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# Mitigating the Effects of Intellectual Property Colonialism on Budding Cannabis Markets

HUGHIE KELLNER\*

## ABSTRACT

*Globalization has reduced barriers to trade, communication, and understanding, opening opportunities that extend far beyond national borders. However, in this bounty of opportunity lie obligations, and often those obligations tie a nation's hands when trying to deal with a problem that arises. One obligation nations face is upholding the United Nations' (UN) decision to prevent the illicit use of cannabis. Another is supporting and following the World Trade Organization's (WTO) near elimination of barriers for companies to bring patent and trademark protection with them into any country they do business with. In a modern globalized economy, if a nation fails to uphold the obligations of one agreement, the consequences spill over into the network of obligations upheld by other nations.*

*The rising cannabis industry is a pristine example of this obligatory burden. Canada broke the UN Single Convention on Narcotic Drugs ("Single Convention"), establishing a recreational cannabis industry that rocketed into financial success. The countries that uphold the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), except Canada, now bear the burden of Canada's decision. That obligation has grown so great that other countries may find following Canada's financial success requires shirking the monopolistic rights the WTO mandates; otherwise, they risk becoming a playground for Canadian companies seeking to globalize.*

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\* Hughie Kellner came from the small farm town of Uvalde, Texas and received a bachelor's degree in Physics from the University of Texas at Austin. Upon graduation from the Indiana University Maurer School of Law, Hughie will deploy his physics degree while prosecuting patents in the Frankfurt am Main, Germany office of Leydig, Voit, & Mayer. After Hughie's first year at Maurer, he worked for a law firm in Thailand as a Stewart Fellow. Despite the events of this note having occurred a couple of months before his arrival, the events were still an active conversation throughout his summer in Thailand—both within the legal community and the general Thai populace.

*This note attempts to provide a solution to these conflicting obligations by proposing a temporary obligation realignment. By proposing a temporal exception to patent enforcement, the WTO TRIPS Agreement can be amended, as minimally as possible, to conform with the obligations cast upon the rest of the world when Canada sluffed its.*

## INTRODUCTION

The world has been awoken to the power of a recreational cannabis market, and countries all over the world are looking at markets like Canada's as a possible inducement for establishing their own.<sup>1</sup> Standing in the way of establishing such markets, however, lies the United Nations (UN) Single Convention on Narcotic Drugs (Single Convention), currently binding 186 countries, which prohibits countries from legalizing recreational cannabis use.<sup>2</sup> Canada outright violated this international agreement upon establishing its market, but Canada's regulatory scheme also attempted to keep that violation within its borders with the intent of being a good neighbor.<sup>3</sup> Private actors, however, are a different story.

With the advent of the World Trade Organization's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) and the Patent Cooperation Treaty (PCT), intellectual property protection (here, patent protection) was made fairly uniform throughout the nations of the world.<sup>4</sup> One requirement of both agreements is that a signatory nation must allow foreign entities to apply for and enforce granted patents within that signatory's jurisdiction.<sup>5</sup> Thus, a company or inventor with a monopoly right over a product in one country can most likely acquire that same right in another country due to the uniform rules of protection and acquisition.

This means that if countries abide by both the UN Single Convention and the TRIPS Agreement, and they simultaneously decide to break from the overwhelming international norm and establish a medicinal cannabis market, that market may generate its own patents, but it must also honor the patents applied for and held by foreign entities. Since Canada does not abide by the UN Single Convention<sup>6</sup> but

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1. See *infra* note 10 and accompanying text.

2. See *infra* Part I.

3. *Id.*

4. See *infra* Part II(B).

5. TRIPS, *infra* note 28, art. 27, ¶ 1.

6. See *infra* Part I.

does abide by the TRIPS Agreement,<sup>7</sup> Canada can establish a recreational cannabis market that will generate patents and then file those patents in other countries' markets as they open up. This places Canadian entities years ahead of local entities that just opened up and may impose such a large obstacle as to block the local entities from starting up the local market altogether.<sup>8</sup> Viewing the blazing cannabis market as desirable—and arguing that it should be open to countries should they so choose—this note proposes a solution that will allow countries to open a cannabis market without suppression from foreign actors reaping the benefits of a first-mover advantage.

In Part I of this note, I will explain how the international legal climate regarding cannabis regulation has allowed Canada to secure an unjust and wildly powerful first-mover advantage in the cannabis industry. In Part II I will explain the nature of a patent, the effect it has when granted, the costs and benefits of the incentives it is designed to promote, and how the WTO and the PCT have come together to make it easier for parties to protect their intellectual property across national boundaries and varying jurisdictions. In Part III I will illustrate how those two concepts could merge to create a climate of corporate cannabis colonialism, using Thailand as a case study. In Part IV I will argue that, while foreign investment and involvement in domestic industry should not be prohibited, patent protection is not warranted for two reasons: (1) the incentives that patent systems are used to create already exist in the current lucrative state of upstart cannabis markets, rendering a patent system unnecessary; and (2) that patent protection will cause the inequitable result of companies developing technologies in treaty-violating markets that then utilize this first-mover advantage in later markets. Both reasons caution strongly against allowing foreign companies from established markets to seize control of upstart markets through legal structures, such as patents, that have enhanced globalization.

## I. CANADIAN UN VIOLATIONS

In 1972, the UN amended the Single Convention,<sup>9</sup> marking the last time the control of narcotic substances would be altered.<sup>10</sup> Thus, for over

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7. As TRIPS was an annex to the Agreement establishing the WTO rather than a standalone or separately agreed to Treaty, a signatory to the WTO treaty binds itself to the TRIPS Agreement by virtue of binding itself to the WTO. *Members and Observers*, WORLD TRADE ORGANIZATION, [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm).

8. See *infra* Part III.

9. Protocol Amending the Single Convention on Narcotic Drugs, 1961, Mar. 25, 1972, 84 Stat. 1236–96, 976 U.N.T.S. 3 [hereinafter Single Convention].

half a century, 186 countries, including Thailand and Canada, have bound themselves to the unchanged restrictions imposed by the Single Convention as amended.<sup>11</sup>

The terms of the Single Convention make clear that signatories may only engage in the production, consumption, cultivation, importation, and exportation of cannabis under strict government control and only for medical or scientific purposes.<sup>12</sup> No country may cultivate, manufacture, or import cannabis in a greater quantity than the estimated need for its medical or scientific purposes,<sup>13</sup> excepting industrial use to which the convention does not apply.<sup>14</sup> Further, no country may accumulate a store beyond its estimated need nor export to a country that has enough cannabis to fulfill its estimated need.<sup>15</sup> A governmental body must license, supervise, or directly undertake all of these actions.<sup>16</sup> The Single Convention also provides that states may impose additional restrictions if they find that those additional restrictions would further the purpose of preventing the illicit use of cannabis.<sup>17</sup> Despite this discretion, most nations prohibit even medicinal use of cannabis.<sup>18</sup>

In July of 2001, Canada became the first country to allow the medicinal use of cannabis.<sup>19</sup> While this is allowed by the letter of the Single Convention, it is a more liberal approach to cannabis than the international norm.<sup>20</sup> Moving one step further, Canada became the first

10. While later treaties would be signed, such as the Convention on Psychotropic Substances, Feb. 21, 1971, 92 Stat. 3768, 1019 U.N.T.S. 175 and the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Dec. 20, 1988, S. TREATY DOC. NO. 101-4, 1582 U.N.T.S. 95, the restrictions imposed in the Single Convention, *id.*, would remain unchanged.

11. *Status of Treaty Adherence to the Protocol Amending the Single Convention on Narcotic Drugs, 1961*, UNITED NATIONS TREATY COLLECTION, [https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=VI-18&chapter=6&clang=en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=VI-18&chapter=6&clang=en) (last visited Jan. 13, 2020) [hereinafter *Treaty Adherence*] (186 countries have signed as of December 3, 2020).

12. Single Convention, *supra* note 9, art. 2, ¶ 7.

13. *Id.* art. 19, 24.

14. *Id.* art. 28, ¶ 2.

15. *Id.* art. 19, 24.

16. *Id.* art. 28.

17. *Id.* art. 28.

18. This is determined by comparing the number of countries that allow some use of cannabis to the number of countries that do not. See *Countries Where Weed Is Illegal 2020*, WORLD POPULATION REV., <http://worldpopulationreview.com/countries/countries-where-weed-is-illegal/> (last visited Jan. 10, 2020).

19. See *Marihuana Medical Access Regulations* (Controlled Drugs and Substances Act), SOR/2001-227 (Can.) (repealed 2013).

20. See *Countries Where Weed Is Illegal 2020*, *supra* note 18.

major economy<sup>21</sup> to allow for recreational cannabis use. On October 21, 2018, Canada opened its market to private entities, subject to a licensing regime.<sup>22</sup> Canada thus planted the seed for a private cannabis market, which would grow into a powerful and pioneering industry.

Canada's regulatory scheme, while in direct conflict with the letter of the Single Convention, intended to violate as little of the international agreement as necessary. Canada's Cannabis Act (the Act) makes clear that importation and exportation may only be undertaken with respect to the medical, scientific, or industrial needs of the other nation.<sup>23</sup> Under the Act, the production, cultivation, and stockpile restrictions of the Single Convention are ignored for *intra*-national commerce, those restrictions are imposed for *inter*-national commerce.<sup>24</sup> With this restriction, Canada meant to devise a system in which its choice to allow its own citizens to use recreational cannabis would not frustrate other nations' abilities to abide by their obligations under the UN treaty. This scheme appears to uphold the terms of the Single Convention by preserving compliant interactions with respect to other countries to the same extent as before October 2018, while in reality Canada has broken the terms through the actions within its borders.

Despite Canada's intention to be a good neighbor and a compliant international actor, it still secured one of the largest first-mover benefits in the modern era. The most conservative estimates state that the net worth of Canada's cannabis industry reached four to six *billion* dollars<sup>25</sup> within *one year* of opening the door to recreational use.<sup>26</sup> Furthermore,

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21. Uruguay is in fact the first country to allow recreational use of cannabis. Simon Maybin, *Uruguay: The World's Marijuana Pioneer*, BBC NEWS (Apr. 4, 2019), <https://www.bbc.com/news/business-47785648>. However, due to long delays in regulation and a lack of political and economic clout, Canada is the first nation to produce a market for recreational cannabis. See Cannabis Act, S.O. 2018, c. 16 (Can.).

22. See Cannabis Act, *supra* note 21, at art. 61, 67.

23. *Id.* art. 62, ¶ 2 (establishing the regime for recreational use of cannabis within Canada).

24. *Id.*

25. See Diane Peters, *How Big Will Canada's Legal Cannabis Market Be?*, JSTOR DAILY (Nov. 28, 2018), <https://daily.jstor.org/how-big-will-canadas-legal-cannabis-market-be/>. To put this \$5 billion in context, Canada is the largest exporter of maple products in the world. See *Statistical Overview of the Canadian Maple Industry 2017*, CANADA.CA, <http://www.agr.gc.ca/eng/industry-markets-and-trade/canadian-agri-food-sector-intelligence/horticulture/horticulture-sector-reports/statistical-overview-of-the-canadian-maple-industry-2017/?id=1524607854094#alt> (last visited Jan. 10, 2020). In fact, Canada exports seventy-one percent of the world's maple syrup, and the value of maple exports, by government estimate, is worth 382 million dollars. *Id.* The cannabis industry is now worth almost twelve times the industry that Canada is so proud of and domineering over that they emblazoned its patron leaf on their national symbol to the world: their flag. Will we soon see a change in leaf upon the crimson and white?

26. Peters, *supra* note 25.

as is the effect of a licensing system, the industry has witnessed a few sophisticated actors, such as Canopy Growth and Aurora Cannabis, coming to possess most of the capital, resources, and revenue of the market, as opposed to a wide distribution with a large number of actors and a cramped field.<sup>27</sup> The relevance of this kind of market development will be picked up again in Parts III and IV.

## II. THE LEGAL RIGHTS THAT EXIST IN A PATENT

### A. What Is a Patent?

To understand why patents are at issue here, it is important to understand what a patent is, how one is acquired, and what the reasons are for its creation. A patent is a form of intellectual property—an abstract concept that exists in some physical form—the most common representations of which are patents, trademarks, and copyrights.<sup>28</sup> At its most basic level, acquiring a patent is very similar to acquiring a license from the government. You submit your invention, and if it meets certain requirements (addressed below), you have the right to prevent anyone in the jurisdiction (most commonly a country) where the patent is secured from “practicing” your invention.<sup>29</sup> This means no one can make, sell, or export your product, or follow the same method or process that you claim in your patent.<sup>30</sup> For instance, if you patent a screw and a method of producing screws, nobody else can make your screws or make screws using the method you claim. If a patent is granted, the application’s descriptions, claims, preferred embodiments, etc. are published publicly.<sup>31</sup>

This right to exclude others from your invention only lasts for a determinate amount of time. As per the requirements of the WTO’s TRIPS Agreement, this right lasts twenty years from the date the application is filed but cannot be enforced until the application is granted.<sup>32</sup> For example, in a typical scenario, if an application is filed in 2000 but is not approved until 2005, the patent owner can only enforce the patent from 2005 up to the relevant date in 2020.

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27. See Nathan Reiff, *Top Canadian Cannabis Companies by Revenue*, INVESTOPEDIA (Mar. 23, 2020), <https://www.investopedia.com/top-canadian-cannabis-companies-by-revenue-4587803>.

28. Agreement on Trade-Related Aspects of Intellectual Property Rights pt. 2, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299 [hereinafter TRIPS].

29. *Id.* art. 28, ¶ 1.

30. *Id.* (subject to the exceptions in articles 30–31).

31. *Id.* art. 29.

32. *Id.* art. 33.

Importantly, the right acquired from a patent is only a right to exclude. It does not grant the right to practice or sell the invention.<sup>33</sup> In some jurisdictions, such as the United States, an invention may be patented but still be illegal to practice. Furthermore, a patent does not prevent others from improving your invention, so long as they do not violate the patent in the process. In summation, acquiring a patent means that you, and those with your permission, are exclusively entitled to prevent others from practicing the specific invention described and claimed.

Enforcing this acquired right is another important topic. If someone is practicing your invention, or “infringing” your patent, you, as the patent holder, assignee, or contractually empowered licensee can bring suit to force that infringing party to cease their action and/or obtain damages you incurred from the infringement.<sup>34</sup> To infringe a patent, an alleged infringer must perform every aspect of your invention the way you claim in your patent or, based on the jurisdiction, in a substantially equivalent way. Therefore, if you hold a patent on an octagonal railroad cart, and someone sells a circular railroad cart—even though the design is essentially the same and possibly even taken from your patent—it does not infringe the patent, though a court may still impose an equitable remedy out of fairness.<sup>35</sup> To be clear, a patent is a narrow right, blocking only what you claim to have invented. But depending on what you invented, or how you word it, that narrow right can become fairly broad.

Successful patent applications in any country that is a member of the WTO, and thus bound by the TRIPS Agreement, must adhere to certain criteria. A patent application must be sent to the nation’s patent office and must:

- (1) be subject matter eligible, that is, it must be directed at something that can be patented, since many jurisdictions exclude from patentability such things as human DNA, plant species, and mathematical formulas;
- (2) be new, as in not something that already exists in the field;
- (3) contain an inventive step, or be “non-obvious,” meaning that someone in that trade would not see the invention you are claiming as a “no-brainer” change to what everyone already knew;

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33. *Id.* art 28.

34. *See id.* art. 44–45

35. *See* *Winans v. Denmead*, 56 U.S. 330, 340–41, 343 (1853) (establishing the foundation for the doctrine of equivalents in American patent law by allowing a device that did not literally infringe a patent to go to the jury to determine the “mode of operation in substance”).



- (4) be capable of industrial applicability (or utility), meaning that what you are patenting must be able to actually do something; and
- (5) describe the invention you claim in sufficient detail such that someone in the trade could read your application and, with a little work, make or perform your invention.<sup>36</sup>

What exactly these requirements act to include or exclude from patent protection varies greatly not only from jurisdiction to jurisdiction, but even within jurisdictions from year to year.<sup>37</sup> Due to these differences, it is sufficient for the purposes of this note to understand the general idea encompassed in each requirement.

These requirements illustrate the difficulty of acquiring a patent. This note may give the impression that any invention can become a patent, but typically only those inventions that move their industrial fields forward become patentable.<sup>38</sup> Further, there are a number of ways that each concept could be tweaked to prefer patents in certain fields more than others, but subject matter eligibility is usually the only place where patent law explicitly does or does not support a field of technology.<sup>39</sup>

The purpose behind these requirements embodies the principles of the patent system and the incentives it promotes at the expense of others. The patent system sacrifices competition to promote innovation, and the requirements of a patent are there to ensure that innovation really is promoted. By granting a patent, the innovator gains a limited-term monopoly and collects monopoly prices, since it is illegal to practice exactly what the innovator does.<sup>40</sup> Competition with the innovator must exist only by providing a similar product or method, if it is even possible

36. See TRIPS, *supra* note 28, art. 27, ¶¶ 1–3, art. 29, ¶ 1.

37. See, e.g., Robin Feldman, *The Pace of Change: Non-Practicing Entities and the Shifting Legal Landscape*, 18 CHAP. L. REV. 635, 635 (2015) (“In ordinary circumstances, legal doctrines evolve at a glacial pace . . . . Patent law is somewhat of an exception.”).

38. In the US, the non-obviousness requirement for many years required that for a device to be patented, it must be so far beyond the current state of the art that it represents a “flash of creative genius.” *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941).

39. Subject matter exclusions are explicitly listed by relevant field, see TRIPS, *supra* note 28, art. 27, whereas field-specific doctrines evolve over time within the other four requirements listed above but remain united in concept and goal to be achieved by each application. See, e.g., Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1156 (2002); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1576-79 (2003) [hereinafter *Policy Levers*]. Otherwise, patent law is meant to be adaptable to whatever field of technology or knowledge arises next, embracing “anything under the sun that is made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (citations omitted).

40. TRIPS, *supra* note 28, art. 28.

to compete,<sup>41</sup> but it cannot be the same product or method. This rather obtuse means of incentivizing behavior can be very inhibiting at times, especially if the patented invention is something in high demand.<sup>42</sup> However, sacrificing competition is thought to be justified by what an economy gains through the results of the following three incentives: the incentive to disclose, the incentive to invent, and the incentive to invest.<sup>43</sup>

The incentive to disclose is directly embodied by requirement (5) above, that you describe your invention in sufficient detail. Offering a patent to inventors is a strong motivator to get inventors to disclose their invention to the public,<sup>44</sup> rather than suppress it or choose trade secret protection, and to disclose how their invention works in a manner that a person having skill in the art could replicate.<sup>45</sup> While the quality, effectiveness, and even timing of disclosure often comes under fire,<sup>46</sup> the main point is that the public gets something, information, by giving up something else, competition.<sup>47</sup>

The incentive to invent is fostered through the patent system's offer of monopoly, which is "meant to raise the costs of free riding on another's creative efforts."<sup>48</sup> Entities have very little incentive to put their time and resources toward invention if that invention can be stolen and practiced by others who, since their only expense is that of appropriation, can charge less due to a lower cost of production.<sup>49</sup> There are many counterarguments to this premise. Some argue competition

41. In the case of pharmaceuticals, there are often drugs on the market that are the only drug able to treat a disease in a certain way or method, and until a generic comes out, it is impossible to compete with the holder of that patent.

42. See, e.g., Evan Ackiron, *Patents for Critical Pharmaceuticals: The AZT Case*, 17 AM. J.L. & MED. 145, 146 (1991) (explaining the difficulties of a monopoly when a critical drug is made more difficult to access); David W. Opderbeck, *Patents, Essential Medicines, and the Innovation Game*, 58 VAND. L. REV. 501, 502 (2005).

43. See Carlos Alberto Primo Braga, *The Economics of Intellectual Property Rights and the GATT: A View from the South*, 22 VAND. J. TRANSNAT'L L. 243, 254 (1989).

44. The incentive to disclose is the ability to obtain the right to exclude by disclosing. This argument is the basis for the remaining incentives, as a patent can only give one thing: the right to exclude. Therefore, the incentive to disclose, the incentive to invent, and the incentive to invest are all discussed in terms of what the public gets for the right to exclude. See Lisa Larrimore Ouellette, Note, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 531, 536-51 (2012).

45. *Id.* at 556-58.

46. See, e.g., Alan Devlin, *The Misunderstood Function of Disclosure in Patent Law*, 23 HARV. J.L. & TECH. 401, 403 (2010); Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 745 (2012) ("Disclosure theory cannot . . . support the modern patent system.").

47. But see Ouellette, *supra* note 44, at 556-57.

48. Gregory Day, *Competition and Piracy*, 32 BERKELEY TECH. L.J. 775, 789 (2017).

49. *Id.* at 790.

drove invention long before a patent system did.<sup>50</sup> Others argue the patent system does not incentivize invention so much as it incentivizes tinkering or improving just enough to acquire another patent.<sup>51</sup> Nonetheless, it is difficult to argue that the patent system does not at least provide a strong incentive to invent beyond what already exists in the market.

The incentive to invest is the most straightforward and honest theory. The patent system enables investors in research and development to recoup the funds that they lost in development through sales with monopoly pricing.<sup>52</sup> This idea lends itself to the medical field, where years of research and testing go toward the development of a drug before it can ever be put on the market.<sup>53</sup> Again, however, the salience of this incentive becomes questionable at the boundaries. Who is to say the investment would not have otherwise occurred, or that costs for the investment could not be funded through some other creative avenue? At its core, however, the incentive is one that is easy to grasp and easy to swallow, as the public is used to using this kind of reasoning when imposing monopolies, such as with public utilities.

All three of the incentives described above are desired because each is seen to result in the public, and society as a whole, getting the better half of the deal. They, in at least some sense, are proposed as reasons that the patent system advances the relevant field faster than the field would be advanced without the patent system, and by logical inversion that the field needs the patent system to move at that faster speed.<sup>54</sup> These incentives also work to show that a patent owner is not entitled to every benefit that may accrue to the public by the production of the invention; the patent owner may only acquire what others are willing to pay for the invention, and nothing more.<sup>55</sup> Therefore, since all benefits should not be internalized by the patent holder, it is designed by its very nature to allow only a well-defined and narrow benefit to accrue to the patent holder and a broader range of benefits to fall to the public.<sup>56</sup>

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50. This takes the form of first mover advantage arguments like difficulty of replication, among others. See *Policy Levers*, *supra* note 39, at 1585.

51. This kind of behavior is referred to as “evergreening.” See generally, Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 81 (2004).

52. See, e.g., Braga, *supra* note 43, at 260-61; *Policy Levers*, *supra* note 39, at 1602.

53. It takes twelve to fifteen years and over USD \$2.6 billion to get a new drug from the laboratory onto the pharmacy shelf. LEIGH ANN ANDERSON, *FDA Drug Approval Process*, DRUGS.COM (Apr. 13, 2020), <https://www.drugs.com/fda-approval-process.html>.

54. *Policy Levers*, *supra* note 39, at 1580.

55. See generally Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005) (noting a free-riding model of intellectual property).

56. See *id.* at 1049.

### *B. How the Patent Has Become a Tool for Globalization*

The trade-offs have been deemed beneficial by most of the international community, judging by the WTO's TRIPS Agreement, whereby any signatory must institute a patent system to their national order.<sup>57</sup> This requirement was seen to advance the benefits that intellectual property brings to markets and provide assurance for companies who depend upon intellectual property (for our purposes, patents) that they will be protected.<sup>58</sup> Thus, investment and commercial activity can now more easily flow into countries where before the lack of protection rendered prospective costs of business prohibitive.<sup>59</sup>

The TRIPS Agreement imposed strong, uniform requirements upon signatory countries that went a long way towards its goal of globalization, and unlike most international treaties, required enforcement mechanisms with teeth.<sup>60</sup> The most relevant requirement here is that the member patent office examining the patent may not discriminate "as to the place of invention, the field of technology and whether products are imported or locally produced."<sup>61</sup> This requirement allows great freedom to engage in business within member countries, and prevents a patent office from giving any advantage to its own citizens that it would not give to a foreigner, unless allowed under other treaties.<sup>62</sup> Further, if a patent is secured in the relevant country, a business does not need to set up a subsidiary within that country to obtain protection.<sup>63</sup>

To assist actors whose businesses cross international borders, the PCT was enacted by the World Intellectual Property Organization (WIPO) to reduce barriers when seeking protection for inventions.<sup>64</sup> The

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57. TRIPS, *supra* note 28, art. 27, ¶ 1; see generally Weerawit Weeraworawit, *The TRIPs Agreement: An Asian Perspective*, in 7 INT'L INTEL. PROP. L. & POL'Y 81-1 (Hugh C. Hanson ed., 2002) (explaining that some Asian countries have hoped for the kinds of patent protection provided for in TRIPS).

58. See Braga, *supra* note 43, at 249-58.

59. Weeraworawit, *supra* note 57, at 81-2 ("[A] major problem facing the foreign rights holders in the Asian countries is . . . that of infringing goods.").

60. *Id.* at 81-1 ("Enforcement is a novel feature not tackled before in the international agreements under the World Intellectual Property Organization. Enforcement provisions make TRIPs unique.").

61. TRIPS, *supra* note 28, art. 27, ¶ 1.

62. *Id.* art. 1, 3-5, 27.

63. See *id.* art. 27, ¶ 1 ("[P]atents shall be available and patent rights enjoyable . . . whether products are imported or locally produced.").

64. Patent Cooperation Treaty preamble, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231 ("Desiring to simplify and render more economical the obtaining of protection for inventions where protection is sought in several countries.") [hereinafter PCT].

PCT, while a treaty in name, acts more like an organization; as the WIPO describes the PCT:

The Patent Cooperation Treaty (PCT) assists applicants in seeking patent protection internationally for their inventions, helps patent Offices with their patent granting decisions, and facilitates public access to a wealth of technical information relating to those inventions. By filing one international patent application under the PCT, applicants can simultaneously seek protection for an invention in a very large number of countries.<sup>65</sup>

Importantly, filing an application to the PCT does not grant a patent international reach; the inventor must file a patent application and await approval in each jurisdiction they wish to pursue, and patents are still enforceable only in the countries where they are obtained.<sup>66</sup> Rather, filing your invention to the PCT, and denoting the countries where you seek patent protection, means that the PCT will provide information on the timeframe and likelihood of a patent being granted in that jurisdiction, along with certain assistance that varies based on the jurisdiction sought.<sup>67</sup>

### *C. How Companies Can Utilize Patents Internationally*

Both the TRIPS Agreement and the PCT reduce barriers to transferring business across national boundaries by easing the transference of the intellectual property needed. The PCT acts merely as a helping hand and information collection tool, while the TRIPS Agreement acts to ensure that intellectual property will operate largely the same from jurisdiction to jurisdiction and, importantly, will be protected with uniform minimum standards. Without commenting on the desirability of this uniform treatment throughout varying economies, it has never been easier for businesses to use their intellectual property to enter international markets.<sup>68</sup> In fact, under the

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65. *PCT—The International Patent System*, WIPO, <https://www.wipo.int/pct/en/> (last visited Jan. 12, 2020).

66. See PCT, *supra* note 64, art. 4.

67. *Id.* art. 11-12, 15-16.

68. That is, it has never been easier to enter the international market using legal structures. New inventions pour into markets all the time; it is not a new phenomenon. However, with TRIPS and PCT, companies can use trademarks, copyrights, and patents to

TRIPS Agreement and PCT, companies can file a patent in a country where they have no connections,<sup>69</sup> acquire a patent, and simply license the technology to (or bring infringement suits against) companies in the member country without needing to ever establish a presence.<sup>70</sup>

Notably, the PCT and many countries' patent systems require you to file your patent application within a restricted timeframe after it is first disclosed.<sup>71</sup> Thus, this transportation of patent rights must be loosely simultaneous throughout jurisdictions. However, the fact still remains that sophisticated actors who utilize the protections of the TRIPS Agreement can now acquire a monopoly to practice an invention in any country that is a signatory to the TRIPS Agreement or PCT. This usually reaches far short of global domination since companies generally file only in jurisdictions where they expect the benefit of using the patent to outweigh the cost of applying for one.<sup>72</sup> However, if the inventor files a patent in every country that has a viable market for that invention, especially if only a few markets exist, the inventor could create an economic climate close to a global monopoly.

### III. THAILAND AS A CASE EXAMINATION

On February 19, 2019, the Parliament of Thailand enacted an amendment to the Thai Narcotics Act of 1979, allowing the Thai Food and Drug Administration (FDA) to register and permit medicinal cannabis use, making Thailand the first Asia-Pacific country to legalize medicinal cannabis.<sup>73</sup> Designed to be a "New Year's gift" to the people of

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more easily move business to a new jurisdiction without the fear of legally supported appropriation and piracy.

69. TRIPS, *supra* note 28, art. 27 ("[P]atents shall be available and patent rights enjoyable without discrimination as to the place of invention . . . whether products are imported or locally produced.").

70. *Id.* art. 28 (subject to art. 30-31).

71. See PCT, *supra* note 64, art. 22, 39, ¶ 1 (That time frame varies from country to country, but the standard window of time that an inventor may wait before filing her patent through the PCT is 30 months after her priority date, which is either when she invented it or, in most countries, when she filed it); see also พระราชบัญญัติสิทธิบัตร พ.ศ. ๒๕๒๒ [Thai Patent Act B.E. 2522] (1979), <http://www.ipthailand.go.th/images/784/new.pdf>. (A patent application in Thailand must occur within eighteen months of an application in another jurisdiction).

72. For example, if a company does not do business in that jurisdiction, there is no need to expend time and money to acquire a patent. See Akshat Pande, *Strategies in International Filing of Patents*, 3 CONVERGENCE 125, 128-30 (2007).

73. พระราชบัญญัติ ยาเสพติดให้โทษ (ฉบับที่๗) พ.ศ. ๒๕๖๒, (Feb. 18, 2019), [http://www.ratchakitcha.soc.go.th/DATA/PDF/2562/A/019/T\\_0001.PDF](http://www.ratchakitcha.soc.go.th/DATA/PDF/2562/A/019/T_0001.PDF) [hereinafter Narcotics Act No.7 B.E. 2562].

Thailand, the liberalization of cannabis was welcomed by the populace, despite being a surprise to many.<sup>74</sup>

Along with the amendment came ministerial regulations detailing a complex and restrictive scheme of regulation designed with the end goal of a privatized and commercial cannabis industry heavily favoring Thai actors.<sup>75</sup> The regulations required entities to pair with a Thai government agency for the first five years of the market, and only Thai citizens or Thai companies could receive licenses. It is clear that, not only was the spirit of the legislation meant to establish a Thai-controlled cannabis infrastructure, but the letter of the law was as well.<sup>76</sup>

Just before the amendment was enacted, two foreign companies, the British firm GW Pharmaceuticals (GW) and Japan's Otsuka Pharmaceutical (Otsuka), submitted multiple patent applications for re-evaluation bearing directly on the production of drugs derived from cannabis, which would effectively monopolize the process or product claimed by the patent, to the exclusion of anybody besides the applicant.<sup>77</sup> Patent law, rarely the epicenter of public discussion, suddenly became just that.<sup>78</sup> Outrage and confusion ensued, prompting Thailand's National Council for Peace and Order to issue Order No. 1/2562, giving a legal basis to refuse cannabis-related patents.<sup>79</sup> Importantly, the order (issued January 28, 2019) stated that once the amendment to the Thai Narcotics Act of 1979 came into effect (February 19, 2019)<sup>80</sup> the ability to grant cannabis patents would return to the same extent capable before the order, being evaluated for the same requirements and under the same process as any other patent

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74. See Joe Gan, *A Mini-Guide to Cannabis in Asia*, AFN (Aug. 31, 2019), <https://agfundernews.com/a-mini-guide-to-cannabis-in-asia.html>.

75. Alan Adcock & Hughie Kellner, *Understanding Cannabis Liberalization in Thailand*, TILLEKE & GIBBONS (Sep. 3, 2019), <https://www.tilleke.com/resources/understanding-cannabis-liberalization-thailand>.

76. *Id.*

77. David Boyle, *Thai Officials Sought to Strike Down Medical Marijuana Patent Applications by Foreign Firms*, VOA NEWS (Jan. 15, 2019, 10:36 AM), <https://www.voanews.com/east-asia/thai-officials-sought-strike-down-medical-marijuana-patent-applications-foreign-firms>.

78. San Chaithiraphant, *Clearing the Air on Cannabis Patents*, BANGKOK POST (Nov. 22, 2018, 4:00 PM), <https://www.bangkokpost.com/business/1580154/clearing-the-air-on-cannabis-patents>.

79. คำสั่งหัวหน้าคณะรักษาความสงบแห่งชาติที่ ๑/๒๕๖๒ เรื่อง การแก้ไขเพิ่มเติมกฎหมายว่าด้วยสิทธิบัตรและมาตรการด้านสิทธิบัตรเป็นกรณีพิเศษ, [https://library2.parliament.go.th/giventake/content\\_ncpo/ncpo-head-order1-2562.pdf](https://library2.parliament.go.th/giventake/content_ncpo/ncpo-head-order1-2562.pdf) [hereinafter *Emergency Order*].

80. See *id.* at art. 8.

application in Thailand.<sup>81</sup> Thus, the order did little more than deny the foreign patent applications and then return the patent system to its natural state, able to accept applications for cannabis patents. This action by the Thai government is directly contrary to the spirit of the TRIPS Agreement and PCT, both of which Thailand has signed.

Once Thai pharmacies began filling prescriptions, a shortage of medicinal-grade cannabis swiftly arrived.<sup>82</sup> In needing cannabis both to prescribe to patients and for research and development, Thailand looked at every option available, even utilizing one hundred kilograms of cannabis from narcotics seizures.<sup>83</sup> With pressing need to create supply, the Thai government began issuing licenses for commercial participation in the cannabis market to Thai entities.<sup>84</sup>

One option available to the Thai government and allowed by the UN Single Convention was to import the seeds and products needed until production reached the levels needed to satisfy demand.<sup>85</sup> The Netherlands was the target country to acquire seeds from for one Thai hospital,<sup>86</sup> but one need not look too hard to find a willing Canadian supplier, many of whom show interest in the Thai market.<sup>87</sup> In this scenario foreign companies with supply would be doing business in Thailand. If a company is doing business in a country, it would benefit greatly from the protection its intellectual property affords in that country, such as trademarks and patents.

#### A. What Issue Presented Itself?

The reason the Thai public was so concerned over the cannabis patents filed by Otsuka and GW is that they represented the floor falling out from beneath them. The patents claimed both cannabinoid oil itself and a process for extracting the cannabinoid oil from the cannabis

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81. See *id.* at art. 4-5.

82. Cf. Kawewit Kaewjinda, *Thai Police Hand Over 100 Kilos of Marijuana for Research*, AP NEWS (Sep. 25, 2018), <https://apnews.com/7ab4fb291751490ab70b1b93d3421b6a/Thai-police-hand-over-100-kilos-of-marijuana-for-research>.

83. See *id.*

84. See Wirot Poonswan, *Thai Law: Cannabis Sales Licenses Now Up for Grabs*, KHAOSOD ENGLISH (Aug. 13, 2019, 12:13 PM), <http://www.khaosodenglish.com/news/2019/08/13/thai-law-cannabis-sales-licenses-now-up-for-grabs/>.

85. See Single Convention, *supra* note 9, art. 31, ¶ 1(b).

86. Richard S. Ehrlich, *Thailand Rolling out Its Legal Weed Wares*, ASIA TIMES (Aug. 14, 2019), <https://www.asiatimes.com/2019/08/article/thailand-rolling-out-its-legal-weed-wares/>.

87. See David George-Cosh, *Asia Emerging as New Frontier for Canadian Cannabis Players*, BNN BLOOMBERG (May 30, 2019), <https://www.bnnbloomberg.ca/asia-emerging-as-new-frontier-for-canadian-cannabis-players-1.1266310>.



plant, which, based on the way they sought protection, was very likely not patentable anyway.<sup>88</sup> However, if either Otsuka or GW received a patent, that patent would be an incredibly powerful tool in clearing competition in the upcoming market. Members of the Thai public saw their newly granted cannabis industry about to be swallowed up and taken from them by a foreign pharmaceutical company before they even had a chance to venture into it themselves.

This more than questionable “emergency order,” which temporarily blocked the possible grant of patents to Otsuka or GW, paid lip service to the allowances under the TRIPS Agreement,<sup>89</sup> but in reality discriminated based on the applicant’s nationality. The goal of the order was to avoid a scenario of foreign monopolization that could pop up in any market that is a signatory to the TRIPS Agreement and institutes some form of commercialization of cannabis. GW and Otsuka Pharmaceuticals did not do anything illegal; they had the right to apply for protection of their intellectual property and did so. The Thai government acted on legally questionable grounds,<sup>90</sup> but had a just reason to do so: attempting to avoid the exportation of an upstart cannabis market that would provide a lucrative cash crop to a highly agrarian Thai population.<sup>91</sup>

The scenario of recreational cannabis markets being promptly secured by foreign interests grows more and more likely as cannabis companies grow larger and more countries look to liberalize cannabis laws.<sup>92</sup> As of right now, Canada’s recreational cannabis market, the only

88. See Boyle, *supra* note 77.

89. Under TRIPS, a Member Nation may refuse a patent in order to protect “*ordre public* or morality.” TRIPS, *supra* note 28, art. 27, ¶ 2; see e.g., Timothy G. Ackermann, *Dis'ordre'ly Loopholes: TRIPS Patent Protection, GATT, and the ECJ*, 32 TEX. INT'L L.J. 489 (1997) (commentators’ discussions of exploitation by developing countries).

90. Notably, the Thai government was under pressure to act this way and attempted to follow the proper channels first. See generally Kanupriya Kapoor & Panarat Thepgumpanat, *Weeding Out Foreigners: Strains Over Thailand's Legalization of Marijuana*, REUTERS (Dec. 11, 2018, 11:30 PM), <https://www.reuters.com/article/us-thailand-cannabis/weeding-out-foreigners-strains-over-thailands-legalization-of-marijuana-idUSKBN1OB0D0>.

91. See, e.g., Chayut Setboonsarng, *Thailand Set to Deliver First Batch of Medical Marijuana*, REUTERS (Aug. 1, 2019, 7:47 AM), <https://www.reuters.com/article/us-thailand-cannabis/thailand-set-to-deliver-first-batch-of-medical-marijuana-idUSKCN1UR4LX> (“Thailand, which has a tradition of using cannabis to relieve pain and fatigue, has legalized marijuana for medical use and research to help boost agricultural incomes.”); Ehrlich, *supra* note 86 (“If existing drug laws are eventually relaxed, impoverished Thai villagers could collectively buy the refrigerator-sized extractors and profit from what is expected to be booming demand, they said.”).

92. See, e.g., Sintia Radu, *South Korea Approves Medical Marijuana*, U.S. NEWS (Dec. 12, 2018, 2:22 PM), <https://www.usnews.com/news/best-countries/articles/2018-12-12/south-korea-is-the-first-east-asian-country-to-legalize-medical-cannabis>; George-Cosh, *supra*

recreational cannabis market open to privatization,<sup>93</sup> supports the largest cannabis companies in the world with vast amounts of capital, competition, and the best incentives to research and develop products better than and before their competitors.<sup>94</sup>

The logic of the feared scenario is as follows: if there exists a jurisdiction that establishes a market that produces entities who innovate more than any other jurisdiction, then that jurisdiction will be state of the art by definition. When another jurisdiction opens up a market, until that market supports entities who are innovating on their own and at a level that surpasses or escapes the prior jurisdiction, all entities will either operate below state of the art or at the same level as the prior, more advanced jurisdiction. With that innovation comes the possibility for patent protection. As discussed in Part II, a patent is only enforceable in the jurisdiction (usually country) it is acquired in. However, with the binding rules of the WTO TRIPS Agreement and the helping hand of the PCT, a patent in one country can easily become a patent in another country. If a patent is acquired by the most innovative entities and exported to the less innovative jurisdiction, entities in the less innovative jurisdiction must pay to use that patent if they wish to operate at the state of the art or, alternatively, stop their business. Therefore, the monopoly of one jurisdiction can be imposed upon another jurisdiction, suppressing actors in the less advanced jurisdiction simply because the first jurisdiction got a head start.<sup>95</sup> This fear was present at the time the TRIPS Agreement was signed and is still present today:

[S]ome analysts interpret the growing concern of industrialized nations with intellectual property rights as an attempt to control the diffusion of new technologies . . . to freeze the existing international division of labor by way of the control of technology transfers . . . . [I]t is important to recognize that for a

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note 87 (Cannabis companies have looked at Malaysia, Thailand, New Zealand, and Australia when considering where to establish a “pan-Asian hub.”).

93. See Maybin, *supra* note 21 (Uruguay has been unable to create a privatized cannabis industry due to its approach to regulation and political clout with American banks and investors).

94. With the most lucrative market (recreational and medicinal) in the world, any extra amount of market share captured would be more valuable than in other markets, such as the limited medicinal markets in other jurisdictions, be it through excluding their competition (utilizing patents) or developing better products than their competition (which does not require, but is incentivized by, patents). See *Policy Levers*, *supra* note 39, at 1584-85.

95. See Braga, *supra* note 43, at 252, 256-57.

[lesser developed] country a reform designed to increase intellectual property rights protection will tend to generate a welfare loss at its initial stages. Because [lesser developed countries] are typically net importers of technology, a usual consequence of a more strict regime of intellectual property laws would be an increase in royalty payments to foreigners.<sup>96</sup>

As this plays out in today's evolving cannabis industry, if someone is going to make advancements in the cannabis industry, most of those advancements will be from the Canadian actors before Thai actors, due to the head start and the stronger expected return on innovation in the Canadian recreational market. The Canadian actors' innovations would be merely the product of the regulatory policies of their respective jurisdiction being amenable to innovation, and then importing those innovations into a jurisdiction that had not previously been amenable to innovation. Accordingly, the Canadian Patent Office has seen the effects of the innovative incentives: the Canadian market has produced and processed many patent applications.<sup>97</sup>

Further, even if Thailand prohibited any foreign actor from producing, importing, exporting, selling, or engaging with the Thai cannabis industry in any meaningful way, a foreign company could still force itself into the industry with the patent rights and structures available to it under the TRIPS Agreement.<sup>98</sup> Without ever having a physical presence, business can be generated by filing a patent and forcing others to license the use of the patent or face an infringement lawsuit.<sup>99</sup> Even if an action is not infringing, a patent could be used to threaten a lawsuit upon a new business<sup>100</sup> (every business in the Thai

96. *Id.* at 252, 256. See also Marci A. Hamilton, *The TRIPS Agreement: Imperialistic, Outdated, and Overprotective*, 29 VAND. J. TRANSNAT'L L. 613, 614 (1996) (calling the TRIPS agreement one of "most effective vehicles of Western imperialism in history.").

97. See Vanmala Subramaniam, *Cannabis Companies Race to Clinch an Edge in Pot Industry's Next Phase of Growth: Intellectual Property*, FINANCIAL POST (Nov. 9, 2018), <https://business.financialpost.com/cannabis/cannabis-companies-race-to-clinch-an-edge-in-pot-industrys-next-phase-of-growth-intellectual-property> (stating that there are currently 345 cannabis patents, but Canada does not publish patent applications until at least eighteen months after filing, and the recent uptick likely means many more patent applications are on their way).

98. See TRIPS, *supra* note 28, art. 27 ("patents shall be available and patent rights enjoyable without discrimination as to the place of invention . . . and whether products are imported or locally produced.").

99. See *id.*

100. It does well to note that this behavior, by certain actors, is a known lurch of the patent system, and those who do it are called non-practicing entities, or, more commonly, "patent trolls." See Adam Hayes, *Patent Troll*, INVESTOPEDIA,

market will be new) that likely would not possess the resources to defend a patent lawsuit (one of the most expensive types of lawsuits)<sup>101</sup> and would be forced to submit to a licensing arrangement or close its doors.<sup>102</sup>

This is so only because Canada decided to violate the terms of the UN Single Convention.<sup>103</sup> Thus, Canada was able to safely internalize every first-mover benefit available because the other 184 countries party to the Single Convention, and all other G7 countries, would still be prevented from establishing a recreational cannabis market. Canada may not have had any malicious motives; after all, it did ensure that its regulatory scheme governed international trade as mandated by the Single Convention,<sup>104</sup> and thus attempted to keep any acts that violate that treaty from causing other nations to violate it. This seems like the intention of a good neighbor who knows they have broken the rules, but the best intentions in the world do not alone alter the operation or availability of other global legal structures.

A solution needs to be found whereby local actors, who did not have a chance to innovate, are given an opportunity to establish themselves so they can innovate while foreign business and investment is also allowed to participate in the market, bringing their advantage of experience rather than legal monopoly. In the following section, I argue that a solution, unique to the cannabis market, can be found by imposing a small and circumscribed amendment to the TRIPS

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<https://www.investopedia.com/terms/p/patent-troll.asp> (last updated July 3, 2020). However, patent trolls, or non-practicing entities, do not practice their own inventions; they merely threaten a lawsuit and receive income therefrom. *Id.* If a business does practice their inventions, such as a Canadian cannabis company who simply is not allowed in the Thai market and could be losing business from those who are using their innovation, they are not deemed patent trolls but merely savvy users of their patents. And if suppliers in Thailand could be obstructed, foreign suppliers could draw business from the market.

101. In 2015, the median costs to pursue a patent suit to completion were \$600,000 when less than \$1 million was at stake, \$2 million when between \$1 million and \$10 million was at stake, and over \$3 million when more than \$10 million was at stake. See Lauren Cohen et al., “*Troll*” Check? A Proposal for Administrative Review of Patent Litigation, 97 B.U. L. REV. 1775, 1779 n.18 (2017) (citations omitted).

102. It is very unlikely that patents filed by foreign actors would completely consume the cannabis market, and there would certainly be some freedom to operate in the Thai cannabis market, such as using older techniques. However, the foreign patents would still act as major suppressants to the developing market, increasing transaction costs and imposing different consequences based on the regulatory scheme.

103. *Treaty Adherence*, *supra* note 11.

104. Canada’s licensing scheme requires exports to only occur for medicinal or scientific purposes, Cannabis Act, *supra* note 21, art. 62, ¶ 2, which is required under the Single Convention, *supra* note 9, art. 31, ¶ 1(b).

Agreement, as a resolution to the Canadian recusal from the UN Single Convention.

#### IV. SOLUTION

A simple solution to the problem is this: if a nation, or jurisdiction, provides for some new use of cannabis, be it medicinal, recreational, or scientific, the legislation or decision doing so should be accompanied by a law stating that patents may not be enforced as they relate to the subject matter legalized (cannabis strains, methods for ingesting/using, etc.) for some determinate amount of time, after which, patents may be acquired.<sup>105</sup> This, at first glance, may seem to some patent attorneys to be a drastic solution as opposed to, for example, compulsory licensing<sup>106</sup> or some other means that does not abscond with the rights demanded by international agreements. In support of my proposal, I will first explain why banning enforcement for a certain period yet keeping patent acquisition is desired, rather than banning patent acquisition altogether, as a means of highlighting the benefits that will accrue from the proposed change. Second, I will argue that imposing patent enforcement during the beginning stages of a jurisdiction's cannabis market development is difficult to justify, as the incentives that patent enforcement are supposed to bring about already exist in great strength, leaving little for the patent sacrifice to provide.

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105. There are many aspects of this solution that this note will not address. One of those aspects is the exact duration. All that is addressed is that duration should be less than the full term of a patent for reasons advanced herein. Further, it is assumed that the exact suitable duration is better adjusted to the economic capabilities of the relevant jurisdiction than uniformly imposed. Another aspect is how the solution should be implemented. This effect, of a patent being filed but not yet enforceable for a significant portion of its term of protection, is not uncommon in the pharmaceutical world where a drug may take ten to fifteen, even eighteen years to get approved, and is only enforceable for the remainder of the twenty years since it was filed, leaving possibly two years to do. Therefore, the solution proposed may occur on its own in some medicinal cannabis markets that have long drug patent examination periods, such as Thailand, specifically. That is why the solution proposed does not come with a specified form of implementation; the same goal may be achieved through controlling varying means and portions of the patent application process.

106. Subsidized licenses or compulsory licensing are, in the opinion of the author, both practical impossibilities and undesirable for the same equitable reasons. They allow companies that place themselves in nations that sluffed international obligations and instituted cannabis regulation more favorable to commercial action to reap the benefits from nations that later choose to relax the restrictions that were uniformly imposed by international consensus.

### A. What Are the Practical Effects of This Solution?

Patents may still be sought and possibly even acquired if the government so chooses. In this way, examiners will not introduce a new subject matter eligibility analysis changing the fundamental scheme of patentability. Rather, examiners will process the patent as normal, under conditions that actors within the patent system understand, reducing frustration with changing subject matter eligibility rules that are already ambiguous.<sup>107</sup> Further, if the promulgating body determines that the window invalidating patent enforcement should be shorter than the patent term would last, there is a benefit for all actors involved. The reasoning supporting a patent enforcement ban rather than a patent acquisition ban rests on five principles.

First, the entity filing the patent will still receive monopoly protection for its invention, albeit with a shorter window than usual. Thus, the incentive to file a patent and disclose the invention to the public still exists, and in a lucrative market such as that for cannabis, a smaller window of monopoly can be compensated by the higher value of that window, which could bring the perceived benefit from a patent back to usual levels.<sup>108</sup>

Second, if the invention is conceived during the enforcement ban, patent acquisition would allow inventions to be processed just as patents. By allowing patent processing before and after the ban, the legal regime will reduce administrative costs and increase legal certainty.<sup>109</sup> By comparison, a system where patent acquisition is

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107. With increasing rates of technology change, what an invention is, how it incorporates nature, and what the human contribution is, especially in the field of medicine, has evolved so quickly that either (1) old doctrines are of no help, *see* Allen K. Yu, *Within Subject Matter Eligibility—A Disease and a Cure*, 84 S. CAL. L. REV. 387, 391 (2011), or (2) determining whether something is human utilization of a natural principle in an invention, or simply claiming a natural principle as an invention, has become anyone's guess, *see generally* Hallie Wimberly, *The Changing Landscape of Patent Subject Matter Eligibility and Its Impact on Biotechnological Innovation*, 54 HOUS. L. REV. 995 (2017) (stating that determining eligible subject matter is becoming more difficult due to the legal framework surrounding natural law).

108. If (C) is the costs associated with a patent (filing fees, attorney's fees, maintenance, opportunity cost, etc.), (ROI) is the expected return on investment, (V) is the perceived strength of the market for that innovation, and (Y) is the number of years a patent may draw income from that market, an inventor will file a patent so long as  $(C)-(V)(Y)$  (ROI). Thus, either (V) or (Y) can fluctuate in a manner to compensate for the change in the other. Thus, even if the patent term (Y) is short, a strong (V) can return the expected benefit to a net positive sum. *See* Pande, *supra* note 72, at 128-30 (where the cost of filing a patent is weighed against expected return with the same variables and analyzed in the same way as laid out here).

109. The issues of obviousness and anticipation rely on analyzing the state of the art before the invention, and complex rules vary from jurisdiction on what can and cannot be

prohibited until after the ban would only result in a complex scheme whereby prior use, prior art, and other novelty requirements are handled.

Third, if actors are utilizing technology under such currently unenforceable but soon-to-be enforceable patents, they will have clear notice when they must cease such infringing action, and either close their doors or develop a compliant way of doing business. Thus, actors in the market can establish themselves and then innovate their own means of carrying out business or license it from those who do. This is the exact action patents are meant to incentivize, innovating new solutions to problems, even if the problem here is merely a legal one.<sup>110</sup>

Fourth, after the cannabis market sustains established actors, the cannabis market may find that the benefits of promoting more actors in the market<sup>111</sup>—the purpose of barring patent enforcement—are once again outweighed by the value of the incentives that the patent system provides.<sup>112</sup> Setting a time period for when patent enforcement will return ensures that the market is not devoid of the incentives once the initial “green rush”<sup>113</sup> wears off.

Fifth, this solution bans foreign monopolies, not foreign participation. This solution does not inhibit foreign companies from moving their business to local markets if the legal regime allows.<sup>114</sup> With the ability to move their intellectual property portfolio, foreign companies can still acquire a trademark and operate their business plan, benefitting from the experience acquired in the prior years of

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included in that discussion. Compare 35 U.S.C. § 102(b)(1) (2015) (allowing use of any material not disclosed by the claimed inventor within 12 months of filing) with European Patent Convention art. 54 (prohibiting use of sources not known to the public before the time of filing but allowing use of the inventor's own disclosure).

110. One clever argument for the patent system actually takes into account the benefit of innovating for no other reason than to avoid another's patent. See *Slimfold Mfg. Co. v. Kinkead Indus. Inc.*, 932 F.2d 1453, 1457 (Fed. Cir. 1991) (“Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose.”).

111. See *infra* Part IV(B).

112. See *supra* Part II(A).

113. The race for a place in the cannabis industry has now been coined the “green rush,” emphasizing how the clamor and prospective reward expected is just like those who clamored during California's gold rush of 1848-55. See *How the Green Rush Can Learn from the Gold Rush*, PRO TRADER TODAY, <https://www.protradertoday.com/report/how-the-green-rush-can-learn-from-the-gold-rush/1553> (last visited Jan. 16, 2020).

114. If your business model is dependent upon patent protection, then this could act as a huge inhibition. However, it would only prevent the actual business operations; you could still file your patents and pick up business operations as usual once enforcement is allowed again. It would be as if the market had simply opened up a certain time later minus the filing and maintenance costs of the patent.

operation. Foreign participants, just like domestic participants, cannot monopolize their innovations, and are thus placed on an equal footing.

### *B. Why Inhibit the Patent System at All?*

At the outset, it is important to note that this unorthodox solution is essentially a limited-term subject matter eligibility exclusion for enforcement only. Subject matter exclusions are admittedly rare.<sup>115</sup> However, a common basis for a subject matter exclusion is that the cost of giving a monopoly to a certain field is too high in proportion to the innovation it drives, such as patenting (monopolizing) a mathematical equation.<sup>116</sup> The solution proposed by this note rests its reasoning upon that same foundation. In a newly developing cannabis market, the patent system has nothing to incentivize what does not already exist without the ability to enforce patents, so the minimal return to the public is outweighed by the imposition of monopolistic practices.

The argument that patents are unnecessary is commonly advanced against the patent system in general. In the cannabis context, such allegations may have merit. The unique nature and history of the cannabis market have engendered strong incentives to innovate and expand the market, surpassing the motivations present in other areas of technology. The effects of such strong incentives are illustrated by the industry boom explained in Part I. A patent system is a government imposed legal structure that sacrifices competition for the promotion of certain incentives in the market. If the cannabis market, unlike other markets, already possesses those incentives to a sufficient degree, there is no logical reason for the government to suffer under the burden of a monopoly.<sup>117</sup>

Recall the three main incentives the patent system is said to promote: (1) the incentive to disclose (the public receives the benefit of the knowledge of the invention for the trade-off a limited monopoly on that knowledge), (2) the incentive to invent (the but-for idea that without the patent system, innovation would not occur), and (3) the incentive to invest (the system reduces the risk in the event of uncertain

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115. See TRIPS, *supra* note 28, art. 27 (requiring any field of technology conceivable to be patentable while excluding only “diagnostic, therapeutic and surgical methods for the treatment of humans or animals” and living things or their biological processes, unless they are micro-organisms, in which case they can be patented).

116. A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.” *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852).

117. Thomas Jefferson famously felt “the embarrassment of an exclusive patent” was a blight upon public governance, albeit a justified one. *Graham v. John Deere Co.*, 383 U.S. 1, 10–11 (1966).



returns). If the market already satisfies these incentives on its own or requires additional incentives other than those generated by a patent system, patent enforcement need not be imposed until the market cools off and such incentives are needed again in greater strength.

The incentive to disclose is satisfied if there is an existing patent application process and a benefit to filing a patent application or pursuing patent protection. Thus, if a patent can be obtained and some potential benefit exists in that acquisition, such as a monopoly of even a painfully shorter duration, the inventor is still incentivized to disclose his invention to the public.<sup>118</sup> Admittedly, removing the ability to enforce a patent reduces the incentive to disclose, since the patent monopoly is used to draw the disclosure into the public eye.<sup>119</sup> However, reducing the incentive to disclose merely increases the appeal of protecting an invention through trade secret protection, whereby the knowledge of how the invention works reaches the public later than it would through the patent system, if at all.<sup>120</sup> Since trade secret protection does not prevent competitors from using the invention (so long as the competitor arrives at that invention without stealing the trade secret) it does not contribute to market monopolization as strongly as patents do.<sup>121</sup> Therefore, even though the incentive to disclose is diminished, it is still sufficiently present because a patent's only alternative, trade secret protection, imposes fewer barriers to competition than does patent enforcement imposition.<sup>122</sup>

The incentive to invent exists in any market; it is one result of competition.<sup>123</sup> Usually, the patent system is seen to amplify that incentive, driving the industry forward faster than it would develop without the patent system and its reward for invention.<sup>124</sup> The goal of the solution proposed in this note is to prevent monopolistic practices

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118. See *supra* Part II(A) (discussing the benefits of disclosure and how it is motivated).

119. *Id.*

120. See Neil M. Goodman, *Patent Licensee Standing and the Declaratory Judgment Act*, 83 COLUM. L. REV. 186, 212–13 (1983).

121. See *id.* at 213 n.145.

122. While trade secret protection does offer certain short-term benefits, such as avoiding the cost of filing, see *id.* at 213, the long-term consequences are avoided by instituting only a short-term prohibition on patent enforcement as opposed to a long-term prohibition.

123. See *Policy Levers*, *supra* note 39, at 1604-08, 1618 (referencing theories of patent law which account for the incentives to innovate already in the market without patent protection, though how strong that incentive is deemed to be without patent protection varies from theory to theory).

124. See *id.* at 1600-10 (describing multiple theories of patent law which account for the incentives to innovate already in the market without patent protection yet advocate different ways in which the patent system could or does work to amplify those latent incentives).

from heading off competition before it can meaningfully develop, in the spirit of fair play. The incentive generated by the proposed solution is thus aimed at reducing barriers for new actors to enter and establish a market using known art as opposed to innovating their way into the market. While these are seemingly unanalogous incentives, under the proposed solution, allowing actors to enter the market actually drives the incentive to invent. Barring patent enforcement for a limited time creates an “invent-or-die” climate during the inception of the market. Without the threat of patent enforcement looming over an actor’s head, the actor can worry first about collecting the resources needed, utilizing state of the art practices, and then inventing around a patent to secure breathing room once the toll on patent enforcement is removed.<sup>125</sup> Thus, the market is still driven to invent, and new actors are thereby given a seat at the table.

The incentive to invest is more than satisfied in the recreational cannabis industry. Just as the statistics cited earlier in this note show, the expected returns on investments in an upstart cannabis market are mountainous.<sup>126</sup> Compare this to the pharmaceutical field, where research, development, and drug approval pathways impose a huge cost on innovation,<sup>127</sup> and the benefit is a drug that can only be sold to those who have a specific medical condition to which the drug can be applied. A patent system for the pharmaceutical field is deemed crucial by some, as the monopoly prices are a very helpful tool in adjusting prices to account for the cost of research and development.<sup>128</sup> For recreational cannabis markets, even under the most restrictive regulatory schemes where the costs of producing marketable cannabis products are comparable to drug registration, the consumer base is not limited to someone with an affliction; the consumer base is an entire subset of the

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125. This allowance would be similar to an extension of the doctrine of experimental use, which currently does not allow the use of a patent to invent around said patent. Extending the experimental use doctrine in this manner, while allowing valuable subsequent research and innovation to occur the moment the patent is disclosed, acts to severely undermine the value of the patent. See Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1075-76 (1989). Furthermore, expanding the experimental use doctrine in the context proposed in this paper would impose the loss of a weaker patent upon foreign companies who have already innovated and the gain of freedom to research upon anyone who wishes to enter the market. The calculation of whether the benefit of outweighs the cost thus displays a context specific nature.

126. See Peters, *supra* note 25; Reiff, *supra* note 27.

127. See ANDERSON, *supra* note 53.

128. See Jaime B. Herren, *TRIPS and Pharmaceutical Patents: The Pharmaceutical Industry vs. the World*, 14 INTELL. PROP. L. BULL. 43, 43-47 (2009) (explaining that the huge cost of developing a drug, if unrewarded by monopoly, might be so prohibitive as to prevent innovation in the field and thus prevent the treatment of diseases).

population of individuals who can voluntarily consume the product, so long as they meet the regulatory requirements, and one that has proven to be a substantial consumer base.<sup>129</sup> The expected return is enough, if not more than enough, to justify investment without monopoly protection.<sup>130</sup>

For medicinal cannabis, however, using the pharmaceutical industry's cost-benefit analysis of drug production points to needing a patent system. On present return alone, the incentive to invest is not as outweighed by expected return on investment as in the recreational market. However, investors are not ignorant of future prospects.<sup>131</sup> The shifting view of cannabis and the conspicuous financial success of Canada's cannabis market both point towards more countries opening up their legal regimes to cannabis liberalization.<sup>132</sup> If investors take this long view, they could see their investments as minimal returns for cannabis drugs in the short term and maximal returns once a recreational market opens, since the facilities that were producing drugs will have a massive head start over companies who seek to enter the market later.<sup>133</sup> In this way, medicinal cannabis markets are seen as an investing precursor to a recreational cannabis market, with the expected returns discussed above.

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129. Compare Peters, *supra* note 25, and Reiff, *supra* note 27, with *The Use of Diabetes Drugs in Canadian Public Drug Plans*, GOV'T OF CAN., <http://www.pmpb-cepmb.gc.ca/view.asp?ccid=1244&lang=en> (last visited Jan. 16, 2020) (showing that while the sales of all diabetes medications in Canada grossed \$1.2 billion CAD, the Canadian cannabis industry is worth four times that amount).

130. For proof of this point, look to the state of Colorado. In the United States, a patent on cannabis cannot be enforced even if acquired because the patent must be enforced in federal court, and the federal government still does not permit recreational cannabis use. Yet, even without patent enforcement, in the state of Colorado (population of 5.6 million) alone, in only the year of 2018, businesses sold \$1.5 billion USD of cannabis, meaning that the lack of monopoly protection did not stifle their incentive to invest in the market. *Marijuana Sales Reports*, <https://www.colorado.gov/pacific/revenue/colorado-marijuana-sales-reports> (last visited Jan. 16, 2020).

131. See, e.g., Jason B. Binford, *Beyond Chimerical Possibilities: The Meaning and Application of Adequate Assurance of Future Performance Under the Bankruptcy Code*, 18 AM. BANKR. INST. L. REV. 191, 212 (2010) (discussing how assurance of future performance is determined based upon the facts in the present); Thomas D. Johnston, *Prudence in Trust Investment*, 8 MICH. J.L. REFORM 491, 496-97 (1975) (discussing the legal duty of a trustee is dependent upon the ability to manage future risk when making current decisions); George-Cosh, *supra* note 87 (stating that cannabis companies are currently investing in establishing hubs for when future markets may open).

132. See Radu, *supra* note 92 (showing South Korea has also opened their doors); Gan, *supra* note 74 (explaining that along with Thailand and South Korea, Cambodia, Laos, and even Singapore have begun to consider cannabis legalization schemes).

133. See *supra* Part III(B).

*C. Balancing the Equities*

The debate in the background of this note is over a question of balancing two competing obligations: is potentially violating or amending one international agreement, the TRIPS Agreement, the appropriate response to violating another international agreement, the UN Single Convention? Normally, two wrongs do not make a right. However, even if the response is technically violative of a nation's duty under the TRIPS Agreement, activism in an international community should only be considered bad if the action taken inflicts more harm than good.<sup>134</sup> Importantly, the two treaties create a unique overlap: the entities who stand to benefit the most from enforcing the TRIPS Agreement come from countries that violated or greatly liberalized the UN Single Convention. The companies only have the inventions to benefit under the TRIPS Agreement because their main country of business took advantage of the UN Single Convention by legalizing cannabis, thereby legalizing their business.<sup>135</sup> Therefore, the harm imposed by the proposed solution's activism is internalized by those entities who committed the original bad act of violating the UN Single Convention. The benefit is no more than allowing local entities to engage in their national cannabis business, if only briefly, as though that original bad act had not yet occurred.

One additional closing point of support is that the TRIPS Agreement provides exceptions for Least Developed Countries (LDCs) in many cases. For instance, LDCs do not have to comply with TRIPS Agreement data exclusivity requirements until January 21, 2033.<sup>136</sup> This is only one of the exceptions for LDCs considered by the WTO.<sup>137</sup> In allowing these

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134. For an interesting case study of this concept, see generally Anthony L.I. Moffa, *Two Competing Models of Activism, One Goal: A Case Study of Anti-Whaling Campaigns in the Southern Ocean*, 37 YALE J. INT'L L. 201 (2012), wherein the author shows that the bad actions of the activist pirates against the Japanese whalers have actually been vindicated by the international community as an effective means of enforcing international law and norms.

135. This direct tradeoff is not completely true when countries that only allow medicinal cannabis are considered, as they have some incentive to develop cannabinoid drugs and their country did not violate the letter of the Single Convention. However, with the norm under the Single Convention being complete restriction, see *Countries Where Weed Is Illegal 2020*, *supra* note 18, the countries that sought to legalize medicinal cannabis still stand on shaky grounds.

136. Decision of the Council for TRIPS of 6 November 2015, *Extension of the Transition Period Under Article 6.1 of the TRIPS Agreement for Least Developed Country Members for Certain Obligations with Respect to Pharmaceutical Products*, ¶ 1, WTO Doc. IP/C/73 (Nov. 6, 2015).

137. See, e.g., Council for Trade-Related Aspects of Intellectual Property Rights, *Least Developed Country Members' Priority Needs Assessments: The Aid-For-Trade Initiative*

exceptions, the WTO recognizes that intellectual property enforcement is either not justifiably feasible in certain economies or bears too large of a burden upon those struggling economies.<sup>138</sup> Although Thailand is not an LDC, some countries hoping to open a cannabis market might be, and the WTO's recognition of the burdens of intellectual property enforcement lends context and moral weight to the current discussion. The international community should be concerned about a situation that enables companies from a G7 economy that flaunt international law to utilize intellectual property protections to monopolize an industry that smaller countries could otherwise look to as a way to gain significance in the global marketplace. For some countries, cannabis is seen as more than just a recreational drug. For countries such as Thailand, cannabis is seen as a way of providing wealth to the roughly forty-nine percent of the agrarian population.<sup>139</sup>

## V. CONCLUSION

Some accommodation needs to be made for countries who uphold their international obligations. It is difficult to defend the right of nations that ignore international law while requiring other nations to follow international law. Such a situation allows the nations that ignore international law to reap the benefits in the most distasteful form of free riding. Rather than imposing this burden upon the remaining nations and possibly forcing their hand to rebuke their international obligations, a more cooperative solution is to restructure the burden upon all nations, so that the benefits that accrue go to all rather than one. A temporary removal of the ability to enforce ill-gotten advantages, by barring patent enforcement, is the vehicle this note feels is most fitting for bringing about the necessary realignment of the overlaid network of obligations.

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and the Enhanced Integrated Framework, WTO Doc. IP/C/W/544 (Oct. 26, 2009) (recognizing the special circumstances for least developed countries in noting their need for technical and financial cooperation).

138. See Decision of the Council for TRIPS of 6 November 2015, *supra* note 136; Council for Trade-Related Aspects of Intellectual Property Rights, *supra* note 137.

139. For context, seventeen percent of the United States' population resides in agrarian regions. *Compare Thailand Population*, WORLDOMETER, <https://www.worldometers.info/world-population/thailand-population/> (last visited Jan. 16, 2020), with *United States Population*, WORLDOMETER, <https://www.worldometers.info/world-population/us-population/> (last visited Jan. 16, 2020).