THE END OF EXCLUSIVITY: TOWARDS A COMPENSATORY (PATENT) COMMONS

SHAMNAD BASHEER*

ABSTRACT

In a seminal piece penned over four decades ago, Calabresi and Melamed theorised a legal remedies framework that contrasted "property rules" with "liability" rules. Given the various woes associated with patent exclusivities, I draw on this influential "remedies" framework to suggest that we are on the cusp of a paradigm shift, where property rules are yielding to liability rules in a significant way. A number of factors are contributing to this paradigm shift, including in pertinent part, the onset of judicial "compulsory licenses" and ongoing royalties. I posit that courts in future are more likely to deny injunctions on the ground that patent injury is compensable in monetary terms. A recent decision of the US CAFC (Court of Appeals for the Federal Circuit) in Nichia v. Everlight is testament to this sentiment. I argue that developing countries in particular may find a compensatory liability model attractive, as it helps them retain the space for technological imitation, and blunt the egregious externalities associated with patent exclusivity in terms of healthcare costs and the like. In the ultimate analysis, a more pervasive compensatory liability regime takes us closer to the idea of what I label as a "compensatory (innovation) commons".

INTRODUCTION

In a seminal piece penned over four decades ago, Calabresi and Melamed theorized a legal remedies framework that contrasted "property rules" with "liability" rules.[1]

In its application to patent law, a property rule meant an entitlement in favor of the patent owner to

* Shamnad Basheer is the Honorary Research Chair Professor of IP Law at Nirma University and the Founder of SpicyIP, leading Indian IP blog. He wishes to thank Pankhuri Agrawal for excellent research assistance.

[1] Guido Calabresi & Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

exclude third parties from making, using or selling the patented invention through an injunction/restraining order. In contrast, a liability rule meant that there would be no right to exclude, but to merely claim commensurate compensation from a third party that trespassed into the patent domain.

Given the various woes associated with patent exclusivities, I draw on this influential "remedies" framework to suggest that we are on the cusp of a paradigm shift, where property rules are yielding to liability rules in a significant way. Indeed, I posit that some years from now, we will see the end of patent exclusivity, at least as we know it now.

I argue that the following factors, listed below, may be contributing to this gradual shift from an earlier era of "exclusive" intellectual property (IP) rights to one predominated by "liability" rules.

An increasing appreciation of the negative externalities associated with patents and market exclusivity, particularly the potential for price gouging and the blocking of downstream research.

An increasing fragmentation of the innovation ecosystem, where the inventor, the innovator and the marketer/distributor of the innovative products/services are often distinct entities who operate under licensing arrangements. As such, the earlier paradigm (particularly in the pharmaceutical industry) where the inventor, innovator and the drug marketer/distributor were the same (or very closely aligned in any case) which might have necessitated a strong exclusivity rule to enable the entity to control the market, may not hold good anymore. More importantly, the new paradigm (extensive fragmentation of players in the innovation ecosystem and licensing arrangements) means that there will be increasing instances of value being assigned to the IP in question.

Closely following from the above point, the increasing ease with which IP is valued and traded in the market and the emergence of a market for IP. This renders the IP in question less prone to being categorized as one whose replication/infringement will almost certainly result in irreparable injury (injury incapable of being adequately compensable through the payment of money). This sentiment was most recently borne out in *Nichia Corporation* v. *Everlight Americas, Inc*.,[2] where the Court refused to grant an injunction in view of the fact that the plaintiff patentee had licensed the invention to several third parties.[3] Such judicial decisions effectively amount to de facto compulsory licenses, as I will argue in a section below.

The sheer uncertainty associated with a patent, which erodes its potential to operate as a strong "property" right. Consequently, the need for a strong exclusivity rule becomes highly suspect.

The onset of judicial compulsory licenses and ongoing royalties.

In short, the exclusivity regime will erode over time and be replaced with an all-pervasive liability regime for the future, predicated upon what I term as a "compensatory commons."

Such a pervasive liability regime may be of particular interest to developing countries who struggle with IP induced excessive pricing, and strive to preserve their space for technological imitation and catch up. As such, these countries may wish to actively induce this paradigm shift, sooner than later.

---

[2] Nichia Corp. v. Everlight Americas, Inc., 855 F.3d 1328, 1341-42 (Fed. Cir. 2017).

[3] *See* Shamnad Basheer, *And the US Issues Yet Another Compulsory License*, SPICYIP (May 9, 2017), https://spicyip.com/2017/05/and-the-us-issues-yet-another-compulsory-license.html (last visited May 24, 2017) [https://perma.cc/NW4W-XG23].

I begin by considering the various negative externalities associated with patents. I then move to discussing why a compulsory licensing or a compensatory liability model may help redress some of these negatives. Lastly, I point to a plethora of factors that may be ushering in the paradigm shift from a strong exclusivity based regime to a liability based one.

I. PATENTLY NEGATIVE EXTERNALITIES

I argue that there are several factors underlying the gradual erosion of the exclusivity rule. Foremost, there is an increasing appreciation and manifestation of the various negative externalities associated with patent exclusivity, particularly in relation to the price of patented products.

As with all market exclusivities, the key disadvantage of patent engendered exclusivity is that it subjects the market to the control of a single firm. This, in turn triggers the risk of high monopoly prices, deadweight losses, and consequent loss of consumer welfare; a concern most egregiously witnessed in the pharmaceutical arena.[4] Further, patent exclusivities have also been condemned for their capacity for blocking downstream technological development, a concern most starkly felt in high technology sectors, such as IT and electronics. Both these aspects are discussed in detail below.

---

[4] *See* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 20 (2003) (explaining that a deadweight loss occurs when a seller with market power prices a product higher than the competitive price, thereby preventing some consumers who might have otherwise purchased it from so purchasing); *see also* F. M. Scherer, *A Note on Global Welfare in Pharmaceutical Patenting*, 27 WORLD ECON. 1127, 1141 (2004) (noting that deadweight loss is especially troubling in the context of pharmaceuticals, since some patients must forgo the use of drugs that would improve their health and sometimes even save their lives).

The healthcare market is often characterized by excessive prices and a consequent loss of consumer welfare. An egregious example is "Makena," a drug based on an existing form of a hormone (progesterone) that is used to reduce the risk of pre-term pregnancy. The hormone, titled "17P" had been available for many years for an average price of 10 United States Dollars (USD) from compounding pharmacies, which produced individual batches. KV Pharmaceuticals conducted trials on the drug, in which it obtained FDA approval, and began marketing it as Makena. KV Pharmaceuticals claimed that the trials were necessitated due to apprehensions of purity and the consistency in the quality of the drug obtained through compounding pharmacies. The approval of Makena gave KV Pharmaceuticals seven years of exclusive rights under the Orphan Drugs Act, subsequent to which it priced the drug at about 1,500 USD per shot; an increase of 14,900%, when compared with the equivalent drug obtained from compounding pharmacies.[5] The pharmaceutical company also issued "cease and desist" letters to pharmacies, warning them that they could no longer sell their versions of the drug.[6] In the wake of widespread protests against such price gouging, the FDA clarified that it "does not intend to take enforcement action against pharmacies that compound hydroxyprogesterone caproate based on a valid

[5] *See* Tracy Staton, *Senators demand FTC probe of KV's Makena Pricing*, FIERCEPHARMA (Mar. 21, 2011, 9:46 AM), http://www.fiercepharma.com/story/senators-demand-ftc-probe-kvs-makena-pricing/2011-03-21#ixzz1Jg9U25dc (arguing that given that the drug has to be injected every week for about 20 weeks, the effective price burden on patients was likely to be a significant U.S. $30,000) [https://perma.cc/JEF3-FLHC].

[6] Frank Pasquale, *After Makena: Could a Risk Corridors Approach Balance Incentives and Access?*, CONCURRING OPINIONS (Apr. 3, 2011), https://concurringopinions.com/archives/2011/04/after-makena-could-a-risk-corridors-approach-balance-incentives-and-access.html [https://perma.cc/D5Y4-AQRS].

prescription for an individually identified patient unless the compounded products are unsafe, of substandard quality, or are not being compounded in accordance with appropriate standards for compounding sterile products."[7]

Another more recent example of this patent price excess is Gilead's Sovaldi, which is priced at a whopping 84,000 USD for a full three-month course. In the wake of significant public protests across the world, Gilead reduced the price to 9,000 USD for a three month course in India and some other countries, such as Myanmar, Egypt, Kenya, etc.[8] Subsequently, the non-profit group I-MAK (Initiative for Medicines, Access and Knowledge) filed a pre-grant opposition against Sovaldi, citing lack of novelty and obviousness.[9] The opposition was initially successful, with the Patent Office rejecting the patent on the drug.[10] However, the Patent Office was forced to review the case again (following a remand from the High Court) and in the second instance it found that the application merited a

---

[7] *See* CMCS Informational Bulletin from Cindy Mann, Director, Center for Medicaid, CHIP and Survey & Certification (CMCS) (Mar. 30, 2011) https://downloads.cms.gov/cmsgov/archived-downloads/CMCSBulletins/downloads/Makena-CMCS-Info-Bulletin-03-30-2011.pdf [https://perma.cc/XVG9-4SP4].

[8] *See* Ketaki Gokhale & Robert Langreth, *Gilead Close to Sending $84,000 Drug to Poor Countries,* BLOOMBERG BUS. (Sept. 5, 2014), http://www.bloomberg.com/news/articles/2014-09-04/gilead-close-to-sending-84-000-drug-to-poor-countries [https://perma.cc/Q33M-UWMR].

[9] *See* P.T. Jyothi Datta, *Hepatitis C Drug: US Group Opposes Gilead's Patent Request in India,* THE HINDU BUS. LINE (Nov. 23, 2013), http://www.thehindubusinessline.com/companies/hepatitis-c-drug-us-group-opposes-gileads-patent-request-in-india/article5382772.ece [https://perma.cc/TJ9X-US4L].

[10] *See* Swaraj P. Barooah, *Breaking News: Patent Office Rejects Gilead's Hep C Drug Patent Application,* SPICYIP (Jan. 15, 2015), http://spicyip.com/2015/01/breaking-news-patent-office-rejects-gileads-hep-c-drug-patent-application.html [https://perma.cc/GNA4-3XXX].

patent, leading to an intense controversy around the independence of the Patent Office.[11]

Patent exclusivities also trigger the risk of an undersupplied market. Illustratively, during the bird flu outbreak, apprehensions were raised about Roche's ability to adequately supply the Tamiflu vaccine to all parts of the world that required the vaccine.[12] Roche initially protested any attempts to bring in other suppliers, and expressed its intention to remain the sole producer of Tamiflu.[13] Subsequently, "owing to widespread protests and threats of compulsory licensing, Roche committed, in principle, to a wide licensing scheme so as to facilitate adequate and timely supplies in the event of a likely pandemic."[14]

Lastly, patent exclusivities have the potential to decelerate or slow down innovative progress by "blocking" competition, particularly downstream research and improvements.[15] This potential for blocking has been

---

[11] Vidya Krishnan, *Gilead Gets Patent for Hepatitis C Drug Solvadi*, THE HINDU (May 10, 2016), http://www.thehindu.com/news/national/Gilead-gets-patent-for-Hepatitis-C-drug-Solvadi/article14310307.ece [https://perma.cc/CC98-RHA6].

[12] *See* Shamnad Basheer & Tahir Amin, *Taming of the Flu: Working through the Tamiflu Patents in India*, 1 J. INTELL. PROP. RTS. 113, 113 (2006) (noting that Roche was the exclusive licensee of Gilead which owned the patent covering "Oseltamivir").

[13] *Id.*

[14] *Id. See also* New Delhi, *Roche Sub-licenses Tamiflu to Hetero Drugs*, FINANCIAL EXPRESS (Dec. 24, 2005*),* http://www.financialexpress.com/archive/roche-sub-licenses-tamiflu-to-hetero-drugs/129542/ (Roche entered into a manufacturing agreement with an India generic drug manufacturer, Hetero in order to meet the world-wide demand for the drug) [https://perma.cc/8MJ6-LYN4].

[15] *See* Mark A. Lemley, *Rational Ignorance at the Patent Office,* 95 NW. U. L. REV. 1, 20 (2001) (discussing the rational ignorance at the patent office) (arguing "The patent system intentionally restricts competition in certain technologies to encourage innovation. Doing so imposes a social cost, though the judgment of the patent system is that

empirically demonstrated in a seminal piece by Merges and Nelson,[16] and later by Heller and Eisenberg.[17] In a more recent piece, Heidi Williams concluded that intellectual property restrictions on gene sequences contributed to a decline of 20-30% reduction in scientific research and follow-on research and development (R&D).[18]

While the term "blocking patents" is conventionally associated with dominant and subservient (dependent) patents, where the holder of the subservient patent requires

---

this cost is outweighed by the benefit to innovation…. There is a great deal of literature attempting to assess whether that judgment is accurate or not, usually without success.").

[16] *See* Robert P. Merges & Richard R. Nelson, *The Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 885-87, 888-91 (1990) (referring to broad patents covering technologies underlying Edison's light bulb, the Wright Brothers' airplane and Selden's automobile engine to buttress their claim that overbroad patents retarded technological progress). *But see*, John Howells, *Patents and Downstream Innovation Suppression – Facts or Fiction? - A Critique of the Use of Historical Sources in Support of the Thesis that Broad Patent Scope Enables the Suppression or Hindrance of Downstream Useful-Technology Development*, (2008) http://www.pucsp.br/icim/ingles/downloads/pdf_proceedings_2008/11.pdf [https://perma.cc/KV9P-Z8MU] (claiming that the analysis of historical examples by Merges & Nelson on this count is not sound).

[17] *See* Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anti-commons in Biomedical Research*, SCIENCE at 698–701 (May 1, 1998). *But see* Wesley Cohen, Richard R. Nelson, & John P. Walsh, *Protecting their Intellectual Assets: Appropriability Conditions and Why US Manufacturing Firms Patent (or not)*, NBER WORKING PAPER SERIES (2000), http://www.nber.org/papers/w7552 [https://perma.cc/X64H-BZAQ] (demonstrating that some of the fears around the potential for blocking in the biotechnology context, did not play out in actual practice).

[18] *See* Heidi L. Williams, *Intellectual Property Rights and Innovation: Evidence from the Human Genome*, 121 J. OF POL. ECON. 1, 24 (2013) (noting that: "*Across a range of empirical specifications, I find evidence that Celera's IP [over gene sequences] led to reductions in subsequent scientific research and product development on the order of 20–30 percent.*").

a licence from the holder of the dominant patent and vice versa,[19] I use the term "blocking" in this paper to refer more broadly to any situation where an upstream patent blocks or potentially blocks any downstream invention, whether or not the later invention is itself patented.[20]

One way to blunt the potential impact of the above negative externalities is to shift away from an exclusive property centric patent regime to a liability based one, where third parties can enter the market and supply cheaper competitive wares at lower prices. It is here that compulsory licensing norms become particularly relevant.

A. Compulsory Licensing/Compensatory Liability

In essence, compulsory licenses are regulatory tools aimed at engendering more competition, increasing supplies and reducing prices in an exclusive patent centric market. Most patent regimes provide for such norms in one way or the other. Illustratively, section 84 of the Indian Patents Act, 1970 stipulates that a compulsory license

---

[19] *See* Suzanne Scotchmer, *Patent Quality, Patent Design, and Patent Politics*, Remarks prepared as a member of the Economic Advisory Group, at 11, European Patent Office, Munich (Dec. 10, 2004), http://ist-socrates.berkeley.edu/~scotch/Scotchmer_epo.pdf [https://perma.cc/MZ2C-7GGS]; *see also* Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 81–82 (1994). The blocking patent impasse could be redressed by compulsory licensing provisions; illustratively, *see* § 91 of the Indian Patents Act, 1970 which permits a follow-on patentee to secure a compulsory license from the parent patent owner and work her patented improvement, without threat of legal liability.

[20] MERCK KGAA v. Integra Lifesciences I, Ltd., 545 U.S. 193, 206 (2005) (where the facts illustrate the notion of blocking and hold up is particularly prevalent in the context of "trolls"); *see also* Troy L. Gwartney, *Harmonizing the Exclusionary Rights of Patents with Compulsory Licensing*, 50 WM. & MARY L. REV. 1395 (2008).

could be granted if the patentee charges an excessive price or does not meet the reasonable requirements of the public by *inter alia* failing to ensure adequate supplies of the product in the market.[21]

The above provision was triggered in a controversial compulsory licensing dispute pitting Bayer, a German multinational pharmaceutical company, against Natco, an Indian generic company. A brief discussion on this case may help foreground the discussion around the optimality, or otherwise, of compulsory licensing norms.

Natco had petitioned the Indian Patent Office arguing that Bayer's price for its patented anti-cancer drug, Nexavar ,was exorbitant and unaffordable to a large segment of the patient population (Rs 2.8 lakhs), and that it was willing to supply the drug at less than 1/30th of the patented price i.e. at Rs 8800.[22] The Patent Office found in favor of Natco, holding the following listed below:

> 1.Bayer's price could not be said to be "reasonably affordable." It charged Rs 2.8 lakhs for a month's supply of the drug, whereas Natco was willing to supply the same at Rs 8800 per month. Although the Patent Office did not specify as to what metric it used to arrive at the "affordability" of the drug, it noted that since Bayer supplied the drug to only 2% of the

[21] *See* Indian Patents Act of 1970 § 84.

[22] In July 2011, Natco, an Indian generic manufacturer applied for a compulsory licence in respect of Bayer's patent covering an anticancer drug, Sorefanib Tosylate. *See* Patent No. 215758 (The Compulsory Licence Application No. C.L.A. No. 1 of 2011 from M/S. Natco Pharma Ltd.) https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxzcGljeWlwZmlsZXN8Z3g6NDFlNjAxZDIyOTY0MjMyMg [https://perma.cc/TS2B-CDCA] (last visited Dec. 26, 2016); Khomba Singh, *Natco Pharma Files India's First Compulsory Licensing Plea*, THE ECONOMIC TIMES (Aug. 3, 2011), http://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/natco-pharma-files-indias-first-compulsory-licence-plea/articleshow/9462939.cms [https://perma.cc/2X7G-M8J4].

> patient population (approximately 8000 patients required the drug), the reasonable requirements of the public with respect to the patented drug (Nexavar) could not have been said to have been met.[23]
>
> 2.Since Bayer did not manufacture the drug in India, but merely imported it, the Controller held that the patent had not been "worked in the territory of India."[24]

This decision was then largely upheld by the Intellectual Property Appellate Board (IPAB)[25] as well as the Bombay High Court[26] to which the decision was appealed.[27]

For the sake of convenience, I refer to the above framework as a "conditional" compulsory licensing regime, where the license is granted upon the establishment of certain specific conditions.

Alternatively, one could provide for more a pervasive compensatory liability regime, where the license would be made available as a matter of right to an

---

[23] Natco Pharma Ltd. v. Bayer Corp., (2012) Controller of Patents, Mumbai, Compulsory License Application 1 of 2011, No. 215758, 1, 20-23 (on the reasonable requirements of the public not being met), 35-36 (on the drug not being available to the public at a reasonably affordable price).

[24] *Id.* at 39-45.

[25] Bayer v. Natco, Order No. 45 of 2013, (Intellectual Property Appellate Board, Chennai, Mar. 4, 2013).

[26] Bayer v. Union of India, Bombay HC Writ Petition 1323 of 2013 (July 15, 2014) https://indiankanoon.org/doc/28519340/ [https://perma.cc/PKV4-T9YY].

[27] The Controller's order dated March 9, 2012, stated that Natco ought to pay 6% of its net sales to Bayer as royalty. The Controller fixed this rate based on a WHO UNDP Publication. Bayer argued that its R&D cost ought to be taken into account in order to fix the royalty rate. However, despite being called on to submit these costs, Bayer failed to do so, leading the patent controller to rely on the UNDP figures. Natco Pharma Ltd. at 59-60.

interested party without any need to demonstrate the existence of specific grounds, such as excessive pricing by the drug originator.

Such a regime is not without precedent, as it was a part of the erstwhile Indian patent regime as a "license of right" for food/medicine related inventions. More specifically, section 87 of the Indian Patents Act 1970 (when it first came into force), provided that inventions pertaining to food and medicine would be deemed to be endorsed with a "licence of right" after a period of three years from the date of sealing the patent. Any person interested in working such a patented invention could do so without the need to establish any other grounds such as excessive pricing, or the fact that patented invention did not satisfy the reasonable requirements of the public etc.

Only the terms and conditions of the license were to be set by the Controller if the parties applied to him/her upon being unable to agree on them.[28] Even here, in order to prevent against delays, the Controller had the power to permit manufacturing, pending the settlement of the terms and conditions of the license.[29] However, today, such a regime arguably runs the risk of falling foul of WTO Agreement on Trade Related Intellectual Property Rights (TRIPS), which requires that compulsory licenses be issued on a "case by case basis."[30]

In fact, during the TRIPS negotiations, India tried very hard to preserve the space for this type of a near automatic compulsory licensing regime, but was ultimately

[28] The Patents Act of 1970 §§ 88(2)-(3).
[29] *Id.* at § 88(4).
[30] General Agreement on Trade-Related Aspects of Intellectual Property, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 333 [hereinafter TRIPS].

unsuccessful.[31] It was therefore forced to do away with licenses of right through the Patents (Amendment) Act of 2002.[32]

B. TRIPS Compliance:

In view of the fact that TRIPS does not circumscribe the grounds for compulsory licensing,[33] member states are largely free to articulate their own grounds. However, as noted earlier, a license of right regime or one that encompasses a near automatic compulsory licensing regime will likely contravene this mandate. Under TRIPS, compulsory licenses have to be issued on a "case-by-case basis."[34]

How then can member states provide for a more pervasive liability regime, where compulsory licensing is more the norm than the exception? I argue that member states could craft a de facto compulsory licensing regime through a strategic application of judicial standards governing the grant of an injunction/restraining order.

---

[31] Jayashree Watal, *Patents: An Indian Perspective,* in THE MAKING OF THE TRIPS AGREEMENT 305 (Jayashree Watal and Antony Taubman eds., 2015) https://www.wto.org/english/res_e/booksp_e/trips_agree_e/chapter_16_e.pdf [https://perma.cc/2W2N-C2F7]. *See also* Janice M. Mueller, *The Tiger Awakens: The Tumultuous Transformation of India's Patent System and the Rise of Indian Pharmaceutical Innovation*, 68 UNIV. PITT. L. REV. 491 (2007).

[32] The Patents (Amendment) Act, 2002, §39.

[33] Whatever the grounds chosen, countries are to comply with the procedural pre-requisites laid down by TRIPS, such as the fact the applicant must first negotiate a voluntary license with the patentee prior to seeking a compulsory license, unless the patent is required in a case of an emergency or a national urgency. Article 31 of TRIPs spells out the remaining threshold requirements for the use of a patent without the authorization of the rights holder.
See TRIPS art. 31(b).

[34] TRIPS art. 31(a).

C. Judicial Compulsory Licenses:

Common law jurisdictions, such as the United States (US) have seen an increase in de facto compulsory licensing norms by the judiciary.[35] I argue that this trend will only accelerate in the coming years, paving the way for a more pervasive liability regime. But first, what exactly does such a de facto norm entail?

In a number of common law jurisdictions, such as the United States and the United Kingdom, an injunction or restraining order is not an automatic entitlement Rather, a plaintiff patentee has (at the interim stage), to prove the following to the satisfaction of the court:[36]

A prima facie case in favor of the plaintiff;

That in the absence of an injunction, the plaintiff would suffer irreparable injury; and

---

[35] Illustratively, in the United States, after the landmark decision in the *eBay case*, courts have increasingly refused injunctive relief, and granted "ongoing royalties" instead. *See* z4 Techs. Inc. v. Microsoft Corp., 434 F. Supp. 2d 437, 444 (E.D. Tex. 2006); Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1314 (Fed. Cir. 2007). An empirical study states that in 30% of over 75 cases in the US (during May 15, 2006-June 15, 2009), injunctions were refused. Mark J. Feldstein, *Permanent Injunctions and Running Royalties in a Post eBay World*, 16 INTELL. PROP. TODAY 34, 46 (2009). *See also* Michael C. Brandt, *Compulsory Licenses in the Aftermath of eBay Inc. v. MercExchange LLC: The Court's Authority to Impose Prospective Compensatory Relief for Patent Infringement*, 17 THE FED. CIR. B. J. 699, 704 (2008); Christopher B. Seaman, *Permanent Injunctions in Patent Litigation After eBay: An Empirical Study*, 101 IOWA L. REV. 1949, 1983 (2016).

[36] *See* American Cyanamid v. Ethicon Ltd. [1975] AC 396 (HL) 407–08 (UK). *See also* Hybritech Inc. v. Abbott Labs., 849 F.2d 1446, 1451 (Fed. Cir. 1988). A similar framework is followed in a number of other common law countries.

That the balance of convenience lies in favor of the plaintiff.[37]

In addition to the above, some countries, such as the United States also provide for a fourth requirement—that an injunction ought not to issue if it contravenes the public interest. [38]

It is to be noted, that the above criteria pertain to the interim stage where a plaintiff patentee requests speedy interim relief from the court, pending final trial and adjudication of the various claims. It is thus that the court merely asks if the plaintiff has been able to demonstrate a "prima facie" case.[39]

There is some divergence between various countries on whether the above criteria applies at the final stage as well. In other words, once it is established, after a full-fledged trial that the patent is valid and infringed should the court grant the injunction as a matter of course, or still condition it on the establishment of criteria such as "irreparable injury?"

US courts are known to insist on the latter. Namely, save the establishment of the "prima facie" limb (which no

---

[37] The inconvenience occasioned to the plaintiff as a result of the non-grant of an injunction would be greater than the inconvenience occasioned to the defendant if the injunction were to be granted.

[38] *See* eBay, Inc. v. MercExchange, L.L.C., 547 US 388, 391 (2006). However, the UK does not recognize this as a separate ground, but rather as a part of the "balance of convenience" standard. *See* GORDON ANTHONY, UK PUBLIC LAW AND EUROPEAN LAW: THE DYNAMICS OF LEGAL INTEGRATION 140 (2002), ("The court must also take into account 'many other special factors' before deciding whether it should, on the 'balance of convenience', grant the injunction. One such 'other special factor' in proceedings against public authorities is the broader public interest in allowing the public authorities to perform their duties - see e.g., Smith v. Inner London Education Authority [1978] 1 All ER 411, 422").

[39] *See* Shamnad Basheer, Jay Sanklecha & Prakruthi Gowda, *Pharmaceutical Patent Enforcement: A Developmental Perspective*, *in* PATENT LAW IN GLOBAL PERSPECTIVE 603, 617-18 (Mar. 2014).

doubt becomes redundant after a full-fledged trial), all other conditions for the grant of an interim injunction apply at the final stage as well, namely:

1. That, absent an injunction, the plaintiff would suffer irreparable injury;
2. That the balance of convenience lies in favor of the plaintiff; and
3. That the grant of an injunction does not contravene public interest.

In *Nichia Corporation v. Everlight Americas, Inc*., the Court made it clear that all of these pre-requisites have to be cumulatively satisfied and none can be dispensed with. [40]

Amongst the pre-requisites for the grant of an injunction as outlined above, the irreparable injury limb

[40] *See* Nichia Corp. v. Everlight Americas, Inc., 855 F.3d 1328, 1341-42 (Fed. Cir. 2017). The court further observed that although the patent was a valid one and infringed, an injunction would not issue; rather the patentee would be awarded damages in the nature of ongoing royalties. *See* Basheer, *supra* note 3. In the UK however, it would appear that the courts are more inclined to grant injunctions or restraining orders at the final stage if the patent is found valid and infringed. In particular, the "public interest" prong is applied more sparingly. *See* Chiron Corporation v. Organon Teknika, [1995] FSR 325, where the court noted: "…the court should in appropriate circumstances take into account the interests of persons who would be affected by the grant of the injunction. That may involve considering the interests of the public…". However, in the particular set of facts before it, it went on to caution thus: "…the mere fact that the grant of an injunction to restrain infringement of a patent will restrict competition and tend to maintain prices, does not suggest that the injunction is contrary to the public interest. It is in the public interest that patent monopolies be enforced with the resulting restrictions upon competition that are inherent in the patent system. It is also necessary to bear in mind that the legislature envisaged that in certain situations the public interest required a fetter upon patent rights and took appropriate steps to safeguard the interests of the public."

will likely rate as the most important, from the perspective of liability rules.[41]

Following the landmark ruling in *eBay* v. *MercExchange*, US courts have categorically held that "irreparable harm" cannot be presumed, but will have to be proven by a patent owner seeking an injunction.[42] Similarly, the Canadian Federal Circuit held that a mere assertion of irreparable harm (such as injury to goodwill), without more, will not suffice.[43]

While it is difficult to point to a precise definition of "irreparable injury," one could broadly state (from various court rulings) that injury is "irreparable" when it is incapable of being fully compensable in monetary terms.[44]

---

[41] *See* Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982), (holding, "The Court has repeatedly held that the basis for injunctive relief in the federal courts has always been irreparable injury and the inadequacy of legal remedies." In Nichia Corp. v. Everlight Americas, Inc., 855 F.3d 1328 (Fed. Cir. 2017), the Court endorsed the findings of *Ebay v. Merck* more forcefully and held that the patentee has to compulsorily satisfy all four equitable factors for grant of an injunction and especially prove irreparable harm.

[42] eBay, Inc. v. MercExchange, L.L.C., 547 US at 391; Robert Bosch LLC v. Pylon Mfg. Corp., 659 F.3d 1142, 1149 (Fed. Cir. 2011).

[43] Pfizer Ireland Pharmaceuticals v. Lilly Icos LLC, 2004 F.C. 223 (Can.) (rejecting Pfizer's claim of irreparable harm of loss to brand equity and possible backlash by consumers and physicians because there was no convincing evidence presented in this regard and the harm claimed was of a purely speculative nature).

[44] *See* House of Sight & Sound, Inc., v. Faulkner, 912 P.2d 357, 361 (Okla. Civ. App. 1995) (holding that injury is irreparable when it is incapable of being fully compensated by monetary damages, or where the measure of damages is so speculative that arriving at an amount of damages would be difficult or impossible); Morton v. Beyer, 822 F.2d 364, 372 (3d Cir. 1987) (holding that the injury must be of a peculiar nature, so that compensation in money cannot atone for it). For UK cases, *see* Hoffmann LaRoche & Co. Ltd v. Secretary of State for Trade and Industry, [1975] A.C. 295 (HL) 355 (holding irreparable damage means that the money obtained after trial may not compensate the plaintiff adequately).

At one end of the spectrum, one might argue that in today's mercantilist market, money can buy you almost everything, save love.[45] Therefore, it follows that almost everything is compensable, barring a narrow spectrum of legal injuries (such as a violation of a constitutionally guaranteed right to equality).[46] But even without trudging down the extreme frame outlined above, one might reasonably argue that a patent right is predominantly a "commercial" or "market oriented" property interest and is therefore compensable in monetary terms. Indeed, numerous court decisions have successfully computed damages occasioned to patentees as a result of infringement.[47]

Courts have even worked out adequate licensing fees in cases where the damages estimate was based on loss of potential reasonable royalties.[48] If "money" damages for past infringement have been computed in numerous cases, it borders on the specious to then argue that an injurious future infringement cannot be compensated adequately with money.

In particular, US courts have relied on evidence of prior licensing to hold that the use of the patent by an unauthorized third party can well be compensated in

---

[45] "Can't Buy Me Love" is a song composed by Paul McCartney of the famed Beatles band. [https://perma.cc/J5YJ-RKBG] THE BEATLES, CAN'T BUY ME LOVE (Capitol Records 1964).

[46] *See* Douglas Laycock, *The Death of the Irreparable Injury Rule*, 103 Harv. L. Rev. 687, 706-08 (1989-90) (who lists some of the losses that cannot be compensated, particularly "unique and scarce tangible property" (e.g. heirlooms, work of art), various forms of intangible rights (e.g. voting rights, religious liberty, clean air, water etc), physical injury to persons, emotional distress).

[47] *See* Doug Rendleman, *The Inadequate Remedy at Law Prerequisite for an Injunction*, 33 U. FLA. L. REV. 345, 349, 351 (1981).

[48] In the US at least, such royalties were labeled as "ongoing royalties" and were awarded in a number of cases where the patentee was either a troll or a patent assertion entity (PAE) or where the patentee and infringer were not in direct competition.

monetary terms.[49] Illustratively, in *Nichia Corporation* v. *Everlight Americas, Inc.*,[50] the appellate court endorsed the findings of the lower district court, noting:

> ...to the extent that the court found that Nichia's prior licenses weighed against a finding of irreparable harm, we countenance that approach. While evidence of licensing activities cannot establish a lack of irreparable harm per se, that evidence can carry weight in the irreparable-harm inquiry. …. The court found that several of Nichia's licenses were to "significant competitors" who posed "major threats" to Nichia's flagship products. Nichia, 2016 WL 310142, at 66. And the court found that these licenses changed the market by making available "multiple low-priced non-infringing alternatives." Id. These findings, the court concluded, supported a finding that "Nichia ha[d] failed to establish it will suffer irreparable harm in the absence of an injunction." Id

The upshot of the above discussion is this: the "irreparable injury" threshold offers considerable scope for countries to institute de facto compensatory liability rules. Further, the "public interest" prong also provides some leeway for judicial compulsory licensing, in appropriate cases, such as *eBay*.[51] Despite some resistance to the categorization of such cases as a form of compulsory licensing,[52] it is hard to conceptually view otherwise, given that the patentee has no say in determining whether or not the infringer gets to use/work her patent. As Justice Rader

---

[49] Polymer Techs., Inc. v. Bridwell, 103 F.3d 970, 974 (Fed. Cir. 1996); Illinois Tool Works, Inc. v. Grip-Pak, Inc., 725 F. Supp. 951 (N.D. Ill. 1989), aff'd, 906 F.2d 679 (Fed. Cir. 1990).

[50] Nichia Corp. v. Everlight Americas, Inc., 855 F.3d 1328, 1341-42 (Fed. Cir. 2017).

[51] eBay, Inc. v. MercExchange, L.L.C., 547 US 388, 391 (2006).

[52] S*ee* Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1313, n. 13 (Fed. Cir. 2007).

rightly notes, "[d]istrict courts have considerable discretion in crafting equitable remedies, and in a limited number of cases, as here, imposition of an ongoing royalty may be appropriate. Nonetheless, calling a compulsory license an "ongoing royalty" does not make it any less a compulsory license."[53]

Judge Richard Posner, often perceived as one of the founding fathers of the law and economics movement[54] denied an injunction in a high technology case, on the simple ground that the costs of the injunction was likely to far outweigh its benefits.[55] In pertinent part, he noted, "compulsory license with ongoing royalty is likely to be a superior remedy in a case like this because of the frequent disproportion between harm to the patentee from infringement and harm to the infringer and to the public from an injunction."[56]

Given the sheer costs imposed by an excessively formalist exclusivity engendering patent system (as demonstrated in the first part of this paper),[57] one can imagine many other instances where such a cost benefit analysis would tilt the public interest against the patentee and pave the way for the evolution of a more pervasive compensatory liability regime.

---

[53] *Id.* at 1316.
[54] Michael J. Perry, *Response: The Law Professor as Moral Philosopher*, 11 YALE J.L. & HUMAN 415, 416 (1999).
[55] Apple, Inc. v. Motorola, NC., 869 F. Supp. 2d 901, 916 (N.D. III. 2012) ("A related reason for withholding injunctive relief in this case is that it would be likely to impose costs on the alleged infringer disproportionate both to the benefits to it of having infringed and to the harm to the victim of infringement, and would thus be a windfall to the patentee and a form of punitive rather than compensatory damages imposed on the infringer.").
[56] *Id.* at 918.
[57] *Infra* 'Patently Negative Externalities'.

However, should such a widespread compensatory liability regime come to pass, what of TRIPS? I argue that TRIPS is flexible enough to permit this policy lever.

D. TRIPS ANALYSIS:

Article 44 of TRIPS reads as below:

> "1. The judicial authorities shall have the authority to order a party to desist from an infringement, inter alia to prevent the entry into the channels of commerce in their jurisdiction of imported goods that involve the infringement of an intellectual property right, immediately after customs clearance of such goods…
>
> 2. Notwithstanding the other provisions of this Part and provided that the provisions of Part II specifically addressing use by governments, or by third parties authorized by a government, without the authorization of the right holder are complied with, Members may limit the remedies available against such use to payment of remuneration in accordance with subparagraph (h) of Article 31. In other cases, the remedies under this Part shall apply or, **where these remedies are inconsistent with a Member's law, declaratory judgments and adequate compensation shall be available." (emphasis added)**[58]

As seen from the above provision (particularly the emphasised part in the second sentence), member states are free to formulate laws that deny restraining orders or injunctions in patent cases, so long as declaratory judgments and adequate compensation (monetary damages etc.) are provided for.

[58] TRIPS art. 44.

E. Valuing Patents

While the above compensatory liability scheme (engineered through the judiciary) may be theoretically appealing, it comes with a number of challenges. Foremost amongst this is the issue of determining appropriate royalty rates. Critics argue that courts are ill equipped to determine royalty rates and should therefore leave this to voluntary negotiations between the parties.[59]

However, as a prominent US legal scholar rightly notes that a property rule leads to inefficient market outcomes because it creates an endowment effect in the minds of IP owners, which makes it more reluctant to trade away "its" property for what would ordinarily be perceived as a fair market value.[60] Further, he notes that a liability rule does not *ipso facto* preclude private bargaining, as it is just as likely to be contracted around as a property rule.[61]

Importantly, the notion that a property rule is economically more efficient and superior rests on a seriously questionable assumption that IP has an objectively ascertainable value. As a commentator rightly notes, "[p]atent value as a whole is highly subjective."[62]

---

[59] *See* Michael Mattioli, *Power and Governance in Patent Pools*, 27 HARV. J.L. & TECH. 421, 433 (2014) ("However, unlike parties to a contract, patent applicants rarely hold well-defined expectation interests, making it difficult for a court to objectively gauge the royalties that a patent would have commanded in a voluntary exchange"); Daniel A. Crane, *Bargaining in the Shadow of Rate-Setting Courts*, 76 ANTITRUST L.J., 307, 307 (2009) (noting that judges are admittedly poor rate regulators).

[60] Mark Lemley, *Contracting Around Liability Rules*, 100 CALI. L. REV. 463, 485-86 (2012).

[61] *Id.* at 476 ("In sum, evidence indicates that parties to patent cases bargain around liability rules at least as often as, if not more than, they contract around property rules.").

[62] David Arsego, *The Problem with FRAND: How the Licensing Commitments of Standard-Setting Organizations Result in the Misvaluing of Patents,* 41 BROOK. J. INT'L L. 257, 280 (2015); *See also*

Given the indeterminacy in valuing IP, one can afford to experiment with a range of broadly approximate rates. Courts have in the past been known to rely on broad heuristic rates. US courts have in fact used a "25% rule," i.e. where a licensee is made to pay 25% of the profits expected for a product incorporating the licensed IP.[63] Although the specific rule 25% itself was later rejected,[64] there is nothing to suggest that it cannot be invoked by other courts in other countries in at least those cases where it is extremely difficult to ascertain the fair market value of an invention, given the absence of empirical evidence on licensing rates for similar inventions.

This was the case with India's first post-TRIPS compulsory licensing dispute involving a pharmaceutical patent, where in the absence of clear evidence from the parties, the Controller General of Patents decided in favor of a broad royalty rate[65] suggested by an United Nations

---

Meir Perez Pugatch, *What is the Value of Your Patent? Theory, Myth and Reality* (Draft), CITESEERX http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.565.2147&rep=rep1&type=pdf [https://perma.cc/3A5Q-JJJ5] (last visited Aug. 24, 2016) ("We also need to acknowledge that the value of a patent is ultimately subjective").

[63] Robert Goldscheider, *Measuring Damages in U.S. Patent Litigation*, 5 J. PROPRIETARY RTS 2, 6–7 (1993).

[64] *See* Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1315 (Fed. Cir. 2011) ("This court now holds as a matter of Federal Circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible under Daubery and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue."); *See also* Gavin Clarkson, *Avoiding Suboptimal Behaviour in Intellectual Asset Transactions: Economic and Organizational Perspectives on the Sale of Knowledge*, 14 HARV. J. L. & TECH. 711, 718-19 (2001).

[65] Natco Pharma Ltd. v. Bayer Corp., (2012) Controller of Patents, Mumbai, Compulsory License Application 1 of 2011, No. 215758, 1, 60 ("I have also carefully analysed the royalty practices/guidelines generally adopted globally. United Nations Development Program

Development Programme (UNDP) report.[66] Such broad rules of thumb need not be cast in stone, but could be monitored regularly to assess their impact on innovation incentives and tweaked appropriately.

This experimental approach permits us to work towards a more honest regime that does not rest on untested assumptions, namely that a strong property rule and a near automatic entitlement to an injunction or restraining order always serve the interests of innovation.

The recent past has witnessed a proliferation of transactions involving trade in patents. Notably, auction services such as Ocean Tomo and intellectual property intermediaries such as Intellectual Ventures have been steadily contributing to the creation of a market for patents, and consequently aiding in determining its "value."[67] As a commentator notes, "[t]he new market for intellectual property has inspired entrepreneurial legal professionals and business professionals alike to create new companies

---

(UNDP) specifically recommended that rates normally be set at 4% and adjusted upwards as much as 2% for products of particular therapeutic value…. In the present case, I am satisfied that anything lesser than 6% would not be just and reasonable given the facts and circumstances of this case as discussed above. Hence I hereby settle that the royalty be paid to the patentee in this case shall be 6% of the net sales of the drug by the licensee.").

[66] UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 2001: MAKING NEW TECHNOLOGIES WORK FOR HUMAN DEVELOPMENT, available at http://hdr.undp.org/en/content/human-development-report-2001 (last visited Dec. 26, 2016).

[67] *See* David Newman, *Going Once…Going Twice…Licensed Under the Most Reasonable and Non-Discriminatory Bidding Terms!*, 11 NW. J. TECH. & INTELL. PROP. 139, 143 (2013); Timo Fischer & Jan Leidinger, *Testing Patent Value Indicators on Directly Observed Patent Value – An Empirical Analysis of Ocean Tomo Patent Auctions*, 43 RESEARCH POLICY 519, 519 (2014).

and expand existing ones to act as middlemen, encouraging the continued proliferation of patent transactions." [68]

Countries keen on instituting a de facto compulsory licensing regime will therefore find it easier to fix royalties based on the approximate value of a patent.

A combination of court ordered compulsory licensing rates based on replicating a market driven rate where evidence of prior licensing and value is available, as well as broad heuristics, enables us to have a more transparent system, where it's easier to assess the value of a patent. Unfortunately, the IP system as we know it today suffers from a serious lack of transparency. We are nowhere close to knowing the true costs of innovation, and whether or not IP regimes end up fairly compensating, overcompensating, or undercompensating the innovator.

This extends to licensing as well, where we have no demonstrable evidence in the vast majority of cases to confirm whether or not licensing rates fairly compensate, undercompensate, or overcompensate a patentee. A compulsory licensing (CL) regime, driven by rates adjudicated upon by a neutral third party is likely to render the system more transparent and help us determine whether or not the royalty rate is a "fair" and "reasonable" one.

---

[68] Allen W. Wang, *Rise of the Patent Intermediaries*, 25 BERKELEY TECH. L.J. 159, 169 (2010). ("…. a truly fair market value may not be attainable, and a buyer and seller will need to rely on a broker's experience to determine the most accurate value achievable under the circumstances. Thus, broker-assisted valuation appears to be a valuable service in enhancing the overall fluidity of the patent market, and the increased number of successful transactions in such a market serves as a powerful incentivizing force in line with the goals of the patent system."); *See also* Ian D. McClure, *From a Patent Market for Lemons to a Marketplace for Patents: Benchmarking IP in Its Evolution to Asset Class Status*, 18 CHAP. L. REV. 759, 761 (2015) ("Compared with two decades ago, private patent transactions continue to increase in volume and evolve in sophistication.").

F. Administrative Challenges?

Apart from the issue of valuation as discussed above, the key challenge for a pervasive compensatory liability regime is in designing a model that is institutionally competent and cost efficient to administer.[69] Time and space constraints prevent me from undertaking that arduous task in this paper. Nevertheless, I make some broad suggestions.

The compensatory amount to be paid ought not to be based on a penal framework, such as treble damages in the US, where the intention is to deter infringement.[70] Rather it ought to be based on compulsory licensing norms, where the third party that uses the patent is not seen as a wrong doer, but as someone entitled to use the patent upon reasonable terms such as a fair royalty rate.[71] This being so, royalty rates should be premised on the "value" of the patent relative to the final product which incorporates it and the amount of "contribution," if any, by the infringer in commercializing an invention based on the patent.

One such model is detailed in an earlier paper of mine.[72] However, this model is specific to the context of

---

[69] *See* Mark A. Lemley & Philip J. Weiser, *Should Property or Liability Rules Govern Information*, 85 TEX. L. REV. 783, 839-841 (2007) (lamenting the fact that in all the debates about property versus liability rules, scholars often tend to ignore issues of institutional competence and costs).

[70] Often times, the current "reparation" model makes for the award of punitive reasonable royalties with a view to deterring future infringers. *See* Brian Love, *The Misuse of Reasonable Royalty Damages as a Patent Infringement Deterrent*, 74 MO. L. REV. 909, 925-28 (2009) (cautioning against "reparation" model).

[71] *See generally* John Jarosz & Michael Chapman, *The Hypothetical Negotiation and Reasonable Royalty Damages: The Tail Wagging the Dog*, 16 STAN. TECH. L. REV. 769 (2013).

[72] Shamnad Basheer, *The Invention of an Investment for Pharmaceutical Innovation*, 15 J.WORLD INTELL. PROP. 305, 305 (2012).

pharmaceutical innovation. Suffice it to state at this stage that, whatever be the model chosen, it must be one that fosters the rapid commercialization of new ideas, encourage follow on innovation and a fair amount of competition, whilst at the same time promoting consumer welfare overall.

G. Reduced Incentives to Innovate?

Apart from the complexity of working out an efficiently administered compensatory liability regime as discussed above, some claim that such a regime will detrimentally impact incentives to innovate.[73] However, this issue hinges to a large extent on a far more fundamental query: to what extent do patents incentivize innovation?[74] For if patents fail to increase the rate and range of innovation or only do so marginally, then one can safely institute compensatory liability schemes without unduly worrying about the allegedly reduced incentives to innovate.

Unfortunately, there is no convincing empirical evidence that patents increase the rate and range of new innovation.[75] Bronwyn Hall concludes that although a

---

[73] Kai-Uwe Kuhn & John Van Reenen, *Interoperability and Market Foreclosure in the European Microsoft Case*, in CASES IN EUROPEAN COMPETITION POLICY: THE ECONOMIC ANALYSIS 50, 64 (Bruce Lyons ed., 2009); Richard Gilbert & Carl Shairo, *An Economic Analysis of Unilateral Refusal to License Intellectual Property*, 93 PROC. NAT'L. ACAD. SCI. USA 12749, 12753 (1996).

[74] The "incentive" theory stipulates that patent rewards (in the form of 20-year monopolies) incentivize prospective inventors to accelerate their inventive efforts. *See* William Fisher, *Theories of Intellectual Property*, in NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY, 168-199 (Stephen Munzer ed., 2001).

[75] Jeremy de Beer, *Evidence-Based Intellectual Property Policymaking: An Integrated Review of Methods and Conclusions*, 19 J. WORLD INTELL. PROP. 150, 169 (2016) ("Having more IP outputs may increase a country's ranking but, as both theory and evidence clearly show,

stronger patent system is likely to result in an increase in patenting, it is not clear if these changes will also simultaneously result in an increase in innovative activity.[76] Others demonstrate that other non-patent incentives such as lead-time and branding may play a far more significant role in incentivizing innovation.[77]

However, almost all patent sceptics agree that industries with highly intensive R&D, such as pharmaceuticals may be an exception in that, without a patent regime to protect the invention in question and help recoup investments, drug companies may not be induced to invest.[78] However, if our expectation from the patent regime is that it would induce a higher rate of investment and consequently a higher rate of innovation, then would it not be better to execute this more directly through an investment protection regime, as I have recommended in the past?[79]

Apart from the fact that the empirical case for stronger patents is yet to be made out, patents often come

---

more IP does not mean more innovation and could, in fact, lead to less."); Michele Boldrin & David K. Levine, *The Case Against Patents*, 27 J. ECON. PERSPECTIVES 3, 3 (2013) ("there is no empirical evidence that they serve to increase innovation and productivity…").

[76] Bronwyn Hall, *Patents and Patent Policy*, 23 OXFORD REV. OF ECON. POL'Y 568, 574 (2007).

[77] *See* Cohen, et. al., *supra* note 17 at 2-3**;** *See also* James Bessen & Michael James Meurer, PATENT FAILURE: HOW JUDGES, BUREAUCRATS AND LAWYERS PUT INNOVATORS TO RISK 98 (2009) ("Firms do not patent a majority of their inventions and about 15 percent of all R&D is performed by firms that obtain no patents at all. So, the private value of a patent is the value of the incremental rents above and beyond the rents earned by other means. As we shall see, a very substantial part of firm rents from innovation are obtained by other means.").

[78] For this reason, scholars such as Hall carve out an exception for the pharmaceutical industry, noting that that in such industries, patents are likely to foster investments and, thereby, the rate of innovative output as well. *See* Hall, *supra* note 76, at 574-575.

[79] Basheer, *supra* note 72, at 310-12.

with a burdensome "social" cost, i.e. the potential to decelerate or slow down innovative progress by "blocking" competition, particularly downstream research and improvements.[80] As stated earlier, this potential for blocking is not merely a theoretical surmise, but has been empirically documented in a seminal piece by Merges and Nelson.[81]

Some also argue that patents are economically inefficient instruments that fail to provide adequate public notice of their bounds, and are costly to procure and enforce.[82] Apart from this, patents are largely indeterminate when differing standards worldwide for patentability are considered.[83] Illustratively, consider the

---

[80] Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1518-519 (2001).

[81] Merges & Nelson, *supra* note 16, at 860-62.

[82] *See* Rebecca S. Eisenberg, *Patent Costs and Unlicensed Use of Patented Inventions*, 78 U. CHI. L. REV. 53, 54-55 (2011) ("But high costs make compliance and enforcement imperfect. Users maybe unaware of patents, and owners may be unaware of infringing activities. Information costs and transaction costs may dwarf potential gains to users from identifying and clearing rights or to owner's form identifying infringers and asserting rights against them. Because the patent system constantly generates new rights of unclear scope and uncertain validity, these costs are not a one-time investment, like running a title search or building a fence, but an ongoing burden."); William S. Thompson, *Reforming the Patent System for the 21st Century*, 21 AIPLA Q. J. 171, 172 (1993) ("Exacerbating the problem of international patent compliance cost is the general rise in patent-related costs, both for patent procurement and maintenance and patent enforcement…. Patent enforcement costs, driven by escalating infringement damage award, are approaching prohibitive levels.").

[83] *See* N. Gregory Mandel, *A Nonobvious Comparison: Nonobviousness Decisions at the PTAB and in the Federal Courts*, 24 TEX. INTELL. PROP. L. J. 403, 404, 418 (2017) ("Though the nonobviousness standard can be recited straight-forwardly, in practice it is notoriously difficult to apply. The standard itself is highly indeterminate: the term "nonobvious" has never been defined by Congress or the courts…. in many contexts patent owners may face far

Viagra patent, upheld in some countries and invalidated in others.[84] Consider also the Windsurfing patent case where a patent infringement lawsuit was brought by Windsurfing International Inc. against its competing manufacturer, Tabur Marine. The Court of Appeal ruled in favor of the defendant in light of evidence that a 12-year-old boy, Peter Chilvers, had assembled a primitive prototype of the windsurfing board in 1958, ten years before the plaintiff filed its patent for the windsurfer.[85]

This is not to suggest that legal regimes have to be absolutely "certain" and "determinate," but that when compared with a number of other regimes, the patent system appears more indeterminate,[86] and hardly equipped

---

greater risks from invalidity than the risks accused infringers face from a finding of no invalidity.").

[84] Basheer, *supra* note 72 at 312-13 ("The UK courts invalidated the patent on the ground that it was obvious in the light of prior art, which suggested the utility of the claimed PDE VA inhibitor in potentially curing erectile dysfunction. However, the Federal Court of Appeal in Canada rejected the above line of reasoning and held that a mere "worth a try" possibility did not preclude inventiveness. Rather, the claimed invention would be obvious, only when the "try" was a matter of routine and required no significant thinking or effort…"); *See also* Shamnad Basheer, *Sex, Side Effects and a Vague Viagra Patent: IP Jurisprurience?*, SPICYIP.com (July 8, 2016), http://spicyip.com/2016/07/ip-juris-prurience-sex-side-effects-and-a-vague-viagra-patent.html [https://perma.cc/XXF2-GLTK]. There are many other such examples.

[85] Windsurfing Int'l. Inc. v. Tabur Marine Ltd. (Great Britain), (1985) RPC 59, 59 (CA).

[86] *See* S. Jay Plager, *Challenges for Intellectual Property Law in the Twenty-First Century: Indeterminacy and Other Problems*, 2001 U. Ill. L. Rev. 69, 71 (2001) ("In patent law, indeterminacy exists both in structure and in doctrine."); Gregory N. Mandel, *The Non-Obvious Problem: How the Indeterminate Non-obviousness Standard Produces Excessive Grants* 42 U.C. Davis L. Rev. 57, 57 (2008) ("The non-obviousness standard is…. Indeterminate.").

to serve the role of an investment protection regime, as many want it to be.[87]

Based on all the above, I would argue that the case for patents is a weak one. Even assuming that patents serve a fairly modest incentive function, it is not clear that the institution of a compensatory liability will necessarily reduce incentives. On the one hand, one may argue that the loss of market exclusivity may cause losses to the IP owner and thereby trigger a reduced incentive to invest in R&D. On the other hand, one could contend that in certain cases, the compulsory license could result in the licensee selling to consumer segments beyond the reach of the patentee, thereby effectively expanding the market base of the patentee and generating licensing revenues from these markets for the patentee. Illustratively, there is a strong possibility that this might have played out in the Indian scenario involving the compulsory licensing dispute between Bayer and Natco.[88]

There is a crying need for more empirical studies on this count. Among the studies that exist, two bear mentioning. The first is an empirical survey by Colleen Chien involving a comparison between rates of patenting and other inventive activities *before* and *after* six compulsory licenses over drug patents were issued by the US Department of Justice in the 1980s and 1990s. She found that in five of the six compulsory licensing cases, there was no measurable drop in innovation. In fact, she

---

[87] *See* Basheer, *supra* note 72, at 315-16.

[88] Unfortunately, given the lack of data on this count (particularly from other sellers such as Cipla in the market), it is impossible to empirically validate this assumption at this stage. *See* Shamnad Basheer & Rupali Samuel, *Bayer's Nexavar and the "Working" of Compulsory Licensing: Mind the Patent (Information) Gap!*, SPICYIP.com, https://spicyip.com/2015/04/bayers-nexavar-patent-working-and-compulsory-licensing-mind-the-information-gap.html [perm.cc/HE88-4WYZ] (last visited May 20, 2017).

suggests that the rate of innovation may have increased in a few cases.

In a similar vein, another study shows us that compulsory licenses may have had some positive effect on innovation.[89] More specifically, it was found that compulsory licenses issued for German patents in the aftermath of the First World War by the US as part of the 1919 Trading With the Enemy Act resulted in more competition in the market place, motivating existing players to invest more in R&D.[90]

While one may debate whether or not compulsory licensing enhances the rate of R&D and innovation, at the very least, these studies lead us to question the assumption that compulsory licensing will necessarily reduce the incentives to innovate.[91]

---

[89] Joerg Baten, Nicola Bianchi & Petra Moser, *Does Compulsory Licensing Discourage Invention? Evidence From German Patents After WWI*, NBER.ORG, http://www.nber.org/papers/w21442 [https://perma.cc/4H7Z-HTXP] (last visited May 26, 2017), at 4, 24-26**;** *See also* Petra Moser & Alessandra Voena, *Compulsory Licensing: Evidence from the Trading with the Enemy Act,* 102 AM. ECON. REV. 396, 425 (2012) ("While our analysis suggests that compulsory licensing encourages domestic invention in the licensing country, the policy's long-run effects include potentially important incentive effects on invention in the country whose inventions are licensed.").

[90] *Id.*, at 25 ("Taken together, these results indicate that compulsory licensing can promote invention by encouraging competitors to enter fields with licensing, which increases the threat of competition for incumbent inventors and motivates them to invest more in R&D.*"*).

[91] Colleen Chien, *Cheap Drugs at What Price to Innovation: Does the Compulsory Licensing of Pharmaceuticals Hurt Innovation?*, 18 BERKELEY TECH. L. J. 853, 882-84 (2003). She cautions however that this depends on the "market" in question and how important it is for the particular patented product. She proposes that compulsory licensing be limited to ancillary markets (developing countries), such that it does not directly impact the main markets for patented drugs (richer developed countries).

H. Creative Experimentation: The Paradox of Patents and Innovation

Most patent regimes today suffer a classic paradox: the very same regimes meant to foster innovation have been shielded from innovative experimentation. Were this shielding to stem from a well-founded belief that all is well with the world of patents, one might have ignored this conservatism. Unfortunately, given that the patent regime has been severely criticized for many decades now,[92] this is a serious cause for worry.

Even as far as the 50's, Machlup, an economist of some repute famously quipped:

> If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.[93]

The time is now ripe to interrogate the various assumptions underlying the patent regime and to reformulate or replace it, as appropriate. Although TRIPS prevents us from giving full vent to the experimental spree, it does provide a fair amount of flexibility to engage in some experimentation, including the institution of a more pervasive liability regime as recommended in this paper.

---

[92] Mark Janis, *Patent Abolitionism*, 17 BERKELEY. TECH. L. J. 899, 922-24 (2002).

[93] FRITZ MACHLUP, AN ECONOMIC REVIEW OF THE PATENT SYSTEM 80 (1958).

I. A Compensatory (Innovation) Commons?

The gradual replacement of a strong property rule frame with a liability rule takes us closer to the idea of an "innovation commons," where the stock of patent ideas are available for all to use.

An "innovation commons" could be defined very broadly as an open and free platform where information pertaining to one or more technological domains is made available for any member of the public to avail themselves of and use.[94]

The platform and the terms of engagement are meant to foster an open collaboration and the consequent evolution of new ideas and products that build on the knowledge present in the platform. It draws on the term "commons," which largely connotes any resource shared or

---

[94] *See* Darcy W.E. Allen & Jason Potts, *How Innovation Commons Contribute to Discovering and Developing New Technologies*, 10 INT'L. J. COMMONS, 1035, 1035, https://www.thecommonsjournal.org/articles/10.18352/ijc.644/ (Sept. 30, 2016) ("In this paper, we introduce a new type of commons – an innovation commons – that exists at the very beginning of a new technology, at the point when a group of people, often technology enthusiasts, come together in order to discover opportunities for the use and development of the technology. But this is not a technology commons. It is an innovation commons because the common pool resource is not the technology per se, but information and knowledge about the technology that subsequently facilitates its development, where by other users or stakeholders, including entrepreneurs, for whom uncertainty has been sufficiently reduced that they are able to confidently act.") [perma.cc/Y4WE-NWMP]; *See also* Susanna Frederick Fischer, *Intellectual Property in the Age of Internet*, 4 J. L., PHIL. & CULTURE 29, 30 (2009) ("Lawrence Lessig offers a concept of the social good that is at stake in the conflict over the scope and power of copyright rights. This is the continued existence of what he calls the innovation commons, which Lessig describes as "a place where everyone is equally allowed to innovate." An innovation commons generates explosive creativity, such as that which has resulted from the internet's original architectural design.").

held in common by a group of people.[95] Commons is more than just a mere word and embraces a larger philosophy that the greater sharing of knowledge leads to greater common good.[96]

Traditionally, the term "commons" was used to refer only to shared natural resources, such as air, water resources, forests, fisheries and wildlife.[97] However, it has now come to be used to refer to any type of shared resource, ranging from public streets, libraries, and parks to knowledge, internet, genetic materials, languages, and social practices.[98] It includes subtractive or rivalrous resources such as fisheries and streets, whose use by one reduces others' ability to enjoy it, as well as non-subtractive or non-rivalrous resources such as knowledge and cultural assets, which remain as much after use as before.[99] The resource could be shared at the global level, the community level, or even at the level of a family or a very small group.[100]

Today, the core of the commons could be said to lie in the fact that the resource can be freely accessed by the members of a certain group without having to obtain prior permission of any sort, at least from private individuals or organizations.[101]

---

[95] Charlotte Hess & Eleanor Ostrom, *Introduction: An Overview of the Knowledge Commons*, in UNDERSTANDING KNOWLEDGE AS A COMMONS: FROM THEORY TO PRACTICE 3, 4 (2011); LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD 16 (2001), http://www.the-future-of-ideas.com/download/lessig_FOI.pdf [https://perma.cc/W5J2-HEHS].
[96] Hess & Ostrom, *supra* note 95 at 4-5.
[97] *Id* at 4.
[98] Hess & Ostrom, *supra* note 95; LESSIG, *supra* note 95; David Harvey, *The Future of Commons*, 109 RADICAL HIST. REV. 101, 103 (2011).
[99] Hess & Ostrom, *supra* note 95; LESSIG, *supra* note 95, at 21; *See also* Harvey, *supra* note 98.
[100] Hess & Ostrom, *supra* note 95, at 4.
[101] LESSIG, *supra* note 95.

However, not all "commons" are necessarily open access. While some such as air are open, some such as public streets are regulated and others such as those shared by a family are exclusionary.[102] The common characteristic of all "commons" is that they are accessed by a group of people jointly, without obtaining permission from anyone.[103]

Given that the proposed set of liability rules mandate the payment of fair compensation to a patentee, I propose that we label this specific set of innovation commons as a "compensatory innovation commons."

II. CONCLUSION:

The coming years are likely to witness an increased decimation of the formalistic property/exclusivity regime, and a shift to a compensatory liability frame. The irreparable injury threshold for the grant of patent injunctions will play a significant role in this transition, and more courts are likely to find that patent injury is compensable in monetary terms. The latest decision in *Nichia Corporation* v. *Everlight Americas & Ors*.[104] is testament to this sentiment.

Countries, particularly developing countries keen on retaining the space for technological imitation and growth ought to experiment more widely with compensatory liability frame, without fear of infringing TRIPS.

In the ultimate analysis, a more pervasive compensatory liability regime takes us closer to the idea of a "compensatory innovation commons."

---

[102] Harvey, *supra* note 98 at 103.
[103] Hess & Ostrom, *supra* note 95; LESSIG, *supra* note 95, at 20.
[104] Nichia Corp. v. Everlight Americas, Inc., 855 F.3d 1328, 1341-42 (Fed. Cir. 2017).