, but it is crucial we take steps to move towards a more efficient system providing more access to innovation across our increasingly globalized society. Although the United States' pride in its innovative identity is strong, the need to keep up with the times is stronger. We must take action now to foster cooperation on a global scale—before the patent system is so overwhelmed by redundant applications that it is rendered obsolete.