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EDITORIAL

The last year has seen one of the most remarkable developments in the history of IP law – the internationalisation of protection standards through the secret negotiation of multilateral trade agreements. If taken to be representative of a larger trend, treaties such as the Trans-Pacific Partnership herald a new era in IP policy – the transformation of the global IP debate into an anti-debate. The effective exclusion of public participation from such collective policy-making exercises is problematic for several reasons. First, it systematically erases subaltern voices, specifically those of the A2K and A2M movements, from the discourse. Second, it allows vested interests to radically upset the carefully constructed balance between public and private interest that IP policy is today. Third, agreements such as the TPP which involve the imposition of TRIPS+ standards bring with them a 'ratchet effect', since they prescribe enhanced non-derogable minimum standards without fixing an upper limit on such protection. In essence, such agreements are one-way policy levers that must be handled with extreme caution, especially where there exist important competing claims such as public health or biodiversity protection.

However, it must also be recognised that attempts to hijack the global IP discourse are not new, nor have they gone unchallenged. In fact, the first piece in this journal is a shining example of one such challenge. We are honoured to carry the submission of Ragavan, et. al. to the US Trade Representative on the position of Indian patent law. The submission is a comprehensive defence of India's IP policy, and goes a long way in busting the long-standing myth that the country's patent law (be it Section 3(d), or the compulsory license provisions) falls short of international standards.

Ryan Logan points out that trade secret laws have the capacity to create an indefinite 'economic monopoly' over a product or invention, while at the same posing to be detrimental to the trade secret holder. He also discusses how the trade secret law could result in privacy concerns for individuals and companies.

Next, we have Meenakshi Rao Kurpad arguing that parallel importation can result in an efficient IPR regime, specifically for a

developing country like India, as it provides for an adequate balance between social welfare and protecting the rights of the creator ensuring that India remains TRIPS compliant. She argues that India has always emphasized on health and access to medicine when compared to protecting patent rights, and also examines the possible threats to the flexibility of the parallel importation mechanism. She concludes that parallel importation is possibly the most viable option provided by TRIPS in ensuring access.

Srimukundan then proposes a fascinating solution to the conundrum of patent licensing in his article, in the form of an exchange for license rights at standardised terms. He critically evaluates one such exchange, and gleans lessons from its failure for future endeavours. He rounds up his article by examining the statutory viability of such an exchange, concluding that there exist no insurmountable legal hurdles to its success in optimising the market.

Alwyn Sebastian's paper traces the origin of copyright both nationally and globally in an attempt to persuade the Parliament to strike a balance between the two regimes, while discussing how, citing economic non-feasability, India has accorded joint authorship to directors.

Aakanksha Mishra forays into the unchartered territory of space policies, new technological developments and privatization of some of the space segments vis-à-vis patent law. She suggests that the patent regime regarding space activities be clarified before any instance of conflict relating to patents in outer space arises.

Tania Singla discusses the problem facing the discourse surrounding GIs today. While registration of GIs and the issues with identification of GIs are oft discussed and debated, branding and promotion of GIs, which are important from an economic perspective, have received little attention in policy and legal discourse. She suggests that by the use of a decentralized mechanism with a common framework, GIs have a better chance of success with reference to quality control.

Prof. V.C.Vivekanandan reviews a book on 'Piracy in the Indian Film Industry – Copyright and Cultural Consonance' (2014) by Arul George Scaria, Asst. Professor of Law, National Law University of Delhi.

We hope that readers of this edition will be as enriched by this collection of work as we, the editors, were. We would like to gratefully acknowledge the Advisory Board for their invaluable contributions to this edition of the journal. Professor Vivekanandan, as always, has been a valuable guide and mentor, without whom this endeavour would be rudderless. We would also like to thank Professor Faizan Mustafa, Vice-Chancellor, NALSAR University of Law for his continuous support. Any errors or omissions in this volume are ours and ours alone.

JUSTIFYING INDIA'S PATENT POSITION TO THE UNITED STATES INTERNATIONAL TRADE COMMISSION AND OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

*Srividhya Ragavan, Sean Flynn and Brook Baker**

INTRODUCTION

On August 2, 2013, the Chairman of the Senate Committee on Finance and the House Committee on Ways and Means Committees using the powers under section 332(g) of the Tariff Act of 1930[1], requested the U.S. International Trade Commission (ITC) to institute an investigation[2] on issues relating to Trade, Investment, and Industrial Policies in India, with particular reference to its effects on the United States. In their request, the Committee requested the ITC to conduct an investigation regarding Indian industrial policies that discriminate against U.S. imports and investment for the sake of supporting Indian domestic industries, and the effect that those barriers have on the U.S. economy and U.S. jobs.[3] Following this, the Secretary of the US ITC instituted the investigation formally requesting reports at a public hearing to particularly determine the competitiveness of India's economy by examining whether India had any significant restrictive trade and FDI policies currently maintained or recently adopted and whether exports of US firms are affected and the measure of such effect. The investigation focused on agriculture, manufacturing and service sectors, as well as the overall business environment.[4] The ITC's overview particularly considered changes in tariff and nontariff measures, including measures relating to the protection of intellectual property rights, and other

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1 19 U.S.C. §1332(g)

2 ITC Investigation No. 332-543

3 International Trade Commission, Notice for Investigation No. 332-543, Aug. 29, 2013. *See also* Federal Register**,** Vol. 79, No. 2, FR Doc. 2013–31487, Jan. 3, 2014 (notice of the USTR)

4 *See* International Trade Commission, Notice for Investigation No. 332-543, Aug. 29, 2013

actions taken by India's government to facilitate or restrict the inflow of trade and FDI.

The paper below largely is an extract of the testimonial filed by the authors to the Secretary of the ITC in response to the Notice on the Federal Register dated August 29, 2013 titled *Trade, Investment, and Industrial Policies in India: Effects on the U.S. Economy*. Where required, the paper also draws from the written submissions that the authors made to the United States Trade Representative's (hereinafter, USTR) office on the related question of whether India deny adequate and effective protection of intellectual property rights or deny fair and equitable market access to U.S. persons who rely on intellectual property protection.[5] The authors submitted the testimonials to the ITC as well as the USTR and as legal academics with expertise in patent law, trade law, the TRIPS agreement and the law of India. Each of the authors had engaged in this field for more than 10 years and has closely followed the developments within India in relation to the prescriptions of the TRIPS agreement.

The authors, as legal academics asserted the core point that, whatever effect India's policies may have on the profits on multinational companies, including those headquartered in the U.S., India's recent enactment and implementation of its patent law is fully in accord with the World Trade Organization's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).[6] Further, the authors asserted that India has demonstrated its adherence to TRIPS and to non-protectionism and a national treatment regime by revamping its systems, instituting massive changes to further intellectual property rights and by establishing prudent IP standards that apply equally to both domestic and foreign companies. Each of these standards remains in conformity with the TRIPS agreement and carefully calibrated to accommodate its national objectives within the scope of the flexibilities accorded under the TRIPS agreement.

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5 *See* Post-hearing submissions of Ragavan, Flynn and Baker, Notice of the USTR, Federal Register**,** Vol. 79, No. 2, FR Doc. 2013–31487, Jan. 3, 2014

6 Annex IC to the General Agreement on Tariffs and Trade, Uruguay Round, World Trade Organization, done at Marrakesh, Apr. 15, 1994, 33 I.L.M 1981 (1994), reprinted in WORLD TRADE ORGANIZATION, THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 365 (1995). See also Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 21 U.S.T. 1583, 1630, 828 U.N.T.S. 305, 307 (last revised July 14, 1967) (hereinafter Paris Convention).

The authors further reiterated that countries remain free after TRIPS to tailor their intellectual property laws to their domestic social, economic and cultural needs as they define them, within the bounds of the treaty. Accordingly, as recognized within the World World Trade Organization and the TRIPS Agreement, there is a great deal of lawful pluralism among WTO Members about standards of patentability and about key flexibilities, including both patentable subject matter and grounds for compulsory licenses. India's laws and implementation thus far remain well within the lawful pluralism allowed by TRIPS.

Specifically, the authors added that TRIPS Article 31 permits compulsory licenses for ANY reason, including the historically sanctioned grounds of insufficient working of an invention in the country. This flexibility was explicitly clarified in the 2001 Doha Declaration on the TRIPS Agreement and Public Health. Similarly, TRIPS leaves countries free to define patentability criteria, including to define what is not an invention. Along the same lines, each member of the WTO has the sovereign right to determine and establish the threshold for the nonobviosuness/inventive-step requirement. Thus, the authors asserted that India is within its rights to establish that the new forms or uses of existing and known molecules that do not significantly increase the therapeutic effectiveness of such substances are not entitled to patent protection. Finally, the authors pointed out that most of the questions on the survey used by ITC remained irrelevant to the task of ascertaining whether India's policies violate TRIPS.

With that as the background, the following paper highlights the submissions and testimonials of the authors at the ITC. The paper can be divided into two main parts. Part I responds to the issues that the ITC considered with reference to India's patent legislation. In this, the testimony traces the history of India's patents, outlines the recent changes that were implemented under the 2005 amendment to the legislation particularly highlighting how these changes remained fully TRIPS compliant. The second section[7] addresses India's policies on agriculture and highlights how these policies are compliant with the TRIPS Agreement. The conclusion highlights that

7 Professor Brook Baker did not sign on to the section on Agriculture submitted to the International Trade Commission.

PART I: PATENTS

1. India Patent History:

India, like many developing countries around the world, reformed its patent laws during its period of most rapid industrialization to tailor them to its domestic social and economic needs. What is important about this history is that the WTO TRIPS agreement restricted the range of options available to India and other countries in effecting such tailoring, but did not alter the goal itself. Indeed, the Preamble and Articles 7 and 8 of TRIPS clearly and forcefully posit that countries retain the sovereign ability to adjust their intellectual property laws and their implementation to serve local needs. The Preamble of TRIPS recognizes an "underlying public policy objective of national systems for the protection of intellectual property, including developmental and technological objectives."[8] Article 7 reiterates this position that the TRIPS' objective to protect and enforce IP rights "should contribute . . . to a balance of rights and obligations" of members in a manner conducive to social and economic welfare.[9] Article 8 recognizes members' rights to adopt public interest or public health measures consistent with the TRIPS provisions.[10] The right of WTO Members to take local realities into account and to adapt TRIPS's minimum standards pluralistically is further clarified in TRIPS Article 1.1.[11]

Historically, India embraced process-patent-only protection in specified fields rather than product patent protection, particularly for food and pharmaceuticals, in order to prioritize domestic issues like access to medication and food security. India was not alone. In the period before TRIPS, nearly 50 countries exempted pharmaceuticals from product patent protection and an additional 10 exempted pharmaceuticals from process patents as well.[12]

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8 Annex IC to the General Agreement on Tariffs and Trade, Uruguay Round, World Trade Organization, done at Marrakesh, Apr. 15, 1994, 33 I.L.M 1981 (1994), reprinted in WORLD TRADE ORGANIZATION, THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 365 (1995) [hereinafter TRIPS] at art. 27(1).

9 *Id.* art. 7.

10 *Id.* art. 8.

11 *Id.* art. 1.1

12 PAUL GOLDSTEIN, INTERNATIONAL INTELLECTUAL PROPERTY LAW at 302 (2001).

The Indian Patent Act of 1970,[13] (IP70) along with other mechanisms such as drug and industrial policies were all part of the repertoire of tools used by India to achieve its national priorities. In gist, the process patent regime of IP70 excluded protection of the end-product, but protected the method or the process of making the product. The process patent regime encouraged competitive innovation in the methods of making known products, thus, it enabled production of products patented elsewhere using different processes, incentivizing the development of more efficient production processes. The system's encouragement for process innovation was the first step to establishing India's generic drug industry, much like how Germany established its chemical process industries in the 1800s. Under IP70, the term of process protection over food, drug, and medical inventions was limited to five years.[14] A license of right authorized any person to manufacture a patented product, without having to seek the patentee's approval.[15] Inventions relating to food, chemicals, and pharmaceuticals, were automatically deemed to be endorsed with a license of right three years after the patent issues. Further, the government could, in the public interest, compulsorily license the patent if the invention was either not reasonably priced or not worked to satisfy the reasonable requirements of the public.

2. Changes Under the 2005 Amendment:

Many of these policies – although not their ultimate aims, were required to be changed by TRIPS. India has been faithful to its obligations under TRIPS, amending its Patent Act and taking many other measures at considerable expense to comply with its obligations while maintaining what flexibility it has under TRIPS to continue to further legitimate domestic policies. Indeed, in many respects India has been more forthcoming in amending its laws and policies to comply with TRIPS than has the United States.

i. Pharmaceutical Product Patent Regime:

India's most important TRIPS-fulfilling amendment—the institution of a pharmaceutical product patent regime—was instituted in

13 *See* Patents Act of 1970, 27 INDIA A.I.R. MANUAL 450 (1979) (hereinafter IP70).
14 *Id.* § 53(1)(a) (1979).
15 *Id.* § 88.

2005. India had previously adopted the TRIPS compliant international standard of patentability based on the requirements of novelty, inventive step, and industrial applicability (utility) with respect to other fields of technology. India was required to grant patents on pharmaceutical product inventions as well as process inventions because the TRIPS Agreement prevents discrimination against particular fields of technology.

India's definition of n*ovelty* or "new invention" includes world-wide prior art which was was much broader than the requirement that prevailed in the United States under 35 U.S.C. § 102, under which any use of the application material within the United States (only) defeated novelty. Only in 2011 would the America Invents Act introduce the concept of worldwide novelty,[16] even though this provision was heavily criticized as obstructing small-scale industries.

India's *inventive step* requirement requires that the "feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art."[17] This requirement for inventive step has been widely noted as being much more stringent than the nonobvious requirement in the United States, but many countries have different, indeed stricter standards for inventive step than does the United States.[18] In fact, the U.S.'s weak standard has been a significant causative factor for the degenerating quality of the patents in the U.S.

India has also adopted, within the framework of allowable pluralism under TRIPS, a stronger definition of industrial applicability than the United States. The United States' weaker standard of utility has historically allowed the patenting of business methods and other more abstract

16 Leahy Smith America Invents Act, Pub. L. 112-29, (H.R 1249) *at* § 102.

17 Patents (Amendment) Act, 2005, No. 15, Acts of Parliament, 2005, at § 2(ja) (hereinafter PTA, 2005); *See also* Srividhya Ragavan and Feroz Ali Khader, *Proof of Progress: The Role of Obviousness Standard in the Indian Patent Office, GLOBAL PERSPECTIVES ON PATENT LAW (FORTHCOMING)*. Ed. Ruth Okediji, Margo Bagley, Jay Erstling. Oxford University Press, 2014 (discussing how the standards of obviousness in India sets a higher bar when compared to the United States).

18 See, e.g., Amy Nelson, *Obviousness or Inventive Step as Applied to Nucleic Acid Molecules: A Global Perspective*, 6 N.C. J. L. & Tech. 1 (2004); Request for Comments on the International Effort to Harmonize the Substantive Requirements of Patent Law, 66 Fed. Reg. 15,409, 15,409–11 (Mar. 19, 2001) (listing seventeen differences between U.S. patent law and the law of other developed countries).

innovations, unlike India and many other countries that either exclude such matters as unpatentable or consider them not to have industrial applicability. This is one of many permissible policy differences allowed under TRIPS. In this regard, it is also important to note that India has codified a number of exclusions to patentability that are similarly excluded by many other countries – abstract ideas, theories of science, plants and animals, etc., even where the same creations could subject to patent in the U.S. Perhaps the most important exclusion from patentability, discussed further below, is India's Section 3(d).

ii. Section 3(d):[19]

Section 3(d) does the important function of segregating patents that result in evergreening from those that represent a true innovation. Basically, new forms of known compounds that exhibit enhanced efficacy will cross the threshold and be considered innovative. Other forms that merely represent a new form of a known substance without making any therapeutic contribution to the disease in question will fail the bar. Unlike the suspicions expressed under the USTR's Special 301 report of 2013, section 3(d) does not represent an unauthorized fourth requirement because the applicability of this section is limited to one small question in one subject matter.[20] Section 3(d) has no universal application, which would be essential had it been conceived as a fourth requirement. Similarly, the requirement in section 3(d), as mentioned earlier, is no different from the requirement imposed for similar compositions in the United States. That is, in the United States, the Manual for Patent Examination Procedure in sections 716.02 and 2144.09 at paragraph VII discuss the use of "unexpected advantages" or "superior properties" to determine obviousness of such structurally similar compounds.[21] Further, the Court of Appeals for the Federal Circuit in several decisions has reiterated the requirement of "unexpected results" or "surprising effect" as tests to determine patentability of the new forms of known substances.[22] These kinds of

19 Id. at § 3(d)

20 *See* 2013 Special 301 Report, Office of the United States Trade Representative, *available at* www.ustr.gov

21 Manual of Patent Examination Procedure, at sections 716 , 2144 *available at* www.uspto.gov.

22 *Id.*

criteria are not measurably different form the efficacy requirement that India uses to assess patentability.

Granting secondary patents, which promotes evergreening, is a controversial issue not just in India but also in the United States.[23] The term *evergreening* refers to strategically patenting different forms of a medicine's active ingredients, new uses, and/or new formulations and staggering such protection to extend monopoly control over various forms/uses of the medicine beyond the 20-year term of protection. The steady lowering of standards, especially for determining nonobviousness, has in turn contributed to such strategic patenting, which is now subject of much scrutiny in the United States.

The struggles of the United States with a barrage of secondary patents on medicines have served as a lesson to other countries, including India.[24] In essence, India is trying hard to prevent issues that the United States is currently facing on account of unduly lowering the bar to facilitate more patents. In gist, low patent standards can dangerously interfere with follow-on innovations and unjustly reward very low levels of innovation. For countries like India, the effect of such lowering on innovation is quite onerous in terms of pharmaceutical costs and untreated patients. Thus, it is important to appreciate that invalidating patents of multinational companies is not a sign of TRIPS noncompliance as long as such invalidation is done using lawful patentability standards and non-discriminatory processes as required by the TRIPS agreement. In the United States such patents are easily issued although they can be invalidated by litigation. But, rather than accepting the resource investment, cost, judicial time and the loss of access to the public inherent in the U.S. model for combating evergreening, India's Section 3(d), enacted in the 2005 amendment,[25] prohibits patenting of new uses of known substances, including medicines. Similarly, patenting new forms of known substances is not allowed unless there is evidence of significantly enhanced efficacy. The logic of this interesting provision is along the exact lines of the opinion of

23 See GENERIC DRUG ENTRY PRIOR TO PATENT EXPIRATION: AN FTC STUDY. FEDERAL TRADE COMMISSION 2002

24 See Thomas Faunce and Joel Lexchin, *Linkage' Pharmaceutical Evergreening in Canada and Australia,* Aust -New Zealand Health Policy (Biomed Central) (2007); EVERGREENING OF PHARMACEUTICAL MARKET PROTECTION, EUROPEAN GENERIC MEDICINES ASSOCIATION.

25 PTA, *supra* note 9, § 3(d).

the Court of Appeals for the Federal Circuit (CAFC) in the case of *Pfizer v. Apotex* involving the Pfizer's patenting of the besylate form of amlodipine (salt form) which Apotex claimed was obvious in the light of Pfizer's own patent on the base compound amlodipine.[26] The CAFC, in agreeing with Apotex that the patent on the besylate form was invalid, highlighted the besylate form lacked the *unexpected superior results* from the base compound in order for the salt form to be patented.[27] Indeed, the Manual for Patent Examination Procedure in section 716.02 and in 2144.09 specifically memorializes *unexpected results* as a test to demonstrate nonobviousness of structurally similar compounds like isomers and homologues.[28] Thus, India's standard is well within the lines of what has been allowed in the United States.

The Novartis judgment, which has become central to Congressional criticism of India's IP regime, was decided significantly on the basis of the absence of any evidence of enhanced efficiency, a valid criteria for assessing patentability as described above.[29] In essence, the Supreme Court of India, in a well-reasoned decision, found that beta-crystalline form of imatinib mesylate, was revealed and claimed in a pre-TRIPS patent and thus was time barred from patentability in India unless it showed significantly enhanced efficacy.[30] Unfortunately for Novartis, the Supreme Court of India found that Novartis offered no evidence of increased efficacy of the relevant compound whatsoever, and thus that the patent was unmeritorious under section 3(d).[31] Whatever the effect ton Novartis's bottom line or on balance of payments with the U.S., this was an eminently reasonable, and TRIPS-permissible, decision.

TRIPS does not require its member countries to be persuaded by the issue patents of other countries. The argument that several other countries agreed that Gleevec was patentable despite being a mere variation of an existing, previously patented chemical entity is inconsequential to India's own patent determination. If a country chooses to adopt a higher bar for determining patentable subject matter and/or inventive step under

26 Pfizer v. Apotex, 488 F. 3d 1377 (Fed. Cir. 2007); *see also* Pfizer v. Apotex, 480 F.3d 1348 (Fed. Cir. 2007).

27 480 F.3d at 1368; *see also In re Swain,* 33 C.C.P.A. 1266, 156 F.2d 246, 247–48 (1946).

28 Manual for Patent Examination Procedure § 2144, § 716 (8th ed., rev. 2012).

29 Novartis AG v. Union Of India & Ors, Civil Appeal No. 2706-2716 of 2013.

30 *Id*

31 *Id.*

TRIPS, it is well within the member's rights to do so. Indeed, Japan has a record of allowing approximately 14% of patents that are granted in the United States. Having a higher bar with standards is well within the rights of a sovereign nation and well-established under the principles of the World Trade Organization. India's Section 3(d) and the Novartis judgment fall well within the ambit of the TRIPS agreement.

Indeed, as India transitions into a full-fledged patent regime, it is well-worth remembering Justice Breyer's cautionary note in *Laboratory Corporation v. Metabolite*:[32] "sometimes [patents] presence can discourage research …, by requiring complex licensing arrangements, and by raising the costs of using the patented information, sometimes prohibitively so."[33] He advocates that patent law should carefully seek to avoid the dangers of overprotection just as surely as it should avoid diminished incentives resulting from under protection.[34] Section 3(d) is an important tool to serve the end of rewarding true innovation while refusing to grant exclusive rights for trivial, incremental changes. Further, in instituting section 3(d) and in setting a higher patentability bar, a developing country like India would rightly avoid the some of the excessive patenting problems that seem to plague the United States.

iii. Opposition Procedure:

Another important feature, the opposition mechanism, embodies a pre– as well as a post-grant opposition procedure.[35] Pre-grants opinions conserve administrative time otherwise spent on examining a patent application that could later be invalidated, in addition to preserving judicial time. As for the procedure, under § 25, any third party can oppose a patent after publication of the application and before the grant for reasons of patentability, wrongful acquisition, inadequate disclosures, etc. [36] On similar grounds, any interested person may oppose the patent within one year of the grant of patent.[37] The grant structure circumvents one of the India's debilitating constraints, being the backlog in the judicial system. Hence, the

32 Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124, 127, 126 S. Ct. 2921 (2006) (Breyer., J with whom Stevens J., and Souter J., join, dissenting).
33 *Id*
34 I*d.*
35 PTA, *supra* note 9, at, §§ 18, 35.
36 *Id.*, § 25 (c), (e), (h).
37 *Id.*, 89, § 25(k);

grant opinions seemingly have more economic value when compared to the USPTO's administrative opinions, for instance, not least because there are few judicial opinions on the question of inventiveness, but perhaps also because of the influence of a combination of other factors such as the time taken to resolve disputes in India.

WIPO has researched opposition procedures in depth and found substantial variation in countries approaches to both pre- and post-grant procedures, but clearly does not consider them unauthorized by TRIPS. Indeed, TRIPS Article 62.4 explicitly references and thus indirectly condones the use of opposition procedures.

iv. Intellectual Property Office Modernization:

When India amended its patent legislation, the government of India through the Department of Commerce modernized the different intellectual property offices at great expense.[38] Additionally, India has worked to relieve patent disputes from the most debilitating constraint of all: the Indian Court system. India has established the Intellectual Property Appellate Board (IPAB), as the special appellate administrative tribunal from 2007 to hear patent appeals from the decisions of the Controller (provided it includes a technical member).[39] Akin perhaps, to the Court of Appeals for the Federal Circuit in the United States, the review of the decision of the IPAB can be sought by the losing party by filing a writ petition on the grounds that there is a question of law requiring the attention of the High Court or that there is illegality or miscarriage of justice. The Supreme Court of India has established that all decisions of tribunals including the IPAB are subject to review before the Division Benches of the High Court (two-judge benches) within whose jurisdiction the concerned tribunal falls.[40] The establishment of the IPAB signifies India's commitment to implementing the patent statute.

38 Press Release, Department of Commerce (India), Government's Initiatives in Revamping Intellectual Property Show Results (Feb. 7, 2002).

39 Notifications No.12/15/2006-IPR-III (2/4/2007), Ministry of Commerce & Industry, (India).

40 L. Chandra Kumar v. Union of India & Others, AIR 1997 SC 1125 (1997) (India); *See also* Union of India v. R. Gandhi, President of Madras Bar Association, (2010) 5 SCALE 514.

v. Compulsory Licensing:

India has one of the most sophisticated compulsory licensing provisions of any country -- one that fully conforms to the TRIPS agreement as clarified by the Doha Declaration.

Section 84 of the Indian patent statue allows the government to compulsorily license a patent three years after grant.[41] Applicants seeking compulsory licenses should provide proof that the applicant attempted to negotiate a license with the patent owner as required under the TRIPS agreement, and must do so for a minimum period of six months.[42] As for the grounds, third parties can seek a license on the grounds that the (a) reasonable requirements of the public with respect to the patented invention have not been satisfied, (b) that the patented invention is not available to the public at a reasonably affordable price, or (c) that the patented invention is not worked in the territory of India.[43] The term *reasonable requirements of the public* is broad and can be deemed to be not satisfied if an existing industry or trade in India is affected; the demand for a patented article is not met by the patent holder, or the market is affected directly or because of the patent holder's activities. These grounds are fully in accord with traditional grounds for compulsory licenses dating back to the earliest patent laws, and explicitly sanctioned in Paris Convention Article 5(A).

Under Section 92, a compulsory license can be granted where the government provides notice of the existence of a national emergency such as a public health crisis or where it intends to use the patented subject matter for non-commercial public use.[44]

Section 90(1)(vii) allows for export of non-predominate quantities compulsorily licensed products and Section 92A requires export of patented pharmaceuticals to "any country having insufficient or no manufacturing capacity in the pharmaceutical sector for the concerned product to address public health problems, provided compulsory licence has been granted by such country or such country has, by notification or

41 *See* PTA, *supra* note 9, at § 84.
42 *Id.*, § 84(5)(4).
43 *Id.*, § 84.
44 *Id.* § 92.

otherwise, allowed importation of the patented pharmaceutical products from India.".

India's provisions with reference to compulsory licensing are fully compliant under Article 31 of the TRIPS agreement. Generally, TRIPS allows countries to determine the grounds for issuing compulsory licensing. In any event, India has issued only one compulsory license so far and did so in a case where there was egregious pricing and lack of supply to the market. Although U.S. critics have focused on the local-working rationale of the Patents Office decision granting a compulsory license, there were in fact three independent grounds for the license: insufficient supply, excessive pricing, and lack of an adequately explained total failure to work locally. Each or any of these grounds, including local working, is legally sufficient and justified under international and national law.[45] India was well-within its rights to issue the license on Bayer.[46]

In any event, the facts of the Bayer situation demonstrates that for the United States to expect India to not take steps because Bayer or other companies feel that is unfair would be at the cost of its political leadership position. In gist, at a time when India housed approximately 20,000 patients with liver cancer and about 9,000 patients with kidney cancer between the years 2008 to 2010, a negligible amount of Bayer's Sorafenib was imported into the country. In fact, no importation ensued in 2008, a year when Bayer recorded a worldwide profit of over $678 million in the rest of the world. The patent holder's inability to fulfill its duty of catering to the demands of the market notwithstanding, Bayer's pricing of the drug bordered on the ridiculous. The selling price which Bayer charged at an egregious price of Rs.2,80,428 per month (about $5,000) was nearly five times higher than the median *annual* income in India. Indeed, as a mark of its careful scrutiny, the Indian patent office rejected an application to compulsorily license Dasatinib.

It is most important to consider the actual context of income inequality and excessive pricing in India, which minimizes U.S. sales and profits in India, as well as against the general trend of trade with India,

45 Michael Halewood, *Regulating Patent Holders: Local Working and Compulsory Licenses Under International Law*, 35 Osgoode Hall L.J. 243 (1997).

46 *See generally,* Srividhya Ragavan, *Patients Win Over Patents*, THE HINDU, (March 7, 2013).

which is quite profitable for the U.S. Overall, U.S. pharmaceutical exports have been steadily rising, as shown in the figure below:[47]

Source: World Trade Organization

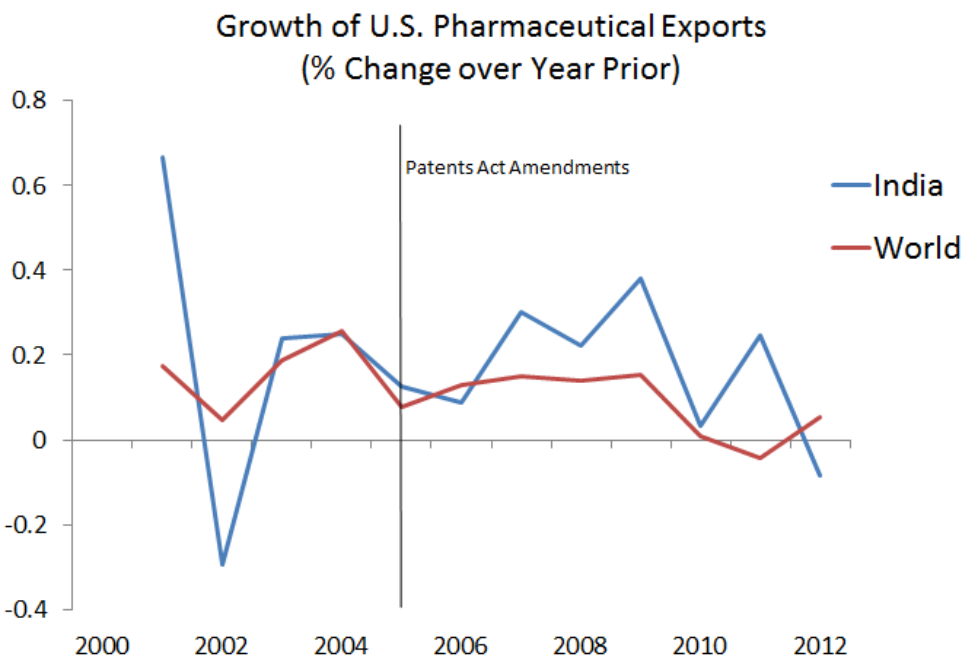
According to trade data from the World Trade Organization, U.S. pharmaceutical exports rose from $39 million to $225 million during the period 2000-2012. This is an increase of 470%.

Furthermore, U.S. pharmaceutical exports to India are growing at a faster rate than U.S. pharmaceutical exports to the world as a whole. Since the Patents Act was amended in 2005, export growth in India has outpaced overall world growth in six out of eight years.

	Total growth, 2000-2012	Average growth over prior year
U.S. Exports to India	470%	18%
U.S. Exports to World	242%	11%

Source: World Trade Organziation

47 From the post-hearing submissions of the authors to the USTR



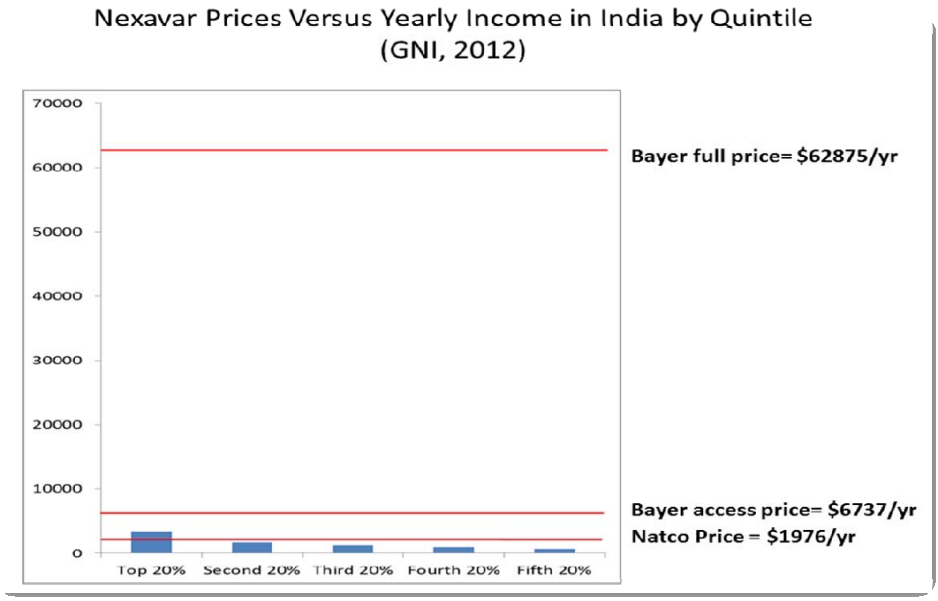
Source: World Trade Organization

It is notable that there has not been a single compulsory license granted on an American product. The one compulsory license issued has been on a patent held by Bayer, a German firm.

3520	1	0
Pharmaceutical patents granted in India, 2007-2012 (*Source:* Indian Patent Office)	Compulsory license for a German pharmaceutical product	Compulsory licenses for U.S. pharmaceutical Products

Bayer's market price and "access price" for Nexavar were both unaffordable to most of the Indian population.

At the ITC hearings, representatives from Bayer, the National Association of Manufacturers, and others, noted that Bayer was making the drug available at a lower "access price" in India. However, if one converts the full price and access price to U.S. dollars (based on a January 2013 exchange rate) and compares them to the average annual income-by-quintile, the data shows that both prices exceed annual income of even the top 20%.



Sources: Income and income distribution data from World Bank; Prices from the Nexaver compulsory license

This reality has to be weighed against the fact that in India, insurance coverage exists broadly for not more than about 5 to 20% of the population.[48] Most Government sponsored schemes have a cap of Rs.

48 E-mail from Professor Surupa Gupta, University of Mary Washington, (Feb 12, 2014) (on file with the author, Ragavan).

30,000 (approx.. $ 500) and is limited to hospitalization. Further, domiciliary treatment (medication) is not covered as part of most insurance in India.[49] Within this, the market shows enormous variations. Much of the insurance is privately acquired as opposed to Government sponsored or as part of employee benefits. It is estimated that the annual pay-out for those who have insurance is in the range of $1500-2000.[50]

vi. Bolar Provision:

Sections 107A, a bolar-type or "early working" provision, introduced via the 2005 amendment, allows for storage of patented material during the patent term to facilitate marketing immediately after the expiration of the patent term.[51] Use of the patent for research, data gathering, and seeking regulatory-approval, both domestically and abroad, are exempted from being construed as infringement. The New Delhi High Court approved the operation and the constitutionality of the provision in *Bayer v. Cipla*.[52] Such regulatory exceptions fall within the ambit of Article 30 which allows every country to consider the legitimate interests of third parties in structuring such exceptions. Indeed, bolar exceptions have been considered in a WTO dispute opinion of a panel "Canada — Patent Protection for Pharmaceutical Products" - (adopted on 7 April 2000) upholding Canada's bolar and regulatory exceptions, similar to that of India's. Even though the U.S. has attempted to block the use of Bolar type provisions to allow a patent exception for purposes of exporting patent protected subject matter for purposes of obtaining regulatory approval in some of its bilateral and regional trade agreements, it is completely lawful for countries like India to allow such foreign registration as a limited exception under Article 30.

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49 E-mail from Mr. D. G. Shah, Vision-India Limited, (Feb 23, 2014) (on file with the author, Ragavan).

50 E-mail from Professor Surupa Gupta, University of Mary Washington, (Feb 12, 2014) (on file with the author, Ragavan).

51 Patents Act, *supra* note 9, at § 107(A)

52 Bayer Corp. v. Union of India, (2009)41 PTC 634(Del).

vii. Exhaustion of Patent Rights:

Section 107A(b) embraces an international exhaustion of the rights of a patent owner.[53] Thus, the sale or importation into India of a legally procured patented item from anywhere in the world will not amount to infringement.[54] That is, there is no need for authorization by the patentee or his assignee as long as the product was sold with due permission of the patent owner (or assignee). In fact, even importation of a product acquired from sources other than the patent owner (or assignee), for instance, from countries not yet recognizing product patent protection, would be covered by the section. Article 6 of the TRIPS Agreement explicitly allows members to choose a regime of exhaustion and ensures that they be challenged under the WTO dispute settlement system. The Doha Declaration, under paragraph 5, has reaffirmed that Members do have this right, stating that each Member is free to establish its own regime for such exhaustion without challenge.[55]

viii: Criticisms about revocation of patents in India

Several statements and submissions to the ITC and the USTR, including that of BIO, criticized India for patent revocations through post-grant reviews by courts or the Patent Office.[56]

First, establishing judicial standards (or statutory interpretation) goes to the core of an independent judiciary. The General Obligations outlined from Article(s) 41 to 61 of the TRIPS agreement supposes the establishment of an independent judiciary with rights and authorities that are consistent with that sovereign government. Under traditional principles of international law, no country, much less industrial groups, can dictate the constituents of "judicial standards" of another country. The United States

53 PTA, *supra* note 9, § 107A(b)

54 *Id.* § 107A(b).

55 Annex IC to the General Agreement on Tariff s and Trade, Uruguay Round, World Trade Organization, done at Marrakesh, Apr. 15, 1994, 33 I.L.M 1981 (1994).

56 See Bio's submission to the ITC, page 4 (complaining of "counterfeiting, large backlogs and patent office inefficiency, differing administrative, legal, and judicial standards for patentability, compulsory licensing, inadequate data protection, and a need for harmonization of substantive standards and processes across patent offices around the world. Issues unique to biotechnology include patentability of biotechnology inventions, double patent review systems, genetic resource access and benefit regimes, and technology transfer issues that involve intellectual property.")

has not and will not tolerate foreign interference into the functioning of its judiciary, and no other country should likewise accept such criticism.

Page 8 of the BIO submission complains specifically about several patent revocations:

> The Indian Intellectual Property Appellate Board (IPAB) revoked several pharmaceutical patents in post-grant opposition proceedings in the last two years including patents protecting Sutent, Pegasys, Ganfort, Combigan, and Renadyl.

Notably, a close comparison of the reasoning used by the Indian patents office shows remarkable parallels to the reasoning used by U.S. courts to invalidate patents here in the United States. As an example, in the following paragraphs, I examine Ganfort & Combigan's (which was one application for a combination drug) treatment in the United States.

In India, Ganfort and Combigan were covered by Patent No.212695 titled "Hypotensive Lipid (prostaglandin derivatives) and Timolol composition and methods of using same" The patent related to a fixed combination of Bimatoprost and Timolol.[57] The patent was challenged as being obvious on the grounds that the only big difference between the invention and the prior art was that the invention was a single dose composition as opposed to separate administration of the combination.[58] The patent was invalidated in India for not traversing the nonobviousness requirement.

The interesting aspect which BIO does not highlight is that fact that in *Allergan Inc vs. Sandoz,*[59] a full panel Court of Appeals for the Court of Appeals for Federal Circuit in dealing with Combigen's claim one INVALIDATED the claim on the grounds that "unexpected results and prior art teaching away were NOT sufficient to outweigh the other evidence of obviousness."[60]

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57 Application for Patent bearing No. 219504

58 Anubha Sinha, IPAB revokes Allergan's patent on eye drugs Ganfort and Combigan, SpicyIP, (2013)

59 Allergan v. Sandoz, Fed. Cir, 2013 *available at* http://www.cafc.uscourts.gov/images/stories/opinions-orders/11-1619.Opinion.4-25-2013.1.PDF

60 *Id.*

> Both timolol (a beta blocker) and brimodine (an alpha2-agonist) were commercially available in their claimed concentrations at the time of the invention and were used to treat opthalmic conditions. The primary prior art reference, DeSantis, expressly taught serially administering both a beta blocker, such as timolol, with a brimodine in a fixed combination. It also provided "an express motivation to combine alpha2-agonists and beta blockers in order to increase patient compliance." Slip Op. at 8.

The equivalent in India of the unexpected results test used in the United States is the *enhanced efficacy*. A Federal Circuit panel validated the method claim – with Judge Dyk filing a dissent asserting the invalidity of the claim.

Indeed, the IPAB opinion states that:

> "We too are of the opinion like the Federal Court that there was a reasonable expectation of success in view of the DeSantis. Therefore for the above reason, we find that the invention is obvious."[61]

In India, a limited number of claims were filed and hence, only these were contested. In the U.S., even though Sandoz succeeded in establishing that claims of '463 patent were invalid as obvious, the number of filed claims were more and the Federal circuit ruled that some of those claims (4 of 149) were not obvious, and that delayed the entry of the generic.

Similarly, with respect to the drug Pegasys, the application to patent was filed by Roche in 1997 for "pegylated interferon alfa2a." The application matured into a patent in 2006 bearing no. 198952. A post-grant opposition was filed by a local companies on the grounds that interferon is a known protein, which when conjugated with the polymer PEG through the process of PEGylatio (a process of covalent attachment of polyethylene glycol polymer chains to another molecule or therapeutic protein) achieves improved stability, solubility, and reduced immunogenicity. Interestingly,

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61 Ajanta Pharma v. Allergan USA, *available at* http://www.ipab.tn.nic.in/173-2013.htm

Roche was able to traverse this opposition at the patent office level. On appeal, the IPAB's explained its reasoning for invalidating the patent as obvious as follows:

> "Interferon had already been used to treat hepatitis C. There were problems in the use of this protein as such. PEGylation was known from 1970s. Pegylation of proteins was known to improve the activity of the proteins. There was intense activity in the field of PEG chemistry and the person skilled in the art will be acquainted with it, if not directly involved in it. Linear conjugates of protein showed improvement over unconjugated protein. …the person of skill In the art takes a look at Monfardini and also at the other exhibits. He knows that the activity of interferon has to be improved for Hepatitis C cases. He knows that linear pegylation will improve it a bit. He knows that branched pegylation has shown marked improvement over linear conjugates in the case of superoxide dismutase and three enzymes. He is confident that branched PEGylation of Interferon will work; it has worked in Monfardini with enzymes. Monfardini gives him the structure on a platter. He also knows that he can work with molecular weight range of 5000-40,000 daltons to strike oil. He has reason to believe that higher may be better."

It is understandable that Roche does not like the judgment – but the above paragraph(s) show case due process and a reasoned judgment in action.

Notwithstanding the above, India recorded at that time a total of 10 to 12 million patients suffering from Hepatitis C – for which Pegasys offered a treatment. A six-month treatment of pegasys cost approximately Rs. 4,36,000 lakhs (approx. $ 8400!) and was discounted at a price of approximately Rs. 3,14,000 lakhs ($ 6000). The drug is taken in combination with Ribavarin, which cost approximately another Rs. 47,000 thousand ($1000). Given the cost, roughly, a total of 1400 patients were treated.[62] Yet, it was patented in India until it was invalidated and was NOT ever subject to compulsory licensing.

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62 Id.

Similarly, another drug cited by BIO - Sunitinib, (Sutent) - whose 50 mg tablets were marketed by Pfizer for an exorbitant price of Rs. 61,000 for a strip of seven tablets ($ 1200 approximately) was also not subject to compulsory licenses. What BIO does not add here is the fact that its members cannot sell these drugs even to its American patients at this price, save for "the 1%" in this country.[63]

Similarly, many of the other issues_that BIO as well as other industry groups like PhRMA decry equally_lack_adequate basis. For instance, in *Mayo v. Prometheus*[64] a unanimous Supreme Court struck down a method of medical treatment claim as being directed to a law of nature and thus patent ineligible! Thus, exclusions from patentability are not alien to the U.S. legal system. Other countries exclude such claims from protection. For example, in Canada methods of medical treatment are not patentable under section section 12.04.02 of its Manual of Patent Office Procedure. Further, TRIPS Article 27.3 further allows for such exclusions.

As for revocation of patents, BIO's and this industry group's statement leaves the impression that revocation of patents is a rare and unusual phenomenon! The following data examines two hundred and eighty (283) three cases where Federal District Courts have examined the patent validity between 2007 and 2011. Of the 283 cases identified, only in 39 cases were the claims determined to be valid. The following table provides a detailed summary:

Patent Cases in District Courts involving validity by Year						
	2007	2008	2009	2010	2011	Total
Cases where claims in patent held invalid	46	49	54	49	45	243
Cases where claims in patent held valid	12	8	11	5	3	39
Percent where claims in patent held valid	20%	14%	17%	9%	6%	14%
Total	58	57	65	54	48	283

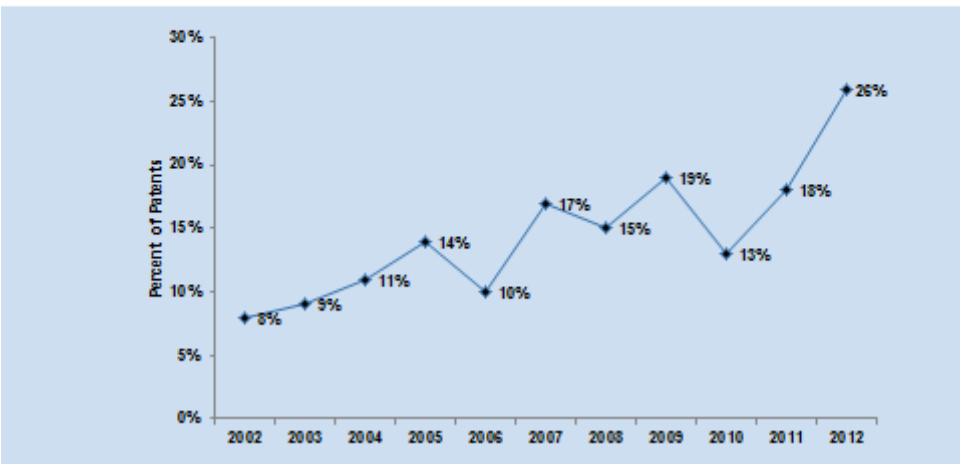
63 Prashanth Reddy, Estimating the number of Hepatitis patients treated by Roche's Pegasus (2012)

64 132 S.Ct. 1289 (2012)

About 243 of the 283 cases had claims that were invalidated by the District Court. That is, in a whopping 86% of the total cases examined, claims were invalidated.

The Court of Appeals for the Federal Circuit is also not shy of invalidation of claims where the court believes is warranted. The following graph provides the number of patents invalidated by the Court of Appeals for the Federal Circuit from 2002 to 2012.

Chart 2: Percent of Patents Invalidated Per Year by the Federal Circuit



Source: White Paper Report; United States Patent Invalidity Study, 2012.

Revoking patents merely point to a robust judiciary reviewing imperfect decisions by harried patent examiners. Several of the submission decries patent revocations in India as if denials/revocations/invalidations never occur anywhere else. The sophistication of a patent system is not in the numbers of patents issued. It is in the quality of patents. Decreasing the bar for patenting in the United States is cited as a reason for the Supreme Court's unprecedented activity in this area of law. Academics have decried the pathetic quality of patents in this country. Forums like the International

Trade Commission has a burden to ensure that it does not set the United States on a course to punish others countries for instituting quality based standards.

PART II: AGRICULTURE

India, like other developing nation counterparts, took advantage of the flexibilities in Article 27(3) of the TRIPS agreement which mandates establishing a protection regime "either by patents or by enacting an *effective* sui generis system." In light of Articles 7 and 8 of TRIPS, the *effectiveness* of a plant protection regime established under Article 27 must be judged by its ability to accommodate local/ national welfare and economic goals. Such a reading of the *effectiveness* requirement fits more comfortably with the other sub-sections of Article 27 which provides that members *may* choose to protect biological or microbiological materials. Member's flexibility to establish an *effective* system increases when using a national yardstick. Considering this, India enacted the Protection of Plant Varieties and Farmers Rights Act of 2004 (PPVFA)[65] under which three separate varieties can be registered, being: (1) New Variety; (2) Extant Variety, which refers to an existing variety discovered for the first time; and (c) Farmer's Variety, based on community property concepts.[66]

i. New variety: A variety would be eligible for protection as *new* provided it is novel, distinct, uniform, and stable—a threshold similar to the UPOV requirements. [67] Examination guidelines set out the principles used for testing the distinctiveness, uniformity, and stability (DUS Guidelines) of a variety to determine its registration status.[68] Information such as (1) the geographical origin of the material; and (2) any contribution by farmer, community, or organization to the development of the variety, (3) information about the use of genetic material conserved by any tribal or rural families in the breeding are required to be given in the application.[69]

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65 The Protection of Plant Varieties and Farmers' Rights Act, No. 53 of 2001; INDIA CODE (2001), [hereinafter "PPVFA"]

66 *Id*, § 15(2).

67 *Id.* § 15.

68 *See* General Guidelines for the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions, Protection of Plants Varieties & Farmers' Rights Authority, Department of Agriculture and Cooperation, Government of India, NASC Complex, IARI, New Delhi-110012 [hereinafter "DUS Guidelines"]

69 *Id.* § 18(1)(e), 40.

ii. Extant Variety: In order to ensure that an appropriate bar is instituted in a country that is rich in biodiversity and traditional farming practices, the extant variety register was created to as a compilation of matters known and existing in the public domain. This classification indirectly creates a higher bar to determine distinctiveness of a new variety. Indeed, the extant variety classification takes care of India's obligation under the Convention on Biological Diversity (CBD) to which it is a signatory.[70] The Convention requires member states to take adequate steps to preserve biological and genetic materials. Section 28 of the PPVFA provides that the government, as the owner of the extant varieties, enjoys the right to determine their production, sale, marketability, distribution, importation, or exportation. Government ownership over the materials ties in with the objective of protecting biodiversity and allowing the government to negotiate with bioprospectors. An Extant Variety Recommendation Committee (EVRC) develops appropriate procedures for examining applications to register an extant variety.[71] By the end of 2010, from a pool of 297 applications, 123 extant varieties were registered.

iii. Farmer's Variety: Within this *variety* typology fall plants which are traditionally cultivated and evolved by the farmers in their fields, or is a wild relative or land race of a variety about which the farmers possess the common knowledge.[72] The reason for protecting farmers' rights is the underlying assumption that genetic diversity is enhanced when varieties are adapted using traditional farming techniques.[73] By 2010, after considering 44 applications three varieties of rice—Indrasan, Hansraj, and Tilak Chandan—became the first of the farmer's varieties registered in India, and perhaps, also in the world.

Other features of the PPVFA are all part of the *sui generis* system that allows a country to tailor a regime that protects plant varieties while making adequate allowances for local issues. The creation of the Gene Fund, for instance, is another feature created by the central government for the benefit of the farmers.[74] The fund helps reward farmers whose existing

70 Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 79 [hereinafter "CBD"].

71 *See* Protection of Plant Varieties and Farmers' Rights Regulations, 2006*,* Gazette of India, Notification (Dec. 7, 2006).

72 PPVFA, *supra* note 38, § 2(*l*).

73 *Id.*

74 *See* PPVFA, *supra* note 38, §s 39, 45.

variety/material is used as a source to create a new variety.[75] Similarly, the PPVFA allows farmers to retain their traditional right to save and reuse seeds from their harvests with some restrictions and conditions. The PPVFA has also introduced a right to community compensation in recognition of traditional knowledge contributions. Section 43 reflects a community property philosophy by providing that "[b]reeders wanting to use farmers' varieties for creating essentially derived varieties (EDVs) cannot do so without the express permission of the farmers."[76] Thus, communities can stake a claim of contribution from breeders if a new variety is derived from information or a contribution is made by the local community.[77] If the community's claim for compensation is established, the breeder must deposit the compensation in the Gene Fund.[78] Lastly, the PPVFA provides for "benefit sharing" – which refers to sharing a proportion of the benefits accruing to a breeder of a new variety with qualifying claimants, if any, who could be indigenous groups, individuals, or communities.[79] That concept, first envisaged in the CBD, has been more clearly expounded on the PPVFA and structured to work closely with the community rights principle detailed earlier. Thus, the statute mandates that before registering any new variety, the statutory authority should invite claims for benefit sharing.[80]

CONCLUSION[81]

Along with the above testimonial, the authors also filed detailed post-hearing reports both to the ITC and the USTR addressing questions and concerns that were raised by the Commissioners during the hearing. The authors highlighted that taking any step that affects India detrimentally will be a strategic mistake for all of the following reasons:

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75 *Id.* § 39.

76 *See* PPVFA, *supra* note 38, § 48.

77 *Id.*

78 *Id.*

79 *Id.* §§ 2(b), 26.

80 *Id.* § 26.

81 *See* International Trade Commission, Report on Investigation No. 332-543, *available at* http://www.usitc.gov/press_room/news_release/2014/er1222ll254.htm (for details of the ITC's Report on the Investigation); *See also* USTR Special 301 Report, *available at* www.ustr.gov (for details of the USTR's Report on its Investigation of India's trade practices).

1. India has not done anything during the examination period of this report to warrant changes;

2. Much of industry's requests are unsupported by specific facts and figures;

3. All of India's actions are well-with its negotiated rights under the TRIPS agreement; within established due-processes and procedures;

4. India is one of the few countries in that region where the United States enjoys good public opinion;

5. Other industries, Boeing, being a great example, has no grouse with India and its intellectual property laws.

The authors cautioned both forums forum from setting a course that could result in labelling other countries for exercising their sovereign powers.

THE CRACK IN THE WALL: PARALLEL IMPORTATION AS A "FLEXIBILITY" WITHIN THE INDIAN PATENT SYSTEM TO ENSURE ACCESS TO MEDICINE

Meenakshi Rao Kurpad[*]

This paper seeks to examine parallel importation and their role in the production of generic drugs and looks at parallel imports as the most viable "flexibility" within the Indian Patent system so as to ensure access to medicine. Therefore, it seeks to argue for parallel imports as a solution that enhances an efficient IPR regime while at the same time ensuring social welfare created by a flexible patent system.

I. INTRODUCTION

India contributes to around 8% of global pharmaceutical production and 20% of the world's generic supply[1] It plays an important role in providing access to essential medicines to developing countries, given that 60 developing countries have no pharmaceutical industry of their own.[2] It was widely accepted that the flexibilities provided by the Indian Patents Act, 1970 (*hereinafter* "1970 Act") led to the large scale growth of the domestic generic drug industry. The growth of the Indian pharmaceutical industry may be traced in three stages. The first was from 1947 to 1970, when the new patents act came into place; the second lasted from 1970 to 2005 when the pharmaceutical industry grew as a major world exporter of generic drugs; and the post-TRIPS compliance period which is 2005 to the present day.

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1 N. Lalitha, *Access to Indian Generic Drugs: Emerging Issues* in INTELLECTUAL PROPERTY, PHARMACEUTICALS AND PUBLIC HEALTH: ACCESS TO DRUGS IN DEVELOPING COUNTRIES (Shadlen et. al. eds.) 225, 252 (2011) (citing IDMA 2010)

2 PHILIPPE CULLET, INTELLECTUAL PROPERTY PROTECTION AND SUSTAINABLE DEVELOPMENT 34-38 (2005)

A. HEAVY RELIANCE ON IMPORTS: 1947-1970

Prior to 1970, the Indian Pharmaceutical industry was practically non-existent. Till then, India still followed the archaic 1872 law on patents, which was formulated during the British rule. The old law on patent allowed for product patents in all fields of scientific and technological work, and this included pharmaceuticals as well.[3] In the two decades post-Independence, India was heavily dependent on essential life-saving medicines such as insulin as they were imported from multi-national pharmaceutical corporations.

Initial efforts to formulate a new patent law were made as early as 1949, when a Committee under the chairmanship of Justice Tek Chand was instituted to provide recommendations for use of patent rights in India.[4] The Ayyangar Committee, chaired by Justice N. Rajagopala Ayyangar played a more crucial role in ushering in the 1970 Act.[5] The Patents Bill, introduced in 1965, contained all the major recommendations of the Ayyangar Committee and after five years of scrutiny and much debate, it was consolidated into law in the form of the 1970 Act.[6]

B. EMERGENCE AS THE WORLD'S LARGEST GENERIC DRUG MANUFACTURER: 1970-2005

The 1970 Act contained an express provision for pharmaceutical patents.[7] Unlike the earlier laws, it provided patents for processes and not for products, which meant that patents would only be granted for processes used in making pharmaceutical compounds and not the drug itself.[8] Being newly independent, financial resources for industrial production and growth were scarce, and recognising this, India sought to adopt a flexible patent regime to encourage generic drug production that would cater to the medical requirements of its people. The government also saw this as an

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3 Srividya Ragavan, *Of the inequals of the Uruguay Round,* 10 MARQ. INTELL. PROP. L. REV. 273, 284 (2006)

4 TANUJA GARDE, *India* in INTELLECTUAL PROPERTY IN ASIA: LAW, ECONOMICS, HISTORY AND POLITICS (PAUL GOLDSTEIN & JOSEPH STRAUS EDS.) 59 (2009)

5 V.K Unni, *Indian Patent Law and TRIPS: Redrawing the Flexibility Framework in the Context of Public Policy and Health* 25 PAC. MCGEORGE GLOBAL BUS. & DEV. L. J. 323, 327 (2012)

6 *Id.*

7 § 5(a) (b), The Indian Patents Act, 1970

8 § 53, The Indian Patents Act, 1970

opportunity to develop the fledgling domestic pharmaceutical industry.[9] Because only process patents and not product patents were recognised by the 1970 Act, Indian drug manufacturers could avail parallel imports as a flexibility to procure drugs, alter the procedure to create a generic version of the drug and sell it at lower prices.

In the next three decades, the Indian pharmaceutical industry not only grew and developed to cater to the medical requirements of its own people but also to countries in Africa and sub-Saharan Africa.[10] The growth of the Indian generic drug industry over its African counterparts is attributed to the presence of large educated and skilled scientific workforce, sizeable capacity and more infrastructures in comparison to Africa.[11]

C. TRIPS COMPLIANCE AND FLEXIBILITIES: 2005- PRESENT

One of the many obligations that arose on India's accession to the WTO was its compliance with the TRIPS agreement, which was formulated in 1995 and was effective from 1st January, 1996. India needed to be fully-compliant with the TRIPS in order to avail all benefits from being a WTO member or adopt the unviable alternate of remaining outside the world trading system.[12] However, India, and other developing countries were given a ten-year grace period to make their intellectual property laws fully compliant with the TRIPS.[13] Many feared that once Indian IP laws became TRIPS compliant, there would many challenges that the Indian generic drug industry would have to overcome to continue to play its role as a low cost drug supplier.

During negotiations on the TRIPS agreement, India and Brazil largely opposed the provisions in the original form, and expressed concerns over access to medicines, especially drugs for AIDS patients in Africa.[14] It

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9 Janice M. Mueller, *The Tiger Awakens: The Tumultuous Transformation of India's Patent System and the Rise of Indian Pharmaceutical Innovation,* 68 U. PITT. L. REV. 491, 514 (2007)

10 MAHESH PRASAD INDIA'S FOREIGN TRADE 114-115 (2011)

11 Rishi Gupta, *TRIPS Compliance: Dealing with the Consequences of Drug Patents in India* 26 HOUS. J. INT'L L. 599-648 (2003-04)

12 Amy Kapezynski, *Harmonisation and its Discontents: A Case Study of the TRIPS Implementation in India's Pharmaceutical Sector* 97 CAL. L. REV. 1571, 1579 (2009)

13 RICHARD SCHAFFER, ET.AL (EDS.) INTERNATIONAL BUSINESS LAW AND ITS ENVIRONMENT 566 (2009)

14 *Id.*

was only due to efforts from India, Brazil and other developing nations that certain flexibilities were adopted to address issues such as access to medicines and public health concerns. One of the most important flexibilities present in the TRIPS agreement is that of parallel imports and the doctrine of exhaustion. Briefly stated, the term "parallel importation" refers to goods produced and sold legally, and subsequently imported.[15] The doctrine of exhaustion refers to the right to control the sale and distribution of products. Article 6 of the TRIPS states that:

> *"For the purposes of dispute settlement under this Agreement, subject to the provisions of Articles 3 [national treatment] and 4 [MFN] nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights."*[16]

This clearly illustrates that the TRIPS is silent on the doctrine of exhaustion. Furthermore, the Doha Declaration of 2001 allows parallel importation of drugs into countries which lack the capability to manufacture their own drugs to address public health concerns.[17] Parallel Importation of drugs allows a country to purchase drugs from a cheaper source outside the country, import them into the domestic market and place them in direct competition with the patent holder at a much lower price.[18]

Parallel Imports help to provide access to medicine in two ways: the first being parallel imports of essential drugs at lower prices[19] and the second is their role in aiding generic drug production. The following sections will examine the viability of parallel imports as a flexibility in order to ensure access post the TRIPS and how it could remain a sustainable flexibility post the TRIPS plus.

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15 Christopher Heath, *Parallel Imports and International Trade,* WORLD INTELLECTUAL PROPERTY ORGANISATION available at http://www.wipo.int/edocs/mdocs/sme/en/atrip_gva_99/atrip_gva_99_6.pdf

16 Article 6, TRIPS (1994)

17 *The separate Doha Declaration Explained*, WORLD TRADE ORGANISATION available at http://www.wto.org/english/tratop_e/trips_e/healthdeclexpln_e.htm

18 Peggy B. Sherman & Ellwood F. Oakley III, *Pandemics and Panaceas: The World Trade Organization's Efforts to Balance Pharmaceutical Patents and Access to AIDS Drugs,* 41 AM. BUS. L. J. 353, 372-373 (2004)

19 Marianne Buckley, *Looking Inward: Regional Parallel Trade as a means of bringing affordable drugs to Africa* 41 SETON HALL L. REV. 625, 626 (2011)

II. PARALLEL IMPORTATION AS A FLEXIBILITY IN THE TRIPS ERA

As illustrated in the previous section, India had to make certain amendments to its patent law in order to make it fully compliant with the TRIPS. While this was welcomed by the WTO, there were fears that such amendments would have an adverse impact on the contribution of the Indian pharmaceutical industry to global generic drug production and consequently access to medicine by the world's poor. However, post the Doha Declaration and certain flexibilities present in the TRIPS mechanism, there are arguments that access to medicine would not be affected. One of the flexibilities present is parallel imports.

This author argues that parallel imports are a viable and sustainable option to ensure generic drug production by Indian industries to ensure and enhance access to medicine. This argument is based on a two-fold approach. First, Indian Patent law recognises and supports parallel imports and two; parallel imports are the most viable flexibility in comparison to other flexibilities provided in the TRIPS.

A. INDIAN PATENT LAW SUPPORTS PARALLEL IMPORTATION

The Patents (Amendment) Act, 2005 (*hereinafter* "2005 Act") allowed for product patents on pharmaceuticals, food and agro-chemicals for the first time since 1970.[20] This led to fears that it would substantially affect generic drug production in India and curb the poor's access to medicine. However, the amendments to the Indian patent Act seems to have taken complete advantage of the flexibilities provided in the TRIPS agreement to ensure that generic drug production is not hampered, and consequentially access to medicine.

i. Limiting the Scope of Patentability :Section 3 (d)

Since 2005, the most contended provision of the newly amended patent law is Section 3 (d) which lays down the criterion necessary to be granted a patent. By providing specific criterion that needs to be fulfilled in order to be granted a patent, India's Patent law has taken advantage of the flexibility provided under Article 27 of the TRIPS, which empowers

20 § 4, The Patents (Amendment) Act, 2005.

governments to refuse to grant patents for reasons possibly related to public health which include commercial exploitation over human and animal health, diagnostic, therapeutic and surgical methods to treat humans or animals and certain plant and animal inventions.[21] This definition reflects all the principles present in the TRIPS, while at the same time taking measures to prevent ever-greening and granting of frivolous patents.

Therefore, such a definition would enable the production of generic drugs, as long as their production would not violate the conditions set forth within the meaning of Section 3 (d).

ii. Incorporation of the International Exhaustion Doctrine in Indian Patent Law

The 2005 Act implements the principle of international exhaustion, which recognises that once a product has been sold, the owner exhausts his right over further sale and distribution of the product, regardless of where the sale has taken place.[22] Section 107A(b) of the 2005 Act reads as follows:

> *"Importation of patented products by any person from a person who is duly authorised under the law to produce or sell or distribute the product,* ***shall not*** *be considered as an infringement of patent rights."*[23] (Emphasis added)

India, like other developing countries, has adopted the international exhaustion doctrine within their patent laws to ensure access to medicines to their citizens.[24] Since the TRIPS is silent on the doctrine of exhaustion, patent laws which recognise international exhaustion cannot be scrutinised for being non-compliant with the TRIPS. Given this, parallel imports can ensure that India is completely TRIPS compliant, while at the same time ensure that generic drug production and further access to medicine is not compromised. This showcases the perfect balance achieved by the amended patent law between patent rights and compliance with the TRIPS and addressing public health concerns and access.

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21 Abhayraj Naik, *Pharmaceutical Patents and Healthcare* 2 SOCIO-LEGAL REV. 46, 50 (2006)
22 s*upra* n. 5 at 341
23 §107A(b), The Patents (Amendment) Act, 2005.
24 s*upra* n. 5 at 341

iii. Role of the Indian Judiciary

The Indian judiciary strives to achieve a balance between the right to health and patent rights. It goes a step further and lays great emphasis on the importance of people's right to health and access to medicine. The emphasis on the right to health by the judiciary was seen in the much controversial *Novartis* case decided by the Apex Court in 2013.[25] The Court held that apart from the traditional conditions of novelty, inventive step and non-obviousness as stipulated in the TRIPS, Indian law laid down the new test of therapeutic efficacy that needed to be satisfied in order to be granted a patent.[26]Therefore, the Indian Judiciary has always emphasised on the right to health and access to medicine and thus, if parallel imports in pharmaceuticals were to be disputed in the future, it is highly likely that the judicial decision would tilt towards upholding the right to health.

B. PARALLEL IMPORTS IS THE MOST VIABLE OPTION AMONG ALL 'FLEXIBILITIES' IN THE TRIPS

In this section, the author will argue that parallel imports is the most effective and workable option among all the flexibilities present in the TRIPS mechanism. In order to do so, an examination of the other possible flexibilities is made.

i. Compulsory Licensing

A compulsory license is a license granted by the government allowing the use of an intellectual property right without the IP holder's consent.[27] In the case of compulsory license, the government allows someone else to produce or process the patented product without consent of the owner.[28] It becomes important to distinguish between parallel imports and compulsory licensing at this point. Parallel imports are concerned mainly with import of genuine products and their subsequent sale at lower prices without the patent holder's consent. Compulsory

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25 *See* generally Novartis v. UOI 2013 (Civil Appeal No. 2728/2013)

26 *Id.*

27 Yahong Li, *Intellectual Property and Public Health: Two Sides of the Same Coin* 6 ASIAN J. WTO & INT'L HEALTH L & POL'Y 389,408 (2011)

28 *Obligations and exceptions: TRIPS and Pharmaceutical Patents* WORLD TRADE ORGANISATION available at http://www.wto.org/english/tratop_e/trips_e/factsheet_pharm02_e.htm

licensing is a formal direction given by the State to either produce generic versions or import patented drugs or their generic versions to address public health concerns. Parallel imports may be allowed in a country by virtue of a compulsory license. However, parallel imports may even be allowed regardless of the compulsory license if the IP laws of that country recognise international exhaustion of IP rights. Moreover, compulsory licensing may also contain measures to prevent parallel imports beyond a certain limit.

The Doha Declaration held that compulsory licensing was one of the flexibilities present in the TRIPS system to address public health concerns.[29] Countries which lacked capacity to manufacture drugs could resort to compulsory licensing to address public health issues. Governments could grant compulsory licenses if they determined public health problems to be of "extreme urgency" or "national emergency".[30] Countries were waived from the obligation under Article 31 (f) of the TRIPS.[31]

Yet, the process to obtain permission to issue compulsory licenses remains cumbersome. Apart from the need for countries who wish to issue compulsory licenses to establish that there is a "national emergency" or a situation of "extreme urgency", there are certain additional requirements that are needed to be met. The TRIPS stipulates that it cannot be given exclusively to licensees, and it usually must be granted mainly to supply to the domestic market.[32] Apart from these conditions, there exist other vague criteria such grounds when normal requirements for compulsory licensing do not apply and the need to apply for a voluntary license first.[33] Therefore, the TRIPS agreement has narrowed the circumstances under which compulsory licensing may be deployed to remedy anti-competitive and other measures.[34] Although Paragraph 6 of the Declaration has attempted to address these concerns, developing nations still face much difficulty and

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29 *supra* n. 17.

30 Pooja Van Dyck, *Importing Western Style, Exporting Tragedy: Changes in Indian Patent Law and Their Impact on AIDS Treatment in Africa* 6 NW. J. TECH & INTELL. PROP. 138, 145 (2007-08)

31 s*upra* n. 27 at 409.

32 s*upra* n. 28.

33 *Id.*

34 Elizabeth Siew Kuan NG, *Balancing Patents and Access to Medicine* 21 SACLJ 457, 471 (2009)

are slow in implementing the process due to procedural difficulties.[35] Given these limitations of procedural requirements, special conditions for packaging, labelling and marking of drugs which hamper the cost-effectiveness and efficiency of the system, along with uncertainty in issues such countries eligible to adopt such a measure,[36] compulsory licensing is far from being a full effective and workable flexibility for nations to exploit in order to address access to medicine and public health concerns. Till 2009, Canada and Rwanda were the only two nations to grant compulsory licenses and notify the TRIPS Council[37], despite the fact that many developing nations in Asia and Africa were also in need of such a measure to address the public health concerns. In 2012, India granted its first ever compulsory license for anti-cancer drug as a result of the controversial *Bayer v. Natco*[38] Order. The move was welcomed by patients and NGOs which had been advocating for low-cost anti-cancer drugs for a long time.[39] The order also opened the doors for generic companies to apply for compulsory licenses to address supply in the domestic market. Yet, such licenses and orders face the constant threat of litigation, and much time and energy is spent before access may be realised. Furthermore, since the issue of the first compulsory license, there has been just one more application in the Indian Patent Office by BDR Pharmaceutical Companies International Pvt. Ltd[40] which was rejected.[41] Therefore, compulsory licensing is still at its baby steps in India, and much more needs to be done to be it a workable flexibility to ensure access.

35 *Id.* at 472.

36 *Id.* at 473.

37 *Id.*

38 R. Sivaraman, *Natco Pharma wins cancer drug case* THE HINDU March 4, 2013 available at http://www.thehindu.com/business/companies/natco-pharma-wins-cancer-drug-case/article4475762.ece

39 Shamnad Basheer, *India's First Compulsory License Granted!* SPICY IP available at http://spicyip.com/2012/03/breaking-news-indias-first-compulsory.html

40 Shamnad Basheer, *Breaking News: Second Compulsory Licensing Application filed* SPICY IP available at http://spicyip.com/2013/03/breaking-news-second-compulsory.html

41 Divya Rajagopal, *Patent office rejects BDR Pharma's compulsory licensing application* THE ECONOMIC TIMES October 31, 2013 available at http://articles.economictimes.indiatimes.com/2013-10-31/news/43561264_1_voluntary-licence-compulsory-licence-dasatinib

ii. Price Controls

Price control schemes or regulatory schemes are formulated by governments so as to make drugs more affordable and to enhance access.[42] Drug price controls were formulated as a reaction to the threat of increasing prices of drugs by virtue of more stringent patent laws. When India passed a new patent law in 1970, it also instituted a drug price control order to ensure public access to drugs and provide a substantial profit margin to companies as well as quality to consumers.[43]

Price controls, no doubt, protect consumers and local companies by keeping the prices of drugs down.[44] It would also send a strong message to the pharmaceutical industry that India would not back down on its national interests, i.e.., ensuring access to medicine and public health.[45] However, the use of such price controls come at the risk of deterring drug discoveries and innovations into the pharmaceutical business.[46] It becomes important at this point to balance interests of pharmaceutical manufacturers and consumer interests. If too many price controls are issued, prices would be capped far below market rates and would hamper incentives to commercialise treatment for diseases that need to be addressed in India.[47] On the other hand, if they are used sparingly, then drug companies will continue to charge high prices and hinder access.[48] Another notable concern with respect to price controls would be that multi-nationals may decide to exclude introduction of patented products into India altogether, and further local companies cannot produce generic versions of this drug.[49] This would consequently prevent access to new medicines.

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42 Maxwell R. Morgan *Medicines for the Developing World: Promoting Access and Innovation in the Post-TRIPS Environment* 64 U. TORONTO FAC. L. REV. 45, 94 (2006)

43 Sean Eric Smith, *Opening up to the World: India's Pharmaceutical Companies prepare for 2005* INSTITUTE FOR INTERNATIONAL STUDIES (ASIA PACIFIC RESEARCH CENTER) STANFORD UNIVERSITY available at http://iis-db.stanford.edu/pubs/11893/smith.pdf

44 s*upra* n. 11 at 609

45 *Id.*

46 *supra* n. 11

47 *Id.*

48 *Id.*

49 *Id.*

iii. Drug donation programs

One way by which developing countries can enhance access is to encourage large pharmaceuticals to develop drug donation programs and provide medicine to the poor. There have been instances of original patent owner pharmaceutical companies donating drugs to certain countries rather than selling them at a profit.[50] One such instance is the successful drug donation program by Merck Invermectin in 1988 where Merck gave large amounts of its drug Invermectin to provide treatment for *onchocerciasis* (river blindness) to many developing countries.[51] The main incentive for large pharmaceuticals to formulate and execute such drug donation programs is the favourable tax subsidy provided by the government.

However, in India, the situation may be different. By virtue of corporate social responsibility (CSR) clause in the new Companies Act, 2013, companies with a net worth of Rs. 500 Crores or more or a turnover of more than Rs. 1000 Crores or a net profit of Rs. 5 Crores in a fiscal year are to conduct CSR activities.[52] For large drug companies this might as well be drug donation programs. Yet, there are problems associated with this. First, drug donation programs are not sustainable long term solutions. They are, at best, a more viable option than compulsory licensing to address "national emergency" or "extreme urgency". Secondly, the CSR has nowhere been defined in the Act and for all purposes could bar drug donation programs as a CSR activity.

iv. Bolar Exception

Article 30 of the TRIPS provides for research and experimental use of a patented product to make improvements on the products which may be patented once the earlier patent expires.[53] This also serves the focal purpose of patent law, ie., to encourage and stimulate research and innovation.[54] This exception allows generic drug companies to use the patented invention to obtain marketing approval without the patent holder's permission so that they can market their product as soon as the

50 s*upra* n. 42 at 81.
51 *Id.*
52 § 135 (1) The Companies Act, 2013
53 Article 30, TRIPS 1994
54 *supra* n. 27 at 406.

patent expires.[55] This exception is called the "Bolar Exception" because it was developed from *Roche Products v. Bolar Pharmaceuticals*.[56]

Indian patent law provides for such a research and experiment exception.[57] This provision existed prior to the new amendments that came in 2005 and continues to be in force. However, it has never been invoked before a court of law in India.[58] Indian law also exempts experimental trials conducted on patented drugs from patent infringement.[59] Although Indian patent law on the experimental use provision is broader and more liberal than other nations,[60] it is unclear as to what may come within the purview of "mere experimentation, research or imparting instruction to pupils."[61]

C. WHY IS PARALLEL IMPORTS THE MOST VIABLE OPTION?

As illustrated, parallel imports have many relative advantages over other flexibilities in the TRIPS system and Indian patent law. India may continue to pursue parallel importation in order to ensure access and encourage generic production, while at the same time being fully TRIPS compliant. Secondly, unlike compulsory licensing and price controls where WTO members are required to prove that such flexibilities have been adopt because of certain medical emergencies, parallel imports has no such requirement or obligation. Developing countries can fully resort to parallel importation without being questioned by other member nations of the WTO. Moreover, it is not just the developing countries which are open to the idea of a parallel trading system. Europe has a parallel trade system for pharmaceutical drugs that continues to grow manifold as price differentials vary between countries in the EU.[62] Additionally, parallel trade provides a sustainable long-term solution as opposed to drug donation programmes which are successful short-term measures. Third, parallel imports are also economically efficient. Simply put, parallel imports involve achieving a balance between interests of consumers and producers and thus becomes

55 *supra* n. 27 at 407.
56 733 F 2d 858 (Fed. Cir. 1984)
57 § 47(3), The Patents Act, 1970
58 Shamnad Basheer & Prashant Reddy, *The Experimental Use Exception Through a Developmental Lens* 50 INTELL. PROP. L. REV. 831, 851 (2010)
59 *supra* n.5 at 341
60 *supra* n. 58.
61 § 47(3), The Patents Act 1970
62 *supra* n. 19 at 630.

an economic question in a broad sense.[63] In a parallel-trading system, the goal is to make drugs more affordable for consumers while generating a profit for the trader.[64] In a sense, this addresses in part the age-old trade-off in intellectual property law, the trade-off between access and incentive. Parallel imports will also contribute to ensuring a competitive price in the international markets.[65] Furthermore, they play a key role in ensuring and enhancing competitive advantage and efficiency gains throughout the international trading system.[66]

III. WHAT CAN PREVENT PARALLEL IMPORTS FROM CONTINUING TO BE THE MOST VIABLE "FLEXIBILITY"?

Although parallel imports now seem to be the most flexible option to ensure access, it is not free from potential threats that can prevent it from doing so. Two potential threats that can impact access to medicine by way of parallel importation are examined here

i. Increase in M&A by Foreign Pharmaceutical Companies

Since 2005, many multinational pharmaceutical companies have entered into Mergers & Acquisition (M&A) agreements with Indian generic producers. One of the possible reasons for such a surge in M&As in the pharmaceutical sector is to wipe out potential competition from generic producers and establish a hold in the Indian market.[67] This could pose substantial threat to not only Indian generic drug production but also on allowing of parallel imports as many of these foreign drug companies seek to restrict parallel imports of drugs. It is also a matter of serious concern that availability and affordability of off-patent medicines will become more

63 Frederick M. Abbott, *First Report (Final) to the Committee on International Trade Law of the International Law Association on the Subject of Parallel Importation* 1 J. INT'L ECON. L. 607, 612 (1998)

64 *supra* n. 19 at 626

65 *supra* n. 63 at 622.

66 *Id.*

67 *M&A deals in Indian pharmaceutical sector will remain on high* INDIA INFOLINE NEWS September 23, 2013 available at http://www.indiainfoline.com/Markets/News/MandA-deals-in-Indian-pharmaceutical-sector-will-remain-on-high-Resurgent-India/5784065980

serious when multinationals continue to acquire domestic generic pharma companies.[68]

ii. TRIPS Plus provisions

In recent years, a growing threat to access to medicines are the more restrictive provisions that are envisaged in the TRIPS plus. These 'TRIPS plus' provisions advocate for tougher and more restrictive conditions than that are required in the TRIPS agreement.[69] Although countries are not bound by international laws such as these, countries such as Brazil, India and China are left with no alternative but to adopt these measures, if they want to sign FTAs with the United States and the EU.[70]

iii. How far do these threats prevent Parallel Imports from ensuring access?

However, these threats do not seem to be serious. Looking at the threat of increased mergers and acquisitions, the answer lies in the cost of obtaining a patent. In contrast to a copyright, it is costly to obtain a patent, including a patent on improvements.[71]Additionally, even when firms enter into mergers with firms in the same industry, there might be problems of skills and knowledge of the new firm adapting to the more complex technologies of the acquiring firm.[72] This leads to increased manufacturing costs.[73] In the alternative, firms may think of resorting to license trade secrets, but this too has cost-related problems. In the absence of patents, firms would look at trade secrets as workable option, but trade secrets are costly because the secret is more likely to leak out as more people come to be in the know of such trade secret.[74] Another reason may be that although a patentee may have an incentive to license its patented products to others, the patentee may not always do so because of factors such as firm culture, management structure, hierarchy, bureaucratic nature of the firm and other

68 *India concerned about M&A, FDI in pharma* BIOSPECTRUM September 3, 2013 available at http://www.biospectrumasia.com/biospectrum/news/194651/india-concerned-m-a-fdi-pharma#.UnNJpfmmh0o

69 *TRIPS, TRIPS Plus and Doha*, ACCESS CAMPAIGN July 2011available at http://www.msfaccess.org/content/trips-trips-plus-and-doha

70 *Id.*

71 WILLIAM M. LANDES AND RICHARD A POSNER, *The Economics of Patent Law* in THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 319 (2003)

72 *Id.* at 329.

73 *Id.*

74 *Id.*

factors that vary from firm to firm when it comes to patents.[75] These two reasons cast substantial doubt on whether increased M &A with Indian generics, which are firms in the target industry of the merger, are in-effect a feasible alternative than a unilateral entry into the industry.[76]

India, apart from other emerging and leading developing economies like Brazil, were strong opponents to the TRIPS agreement itself. They expressed strong concerns that over-protection of IPR would impede transfer of technology and increase pharmaceutical product costs and further undermining sovereignty of nations and the development objectives of growing economies.[77] The TRIPS plus provisions are being met with strong criticism by both developed and developing countries alike. Apart from objections by nations, many organisations have expressed their dissent with the TRIPS plus provisions. Organisations such as The Affordable Medicines and Treatment Campaign Universities Allied for Essential Medicines and the European arm of International Students Access to Medicines Organisations strongly voice their objections against the TRIPS plus.[78] When the controversial India-EU FTA was being negotiated, there was a week of international action against it, where several protested the TRIPS plus provisions which hampered access to medicine.[79] Therefore, there is substantial international pressure against the TRIPS plus provisions from being fully implemented and recognised.

IV. CONCLUSION

In the wake of developed economies advocating for stronger intellectual property protection at the world trading level, parallel imports as a flexibility within the TRIPS mechanism is critical in ensuring access to medicine in India and the developing world. It is, by far, the most workable and effective flexibility within the TRIPS and is backed by Indian patent law. Although it faces some threats in the form of increasing mergers and

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75 *Id.* at 318.

76 s*upra* n. 71. at 329.

77 Timothy Bazzle, *Pharmacy of the Developing World: Reconciliing Intellectual Property Rights in India with the Right to Health: TRIPS, India's Patent System and Essential Medicines* 42 GEO. J.INT'L 785, 793-794 (2010-2011)

78 Swaraj Paul Barooah, *Student groups ask for reconsideration of TRIPS plus provisions of EU-India FTA* SPICY IP available at http://spicyipindia.blogspot.in/2010/10/student-groups-ask-for-reconsideration.html

79 *Id.*

acquisition of generic Indian firms by foreign drug corporations and the TRIPS plus provisions, there is little to worry about the same. It becomes important for developing nations to fully harness the potential of parallel imports in being a key link to providing access to medicine. Additionally, they must continue to exert pressure to ensure that the TRIPS plus provisions do not create a barrier to access.

THE LICENSING DILEMMA: A 'PATENTS-EXCHANGE' TO THE RESCUE

Srimukundan R.[*]

Patent licensing affords opportunities for creating value from innovation as well as furthering other strategic commercial goals. The 'traditional' patent-licensing market is characterised, primarily, by bilateral licensing transactions. It is further marked by significant transaction costs incurred by the parties and information asymmetries that threaten to reduce the market size in the long run. A significant improvement to this state of affairs came in the form of an Exchange to continuously trade license rights on standardised terms at market price. The Exchange, operated by IPXI, Inc., functioned on the basis of boilerplate Unit License Rights (ULR) Contracts, each of which allowed the licensee to use the patented product or process for a pre-determined number of instances. The Exchange allowed the ULRs to be priced according to market dynamics. Nonetheless, the Exchange ceased operations due to the lack of participation by licensees. Analysing the reasons for the same, this article concludes that the IPXI Exchange's winding-up can be attributed to the failure to correct the information asymmetries existing between the licensors and the licensees. Building on the same using the powerful tools of economic analysis, market design and options theory; the author proposes an Exchange where patent license rights can be traded like financial options. These ULR options carry one ULR contract each, and can be exercised at a pre-determined strike price by the licensees. This allows less-informed licensees to defer their investment in the licenses, reducing the commercial risk and the problem of adverse selection. The article elaborately discusses the functioning of this model, which is poised to reduce transaction costs and correct information asymmetries. Lastly, the article addresses legal challenges to the proposed model. The article provides solutions to meet the statutory requirements for licensing, and the due diligence of the patents. Suggestions have also been made for drafting the ULR contracts and for protecting the interests of the licensee against potential infringement.

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I. INTRODUCTION

The narrator's eager visit to the splendid *Araby* Bazaar eventuated quite fruitlessly. The stalls were shut; the place was covered in darkness. A shopkeeper serves him halfheartedly. The narrator refuses the offer, and leaves the place disappointed over wasted anticipation. James Joyce's melancholic description of the Bazaar is true in the patent licensing context as well.[1]

A patent license is a contract that enables the licensee to use patented information without liability for infringement, in consideration for payment to the patent owner.[2] The patent licensing market is a group of licensors and licensees, buying and selling the rights to use patents. The *Bazaar* for patent licenses has also been quite unproductive. However, events in the last few years have renewed interest in streamlining the patent licensing market. The most significant of these was the establishment of an Exchange to trade intellectual property rights licenses by the Chicago-based company, Intellectual Property Exchange International, Inc. (IPXI).[3] The IPXI Exchange failed when it ceased operations on March 23, 2015.[4] This article aims to refine the Exchange-trading model using the powerful tools of economic analysis, market design and options theory. It further attempts to ground the proposed model in the Indian Patents Regime; identifies the challenges and puts forward solutions.

This article proceeds in five parts. Part I deals with the traditional patent licensing market and its inefficiencies. Part II explains the model implemented by IPXI. Part III, being multifold, analyses IPXI's Exchange; applies market design and options theory; and, explains and evaluates the proposed model. Part IV deals with the legal challenges to the Model and the solutions offered. The article briefly concludes in Part V.

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1 JAMES JOYCE, DUBLINERS 24 (Bantam Dell ed., 2005).

2 RICHARD S. GRUNER, SHUBHA GHOSH & JAY P. KESAN, INTELLECTUAL PROPERTY IN BUSINESS ORGANIZATIONS CASES AND MATERIALS 405 (1st ed. 2006).

3 Corporate Announcement, https://www.ipxi.com/ (last visited Mar. 30, 2015).

4 *Id.*

PART I : RATIONALE FOR PATENT LICENSING

Patents are licensed out for diverse reasons. Professor David Teece, in his pioneering paper,[5] demonstrated that the ability to create value from innovation depended on complementary assets: such as marketing, manufacturing and post-sales support. Often, innovators lack direct ownership or control over complementary assets; thereby compelling them to license out the process of commercialisation.[6] Licensing also serves as a tool to influence competition and market demand. Firms license patents out to deter competitors from engaging in research and development. Often, licensee firms are disincentivised from 'designing around' and developing better technology that leapfrogs the licensed patent.[7] A suitable example is Compaq Computers' licensing of its 'Robert's patent'. While computers in the early 1980's needed separate monitors for graphics and text, this patent enabled Compaq to display both on the same monitor. It has been reported that Compaq licensed it out to competitors to prevent them from immediately developing a superior technology in the short run.[8]

Firms, which do not posses complementary assets outside certain geographical areas, are likely to license out patents to players in other market regions.[9] Further, many technological advances are characterised by strong *positive network externalities*, i.e., end-consumers derive benefits from the technology only when numerous others also use the same.[10] An example would be that of mobile phones and social networking sites. This market condition may force manufacturers to expand production by

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5 David J. Teece, *Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy*, 15 RESEARCH POLICY 285 (1986).

6 *Id.* at 296.

7 Robert S. Pindyck, Lecture Notes on R&D and Patent Licensing, http://web.mit.edu/rpindyck/www/Courses/R&D&PL_13.pdf (last visited Mar. 30, 2015); Maria Pluvia Zuniga & Dominique Guellec, *Who licenses out patents and why? Lessons from a Business Survey* 1-2 (OECD Directorate for Science, Technology and Industry, Working Paper No. 5, 2009).

8 ROD CANION, OPEN: HOW COMPAQ ENDED IBM'S PC DOMINATION AND HELPED INVENT MODERN COMPUTING 164 (1st ed. 2013); Pindyck, *supra* note 7, at 20.

9 Ashish Arora & Alfonso Gambardella, *Ideas for rent: an overview of markets for technology*, 19 INDUSTRIAL AND CORPORATE CHANGE 775, 782 (2010).

10 S.J. Liebowitz & Stephen E. Margolis, Network Externalities (Effects), https://www.utdallas.edu/~liebowit/palgrave/network.html (last visited Mar. 30, 2015).

licensing-out their patents.[11] Consumers often fear monopolistic production because the control of supply allows manufacturers the free rein to increase prices.[12] To counteract this adverse suspicion, manufacturers often license their patents out to competitors as a signaling measure that prices will be low.[13] There have also been instances of firms licensing out their patents, particularly in the pharmaceutical sector, to avoid the painful alternative of compulsory licensing. For example, the US Pharmaceutical Major Gilead Sciences 'voluntarily licensed' out its Hepatitis C drug to a number of Indian generic drug manufacturers, instead of possibly facing compulsory licensing claims from generic competitors after three years[14] from the grant of the patent.[15]

Nonetheless, extracting full value from the innovation or achieving other strategic goals would necessarily translate into identifying the right licensee without facing serious cost-and-information barriers. Consequently, the process of 'matching' the innovator with the licensee has to be *efficient*.[16]

TRADITIONAL PATENT LICENSING

Patent licensing, conventionally, has been carried out through bilateral licensing transactions. The traditional players are the licensors (patent owners), licensees (operational users) and the licensing agents who assist licensors in identifying potential licensees.[17] Lately, the market has been opened to *house* NPEs (Non-Practising Entities) that own patent portfolios but do not develop or commercialize them.[18] Fragmented players with conflicting incentives; asymmetric information,[19] and high transaction

11 Pindyck, *supra* note 7, at 18.
12 Fears of Monopolistic Power, http://cs.stanford.edu/people/eroberts/cs201/projects/corporate-monopolies/dangers.html (last visited Mar. 30, 2015).
13 Pindyck, *supra* note 7, at 19.
14 The Patents Act, §84 (1970).
15 Ramnath Subbu, *Generic Remedy to a Pain Symptom*, THE HINDU, Mar. 30, 2015, at 15.
16 Joshua S. Gans & Scott Stern, *Is there a market for ideas?*, 19 INDUSTRIAL AND CORPORATE CHANGE 805, 815 (2010); Teece, *supra* note 5, at 296.
17 ALEXANDER I. POLTORAK & PAUL J. LERNER, ESSENTIALS OF LICENSING INTELLECTUAL PROPERTY 51 (1st ed. 2004).
18 Anne Kelley, *Practising in the Patent Marketplace,* 78 U. CHI. L. REV. 115, 118 (2011).
19 See: Part I, Section C.

costs[20] have thwarted the realisation of *Teecean* efficiency. As a result, the market for patent licenses has been imperfect: lacking liquidity and transparency.[21]

THE PROBLEM OF TRANSACTION COSTS

A meaningful point of departure for any discussion on the assignment and exchange of 'property' rights is the Coase Theorem.[22] It states: where transaction costs are high, property rights should be assigned to those that value it the most.[23] Transaction costs are the costs of exchange, which are over and above the contractual consideration.[24] They include the costs of identifying the parties, bringing them together to bargain and enforcing the subsequent agreement.[25] Nevertheless, the law assigns patents only to the innovator.[26] Since the innovator may not always be the person that uses the assigned rights efficiently,[27] this 'built-in distributional bias'[28] can be addressed through a corollary of Coase theorem. While transaction costs are zero, private bargaining will lead to an efficient use of resources regardless of the initial assignment of property rights.[29] Zero transaction costs belong entirely to the realm of Coasean perfect markets; these costs inhere in almost all real-world market

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20 See: Part I, Section D.

21 Roya Ghafele, Benjamin Gilbert and James Malackowski, *Emerging IP Monetisation Solutions: the Institutionalisation of an IP Exchange*, 5 INT'L J. INTELL. PROP. MGMT. 115, 119 (2012); Andrei Hagiu & David Yoffie, *Intermediaries for the IP Market* 4 (Harvard Business School, Working Paper No. 12-023, 2011).

22 Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

23 ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 85 (6th ed. 2012).

24 Richard A. Posner, *Transaction Costs and Antitrust Concerns in the Licensing of Intellectual Property*, 4 J. MARSHALL REV. INTELL. PROP. L. 325 (2004); David M. Driesen & Shubha Ghosh, *The Functions of Transaction Costs: Rethinking Transaction Costs Minimization in a World of Friction*, 47 ARIZONA L. REV. 61, 84 (2005); COOTER & ULEN, *supra* note 23, at 86.

25 Robert S. Lee, *An Economic Analysis of Compulsory Licensing in Copyright Law*, 5 W. NEW ENG. L. REV. 203, 214 (1982); James E. Krier & W. David Montgomery, *Resource Allocation, Information Cost, and the Form of Government Intervention*, 13 NAT. RESOURCES J. 89, 91 (1973).

26 The Patents Act, §6 (1970).

27 Teece, *supra* note 5, at 288.

28 Robert P. Merges, *Of Property Rules, Coase and Intellectual Property*, 94 COLUM. L. REV. 2655, 2661 (1994).

29 COOTER & ULEN, *supra* note 23.

transactions. Still, it becomes imperative to lower transaction costs for efficient use of patent rights.

The steps involved in a traditional *ex ante* bilateral licensing, *inter alia*, include: identifying potential licensees; separate negotiations for each license; enforcing the license terms on consumption and royalty.[30] The patent market is characterised by high *ex ante* search costs. Patent owners and licensees face restrictively expensive and time consuming search costs in identifying each other.[31] This is followed by the *ex ante* costs of negotiating and drafting the license agreement.[32] Bilateral licensing hinges on the relative bargaining powers of the parties; the resultant *tailored* license agreements drive the costs up. While negotiating, manufacturer-licensees often dispute the validity and enforceability of the patents.[33] At times, *ex ante* bargaining costs have been estimated to account for more than half of the licensee's total project costs.[34] Detailed diligence for license valuation further escalates the costs.[35] Bilateral licensing transactions lead to diseconomies of scale for both licensors (looking for new licensees) and licensees (looking to aggregate licenses to be able to produce the entire product).[36]

The *ex post* costs of enforcing the agreed terms depend considerably on the *ex ante* costs. On the one hand, insufficient diligence at the time of licensing (not meeting the *ex ante* costs thoroughly) increases the risks of incurring excessive *ex post* costs in the form of litigation, etc. On the other hand, excessively high *ex ante* costs may deter parties from transacting itself; leading to both parties incurring costs of lost opportunity.[37] Both situations demonstrate sub-optimal economic activity. Further, Small-and-Medium

30 Ian D. McClure & James E. Malackowski, *The Next Big Thing in Monetizing IP: A Natural Progression to Exchange Traded Units*, LANDSLIDE, May/June 2011 at 32, 34.

31 Hagiu & Yoffie, *supra* note 21, at 5; Peter N. Detkin, *Leveling the Patent Playing Field*, 6 J. MARSHALL REV. INTELL. PROP. L. 636, 638 (2007).

32 Sonia Baldia, *The Transaction Cost Problem in International Intellectual Property Exchange and Innovation Markets*, 34 NW. J. INT'L L. & BUS. 1, 24 (2013).

33 Detkin, *supra* note 31, at 639.

34 Richard E. Caves, Harold Crookell & J. Peter Killing, *The Imperfect Market for Technology Licenses*, 45 OXFORD BULL. ECON. & STAT. 249, 250 (1983).

35 UNIVERSITY OF ST. GALLEN, CREATING A FINANCIAL MARKET FOR IPR 17 (2011), *available at http://ec.europa.eu/enterprise/policies/innovation/files/creating-financial-market-for-ipr-in-europe_en.pdf* (last visited Mar. 30, 2015).

36 *Id.*

37 N. GREGORY MANKIW, PRINCIPLES OF ECONOMICS 261 (6th ed. 2012).

Enterprises (SMEs) incur *distinct* transaction costs, on both sides of the fence, due to limited resources and personnel for marketing.[38]

THE PROBLEMS OF INFORMATION ASYMMETRY AND ADVERSE SELECTION

Information asymmetry between the parties to a transaction distorts efficient outcomes in the market. It leads to adverse selection when an uninformed party cannot observe the quality of the goods being transacted.[39] This phenomenon advantages sellers with private information about the goods; leading to a disparity between the social and private returns.[40] The Nobel laureate George Akerlof adopted the "Market for Used Cars" ("lemons") to demonstrate how information asymmetry will reduce the average quality of goods and the size of the market in the long run.[41] To elucidate, owners of used cars often had more information than the buyers. Potential buyers faced difficulties in distinguishing between similar-appearing good quality and bad quality used cars. Risk-averse buyers would not be willing to pay more for a good quality car, fearing an adverse selection. Used cars will have to be priced low; ultimately, owners of good-quality used cars will choose to not offer their cars for sale, resulting in market failure.[42]

In like manner, patents are mostly licensed in a '*blind*' market.[43] Though patents are open to public examination at the Patent Office, information regarding patent licenses, particularly the licensee fee, is always a closely held secret.[44] Remarkably, the Patents Act permits and protects such non-disclosure.[45] Licensing-out to competitors by a market incumbent may be characterised by incomplete disclosure owing to the fear of divulging strategic information. Knowledge of the license terms may also

38 Ray Rothwell & Mark Dodgson, *External Linkages and Innovation in Small and Medium-sized Enterprises*, 21 R&D MANAGEMENT 125, 127-128 (1991).

39 MANKIW, *supra* note 37, at 470; HAL R. VARIAN, INTERMEDIATE MICROECONOMICS 725 (8th ed. 2010).

40 George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 THE Q. J. ECON. 488 (1970).

41 *Id.*

42 *Id.* at 491.

43 Mark A. Lemley & Nathan Myhrvold, *How to make a Patent Market*, 36 HOFSTRA. L. REV. 257 (2008).

44 *Id.* at 258.

45 The Patents Act, §69(4) (1970).

provide third parties with an advantage in subsequent bargains.[46] However, the consistent practice of non-disclosure of license prices will deter licensees from entering into license agreements, fearing excessive payments. The fear is only amplified by licensors who charge exorbitant royalty rates.[47] Resemblances to the inefficient *Akerlofian* market are not surprising. Licensees will seek lower license prices apprehending the possibility that commercial profits may not be commensurate to the licensing costs.[48] Consequently, lower licensing revenue will distort the licensor's incentives to engage in research and development.[49]

Lowering transaction costs and correcting information asymmetries are both indispensable for an efficient patents-licensing market. This calls for designing institutions that lower the costs of exchange and check inefficient private returns.[50]

II. THE IPXI EXCHANGE

The IPXI Exchange was set up with the purpose of infusing efficiency into the patents licensing market.[51] Modeled along the lines of the European Climate Exchange that trades Carbon dioxide through financial instruments,[52] IPXI was a platform for trading IPR on standardised terms with market-based pricing.[53] The system worked on the basis of Unit License Right (ULR) contracts, which are non-exclusive IP licenses traded on the Exchange.[54] Patent owners offered these ULRs at the Exchange where potential licensees could purchase them at market price. The ULR-holder had the right to use the patented product or process for a pre-determined number of instances. Each instance of use had to be reported

46 UNIVERSITY OF ST. GALLEN, *supra* note 35, at 16.
47 Lemley & Myhrvold, *supra* note 43, at 258.
48 Richard Brealey, Hayne E. Leland & David H. Pyle, *Informational Asymmetries, Financial Structure, and Financial Intermediation*, 32 THE J. FIN. 371, 383-384 (1977).
49 Michael L. Katz & Carl Shapiro, *How to license Intangible Property*, 101 The Q. J. Econ. 567, 568 (1986).
50 Merges, *supra* note 28, at 2662.
51 McClure & Malackowski, *supra* note 30.
52 Ghafele, Gilbert & Malackowski, *supra* note 21, at 121.
53 Ghafele, Gilbert & Malackowski, *supra* note 21, at 122; Department of Justice – Intellectual Property Exchange International, Inc. – Business Review Request, http://www.justice.gov/atr/public/busreview/295151.htm (last visited Mar. 30, 2015).
54 Ghafele, Gilbert & Malackowski, *supra* note 21, at 122.

to IPXI; when the authorised number had been exhausted, the ULR would be 'retired'.[55] These purchaser-holders could later trade them on the Exchange until the ULR had been retired.[56] To elucidate, assume that ULRs, comprising of multiple patents for LED bulbs, are being offered. If a manufacturer buys 1000 ULRs, she will be permitted to use those patents on 1000 LED bulbs.

The ULR offerings were carried out in a manner similar to a company's equity offerings.[57] Patent owners could offer subsequent additional tranches of ULR contracts.[58] Offering and trading ULR contracts was limited to the membership.[59] IPXI's members acted in three roles: sponsors, operational users and liquidity providers. Sponsors were the patent owners; operational users were the licensees and liquidity providers were the financial buyers disallowed from consuming the ULR contracts. Resale of ULRs had to be carried out in the Secondary market operated by IPXI itself.[60]

Further, IPXI would scrutinise the intellectual property being offered; particularly its legal validity and commercial value.[61] The Sponsors had to publish a memorandum detailing on the ULRs offered.[62] IPXI also provided a closed data room to publish critical information regarding the sponsors, the ULRs and the associated intellectual property.[63] Having faced a dearth of participation by licensees, IPXI recently ceased operations.[64]

55 Department of Justice, *supra* note 53.
56 McClure & Malackowski, *supra* note 30, at 35.
57 Ghafele, Gilbert & Malackowski, *supra* note 21, at 122.
58 INTELLECTUAL PROPERTY EXCHANGE INTERNATIONAL, INC., IPXI MARKET RULEBOOK 3 (2013), https://www.ipxi.com/public-files/IPXI-Market-Rulebook.pdf (last visited Mar. 30, 2015).
59 *Id.* at 16.
60 *Id.* at 5.
61 Ghafele, Gilbert & Malackowski, *supra* note 21, at 122.
62 INTELLECTUAL PROPERTY EXCHANGE INTERNATIONAL, INC., *supra* note 58, at 5.
63 INTELLECTUAL PROPERTY EXCHANGE INTERNATIONAL, INC., *supra* note 58, at 20.
64 *Supra* note 3.

III. TOOLS OF MARKET DESIGN

The importance of market design in the bilateral patent-licensing market, which is pervaded by inefficiencies,[65] is indisputable.[66] The author draws on the thesis of the Nobel Prize-winning economist Alvin Roth to design a market for patent licensing.[67] Roth argues that three characteristics are integral to an efficient marketplace: thickness, lack of congestion and market safety.[68] *Thickness* refers to the number of market participants. *Congestion* refers to a situation where timings or circumstances hinder participants from considering alternative transactions. Lastly, the market is deemed to be *safe* when participants do not engage in strategic behaviour by withholding private information that reduces overall welfare.[69] The traditional patent-licensing market exhibits abysmal performance on all the three fronts. It has minimal thickness due to high transaction costs and information asymmetries. Participants are *fatigued* by congestion: sunken *ex ante* transaction costs make moving to alternative transactions onerous.[70] Parties often withhold private information rendering the market unsafe.[71]

EVALUATING THE IPXI EXCHANGE

A centralised exchange for trading patent license rights will drastically reduce search costs incurred by parties. The use of standardised ULR contracts further reduces the bargaining costs, particularly the costs of *tailoring* license agreements. Furthermore, IPXI claimed to operate a system of market-based price determination, nullifying bargaining deadlocks over license pricing. Despite these advantages, licensees chose not to participate

65 See: Part I, Sections C & D.

66 Gans & Stern, *supra* note 16, at 811.

67 Alvin E. Roth, *What have we learned from Market Design?*, 118 THE ECON. J. 285 (2008).

68 *Id.*

69 *Id.*

70 To explain further, the traditional scheme of patent licensing with agents reaching out to potential licensors and licensees must be contrasted with a centralised market place such as a Stock Exchange. Modern stock exchanges are designed and equipped to allow buyers and sellers to move from one transaction to another in relatively very short periods of time. In a decentralised patent licensing market, the prohibitive costs already incurred would make it extremely burdensome for parties to move to alternative licensing opportunities.

71 See: Part I, Section D.

in the Exchange. It, therefore, becomes important to discern critical shortcomings in IPXI's model.

Patents are often characterised by uncertainties regarding their technical capacity, commercial viability and legal scope.[72] Nevertheless, IPXI's model only offered limited discovery of information pertaining to the licenses, through the prospectus and data room. This must be contrasted with the excessive diligence carried out in bilateral licensing transactions.[73] However, full-scale diligence by potential licensees individually will exacerbate the costs; rendering the Exchange model futile. While large licensee firms may have the resources to work out the uncertainties of the patents, the same will not be the case with Small-and-Medium Enterprises (SMEs).[74] The model envisaged by IPXI makes licensees pay for the license rights at the time of the offering itself.[75] Those licensees that wish to defer will have to take recourse to the Secondary market where prices will be determined on the basis of demand and supply factors. Considerations of economies of scale will compel rational licensees to purchase large numbers of ULRs. Essentially, licensees have the option of making an entire down payment or holding off to purchase at higher prices later. The down payment will constitute sunk costs for the licensees. After this, licensees can only hope to either consume the license rights to their commercial advantage or resort to sale in the Secondary market. Therefore, unlike royalty-transactions, the entire risk in these arrangements will be borne by the licensees.

Contrastingly, commercial success of the licensee's final product depends on a number of exogenous factors.[76] To take a typical example, royalties constitute a substantial portion of a smartphone's manufacturing cost because of the large numbers of patents that have to be licensed.[77] Regardless, a smartphone's commercial success itself depends on a number

72 Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. Econ. Perspectives 75, 76 (2005).

73 UNIVERSITY OF ST. GALLEN, *supra* note 35.

74 UNIVERSITY OF ST. GALLEN, *supra* note 35, at 109.

75 INTELLECTUAL PROPERTY EXCHANGE INTERNATIONAL, INC., *supra* note 58, at 22.

76 Caves, Crookell & Killing, *supra* note 34.

77 Joseph J. Mueller, Timothy D. Syrett & Ann K. Armstrong, *The Smartphone Royalty Stack: Surveying Royalty Demands for the Components within Modern Smartphones* (May 29, 2014), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2443848

of factors such as press hype, consumers' reactions, etc.[78] Commercial failure may render the ULR contracts held by the licensees worthless. This situation is aggravated in the case of SME licensees that lack resources to cushion against the risk of such failure. For example, the small-scale smartphone manufacturer Micromax is obligated to pay royalties amounting to Rs. 10 crores every month to its licensor Ericsson.[79] In the IPXI context, this would translate into a much larger down payment to Ericsson for the large number of ULR contracts; and, the risk of failure will be borne by the licensee throughout. This may tend to distort incentives for small-scale enterprises to enter into licensing transactions.

Traditional management theory predicated investment decisions on the Net Present Value (NPV) rule.[80] The difference between all present and future benefits and costs of the investment gives the NPV, with the future values being adjusted by a suitable discount rate.[81] Of late, advances in management theory have proven that NPV may not by itself suffice.[82] Expected cash flows of projects are prone to fluctuation; they are best observed and determined when the project is delayed.[83] This theoretical position, put forward by Professors Stephen Ross and Jon Ingersoll,[84] has been proven to be relevant to patents as well.[85] The patent licensing project may have a negative NPV at the moment that may become positive in the

78 Don Reisinger, Smartphone Success or Failure, http://www.eweek.com/c/a/Mobile-and-Wireless/Smartphone-Market-Success-or-Failure-10-Critical-Factors-498307/1 (last visited Mar. 30, 2015); J.P. Mangalindan, Why Amazon's Fire phone failed, http://fortune.com/2014/09/29/why-amazons-fire-phone-failed/ (last visited Mar. 30, 2015).

79 Soma Das & Anandita Singh Makholia, Patent Row: Delhi High Court asks Micromax to pay royalty to Ericsson, http://articles.economictimes.indiatimes.com/2014-11-20/news/56304154_1_several-wireless-technology-standards-low-cost-business-strategy-digital-india (last visited Mar. 30, 2015).

80 Stephen A. Ross, *Uses, Abuses and Alternatives to the Net-Present-Value Rule*, 24 FIN. MGMT. 96 (1995).

81 WILLIAM J. CARNEY, CORPORATE FINANCE: PRINCIPLES AND PRACTICE 93-94 (1st ed. 2005).

82 Ashwath Damodaran, *The Promise and Peril of Real Options*, 2 (NYU Stern Business School, Working Paper No. S-DRP-05-02, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1295849; Ross, *supra* note 80, at 97.

83 Jonathan E. Ingersoll & Stephen A. Ross, *Waiting to Invest: Investment and Uncertainty*, 65 J. BUS. 1, 3 (1992).

84 *Id.*

85 Damodaran, *supra* note 82, at 33.

future, and vice versa.[86] For the licensees, the decision to invest, i.e. to purchase ULR contracts, should ideally be made only after a reasonable delay to correct information asymmetries.

IPXI's model only allowed Secondary market trading for deferring purchasers. Demand accruing for ULRs after the initial offering will reflect the commercial success of the project. Supply and demand dynamics will increase the prices of the ULRs in the Secondary market. Consequently, SME licensees with limited resources will be frozen out of the competition at this stage. Furthermore, licensees will be incentivised to enter into non-exclusive licensing transactions only if the royalty rates are reasonable.[87] It is submitted that the failure to incentivise licensees by correcting information asymmetries led to IPXI's expedited demise. Therefore, it becomes imperative to design a marketplace that will afford licensees the choice of waiting without having to be penalized for not being a first-mover. The non-existence of this choice will reduce the participation of these players, adversely affecting the market thickness. At the focus of the proposed market design lies the possibility of trading license rights like financial options.

APPLICATION OF 'OPTIONS' THEORY

An option contract confers upon its holder the right but not the obligation to buy or sell an asset, on or before a future date at a pre-determined price (*exercise price*).[88] Options allow their holders to simultaneously lever their resources and limit the risks.[89] Call options are unsophisticated option contracts that confer upon their holders the right to buy an asset (typically shares of a company) at a pre-determined price.[90] An option holder may either exercise the option or allow it to lapse. The price

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86 Damodaran, *supra* note 82, at 33.

87 Maryann Feldman, Alessandra Colaianni & Kang Liu, *Commercialising Cohen-Boyer 1980-1997* 29 (Danish Research Unit for Industrial Dynamics, Working Paper No. 21, 2005), *available at* http://www2.druid.dk/conferences/working_papers/Feldman_Colaianni_Liu.pdf.

88 CARNEY, supra *note* 81, at 537.

89 Rene M. Stulz, *Should we fear derivatives?*, 18 J. ECON. PERSPECTIVES 173, 175 (2004).

90 CARNEY, supra *note* 80, at 537; Derivative Instruments Primer, http://www.financialpolicy.org/dscinstruments.htm (last visited Mar. 30, 2015).

at which the option itself is purchased is called the *option premium*.[91] An American style option can be exercised on or before its expiry; European options can be exercised only on the date of expiration.[92] Post 1980s, the discipline of 'Real Options Theory' has been directing business decisions using the 'options' logic.[93] The proposed market design deals with ULR Options (ULROs). Each ULRO has one ULR contract underlying it. The initial offering by the licensor will consist of these ULROs, sold at a *premium*. The ULROs will be American-styled options that allow the holders the choice of the timing the exercise. The strike price, option period and premium will be determined on a case-by-case basis by a book building process.[94]

To illustrate, assume that a ULR contract comprises license rights to 10 different smartphone patents, with each ULR contract allowing consumption for 5 units of the final product, i.e., 5 smartphones. In the proposed market design, ULR Options will be issued, with each ULR Option carrying one ULR contract. Let the premium on each ULRO be Rs. 5, while the exercise price of each option is Rs. 1000 and the expiry period is 4 months. Let it be assumed that a smartphone manufacturer seeks to manufacture 1,00,000 phones with those patents. Therefore, the manufacturer has to purchase 1,00,000 ULROs at Rs. 5 (premium), which amounts to Rs. 5 lakhs. At the end of two months, if the manufacturer has reasonably assured herself of the market conditions and is fully informed about the patents, she may choose to exercise the options. She can exercise the license rights to all of her 1,00,000 options by paying Rs. 10 crores. If commercial considerations force her to cut down on the total number of manufactured phones, she may choose to exercise only 50,000 options by paying Rs. 5 crores. She can resell the rest in the Secondary market or may allow them to lapse. Further, if she realises that it would be commercially sound to shelve the project permanently, she may choose to not exercise the options at all.

As explained, the option of deferring the investment in the licenses reduces the risks of commercial failure and adverse selection that licensees

91 Stulz, *supra* note 89.

92 CARNEY, supra *note* 81, at 537.

93 Yong Li, Barclay E. James, Ravi Madhavan & Joseph T. Mahoney, *Real Options: Taking Stock and Looking ahead*, 24 ADVANCES IN STRATEGIC MGMT. 31, 32 (2007); CARNEY, supra *note* 81, at 539.

94 See: Part III, Section D.

would have borne upon themselves entirely. At the same time, the licensor is suitably compensated through a premium for the delayed investment. Mitigating adverse selection will allow the license prices to reflect their real market value, protecting the licensors from a lemons' market situation.

FUNCTIONING OF THE PROPOSED MODEL

While it is beyond the scope of this article to delineate every aspect of the proposed model, I deal with those aspects that are the most integral to the functioning of the proposed market. Some of these features have indeed been borrowed from IPXI's model.

The market design resides in a highly organised bourse, comparable to any modern-day Stock Exchange. The Exchange shall consist of trading members who may be operational users (or) liquidity providers (or) sponsors with respect to each authorised product (both ULRs and ULROs). Sponsors will be the licensors; operational users will be the licensees that may buy, sell and consume the authorised product, while liquidity providers will be permitted only to buy and sell the products. The Exchange should provide for an internal Regulatory Committee that holds members to their obligations under a boilerplate membership contract. Comparable to the bylaws of a stock exchange, the membership contract will govern relations amongst trading members. It is essential for the contracts to contain mandatory arbitration clauses for speedier resolution of disputes between: members and the Exchange, and members *inter se*. This approach is comparable to ICANN's Uniform Dispute Resolution Policy (UDRP), which has seen tremendous success over the years.[95]

Like Stock Exchanges, the proposed Exchange will consist of twin markets: a Primary market for initial offering, and a Secondary market for the resale of the authorised products. The initial offering shall consist solely of ULR Options (ULROs), which give the option holders the right to exercise it within a pre-determined expiry period at a pre-determined strike price. The ULROs will be purchased for a premium; and place no obligation on the holders to exercise the options. Once exercised, the

95 Patrick Kelley, *Emerging patterns in Arbitration under the Uniform Domain-Name Dispute Resolution Policy*, 17 BERKELEY TECH LJ 181, 182 (2002). ICANN mandates each registrant of a domain name to abide by its dispute resolution policy at the time of registration itself. Consequently, parties have been able to resolve disputes quickly through arbitration in *lieu* of litigation, without incurring extensive costs.

ULROs will be converted into ULR contracts that can either be consumed or resold in the Secondary market. Before the lapse of the expiry period and before being exercised, ULROs can be traded in the Secondary market as well. The ULR contracts will consist of standardised terms, uniformly applicable to all holders. As liquidity providers will not be allowed to consume the ULR contracts, they will be allowed to hold only up to a pre-determined number of ULR contracts, for considerations of working the patent.[96]

The ULRO offering will be comparable to Initial Public Offerings (IPOs) of companies. Roadshow talks with potential investors, like in IPOs, could be used. In fact, one of the most successful and standard-setting licensing transactions, i.e. the licensing of Cohen-Boyer Recombinant DNA patent by Stanford University, adopted similar IPO techniques.[97] It must be noted that only 'granted' patents can be licensed through the Exchange, for considerations of legal certainty. The process should be the same for both 'process' and 'product' patents. Since many sponsors holding related patents may often come together to offer a single ULR comprising those patents, the model also envisages an Issue manager(s) to carry out the offering. Extensive due diligence[98] must be carried out by the Sponsors or their Issue manager. They should also publish prospectuses detailing information regarding the patents, the price band of the offering and other administrative details. Strict contractual penalties, through the membership contract, will be imposed for false information, misrepresentation and intentional omissions in the prospectus.[99]

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96 The number of ULROs that can be purchased by liquidity providers has been capped (the cap depends on the circumstances of each ULRO offer), so as to not attract Section 84 of the Patents Act, 1970. Section 84 provides for the grant of compulsory licenses over patents that have not been worked within India.

97 Feldman, Colaianni & Liu, *supra* note 87, at 16.

98 See: Part IV, Section E.

99 The model is envisaged to be along the lines of any Self-Regulatory Organisation (SRO), exemplified by a Stock Exchange. Most jurisdictions like the US, the UK and India have Stock Exchanges, which also act as Market Regulators by setting the rules of the marketplace. Notwithstanding the government's capital markets regulator, Stock Exchanges watch over the compliance with these rules. In pursuance, Stock Exchanges have extensive powers of enforcement such as fining the members (traders) and delisting the securities. This authority to regulate flows from the boilerplate agreements that issuers and traders enter into with the Stock Exchanges. However, such penalties must be distinguished from ordinary contractual penalties that have to be enforced by law courts.

The significance of market clearing in the scheme cannot be soft-pedalled. Market clearing is the "process of price adjustment by the seller until supply equals demand and the market is cleared of all surpluses and shortages".[100] A traditional book building process, like in equity offerings, will carry out the determination of the exercise price and the options premium.[101] The book building process will run for a limited number of days after the roadshow talks with the investors. Over time, the market could also expand to accommodate specialised underwriters to the offerings.

At the time of exercising the option, the ULRO-holder should notify the Exchange, which should notify the licensor in return. The ULR contract shall be tripartite between the licensor, the exercising licensee and the Exchange. Post-exercise sale of the ULR contracts must be notified to the Exchange and the contract will be novated to read the name of the new licensee. A Special Power-of-Attorney of the licensors will be given to the Exchange to carry out this process. The Exchange should charge strictly reasonable fees for membership, offering, trading and other services so as to not deter participation.

The model envisages self-reporting by the licensees, on a periodic basis, regarding the consumption of ULR contracts. Once the authorised consumption limit is reached, the ULR will be retired. The argument that self-reporting weakens the proposed model cannot be sustained. A self-reporting relationship is a contractual trust-based arrangement under which parties report their own harm-producing actions to another enforcing party.[102] Self-reporting is typical in the commercial world: an agent's duty to render accounts to the principal,[103] vendor's report of compliance with manufacturer's policies,[104] etc. Further, self-reporting is commonplace in all

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100 Richard A. Epstein, *Behavioral Economics: Human Errors and Market Corrections*, 73 U. CHI. L. REV. 111, 121 (2006).

101 Ann E. Sherman, *Global trends in IPO Methods: Book building versus auctions with endogenous entry*, 78 J. FIN. ECON. 615, 616 (2005).

102 Louis Kaplow & Steven Shavell, *Optimal Law Enforcement with Self-Reporting of Behavior*, 102 J. POL. ECON. 583 (1994); http://us.kpmg.com/microsite/attachments/SelfReportingSummaryWP.pdf

103 Indian Contract Act, §213 (1872).

104 Ben W. Heineman, Apple is about to discover the price of fair labour, http://www.theatlantic.com/business/archive/2012/03/apple-is-about-the-discover-the-price-of-fair-labor/255268/ (last visited Mar. 30, 2015).

IP license agreements that levy royalties based on the number of products manufactured by the licensee.[105] Lately, the law has begun to mandate corporate actors to install sufficient internal controls,[106] which has improved financial reporting by companies.[107] It has been proven that when accounting costs are low for the licensee, it is optimal to enter into licensing agreements with self-reporting.[108] Lower accounting costs with efficient internal controls should adequately deter the licensee from breaching the ULR contracts. Furthermore, numerous accounting firms have introduced contract compliance services to help licensors monitor reporting on patent royalties.[109] The licensees should be obligated by the ULR contracts to return standard Reporting Forms issued by the Exchange. Meticulously detailed forms, like Income Tax Returns forms,[110] should make it easy for the Exchange's Regulatory Committee to identify irregularities in the reports. The Regulatory Committee will also have the right to audit a licensee's accounts, if deemed necessary, on the licensors' behalf.

AN APPRAISAL OF THE PROPOSED MODEL

Disenfranchising SME licensees and liquidity providers will create an unsustainable market place with not enough participants in diverse roles. Embracing these actors, instead, will help augment competition and market thickness. Reduced search and bargaining costs will incentivise both licensors and licensees to participate in the market. A centralised marketplace will help licensors cut down on marketing costs. The Exchange will help actors achieve economies of scale, as subsequent additional offerings and purchases will require less input costs. The proposed design features organised and continuous trading amongst reasonably informed

105 Romana L. Autrey & Richard Sansing, *Licensing Intellectual Property with Self-Reported Outcomes*, 29 J. ACCT., AUDITING & FIN. 260, 261 (2014).

106 The Companies Act, §§ 139(1), 139(3), 141, 143(3)(i) (2013).

107 Autrey & Sansing, *supra* note 105, at 272.

108 Autrey & Sansing, *supra* note 105, at 275.

109 Licensing Management and Contract Compliances Service, http://www.pwc.com/gx/en/pharma-life-sciences/licensing-management-contract-compliance-services.jhtml (last visited Mar. 30, 2015); Contract Compliance Service, http://www.kpmg.com/global/en/services/advisory/risk-consulting/internal-audit/contract-compliance-services/pages/default.aspx (last visited Mar. 30, 2015); Contract Risk and Compliance Services, http://www2.deloitte.com/global/en/pages/risk/solutions/contract-risk-compliance-services.html (last visited Mar. 30, 2015).

110 Feldman, Colaianni & Liu, *supra* note 87, at 14.

parties. The presence of liquidity providers will make it feasible for operational users to continuously buy or sell license contracts without hindrances. Therefore, lack of congestion will be par for the course.

By distorting the incentives for withholding private information on the part of the licensor, the market design will prevent accumulation of private gains. Uniform, standard contracts will help protect parties that are at a bargaining disadvantage with much larger firms. Contractual obligations to meet statutory requirements, so as to not deprive the licensee of the right to work the patent like the payment of renewal fee,[111] etc., will enhance safety of the licensee's investment. Similarly, the right to audit the licensee's accounts should adequately protect the licensors' interests. It is submitted that the proposed model satisfies the three criteria put forward by Alvin Roth.

IV. LICENSING UNDER THE PATENTS ACT

The Patents Act 1970 confers upon a patentee the right to prevent any application of her patented product (or) process without her consent.[112] Section 68 of the Act stipulates that the assignment of a patent license shall not be valid unless it is reduced to a duly executed agreement containing all terms and conditions regulating the rights of the parties. By design, the ULR contracts will be boilerplate contracts delineating the rights and obligations of the parties, reduced into writing. Further, section 69 obligates the parties to the license agreement to register the same with the Controller[113]. Prior to the amendment in 2005, Section 68 imposed an additional obligation of registration with the Controller for the license agreement to be valid. This scope of this amendment examined by the Delhi High Court in *Sergi Transformer Explosion Prevention Technologies Private Limited v. Kumar Pratap Anil*.[114] It was held that, post the amendment, the validity of the license assignment was independent of its registration with the Controller. Nonetheless, a licensee is proscribed from using the license agreement as evidence to an interest in the patent until the license agreement is registered with the Controller, rendering its 'formal' legality of

111 See: Part IV, Section B.

112 The Patents Act, §48 (1970).

113 *Id.*, §73.

114 Sergi Transformer Explosion Prevention Technologies Private Limited v. Kumar Pratap Anil, 2014 (58) PTC 449 (Del).

no effect.[115] Therefore, registration of the license agreement becomes imperative.

First, it must be noted that the requirement of registration was legislated when only bilateral licensing transactions were the norm.[116] Unlike the bilateral patent licensing market, the license rights in a continuously traded exchange are in a state of flux. A ULR contract may be transferred between holders continuously. Requiring the original licensor or the licensee, after every sale transaction, to apply for registration will only inflate the transaction costs incurred by the parties, and distort their incentives to engage in non-bilateral licensing at the outset. One possible solution within the existing legal regime is to accord the Exchange with a Special Power-of-Attorney on the Licensor's behalf in the ULR contract. The Exchange must, in turn, be obligated to hire the services of Patent Agents who will carry out the registration process. It must be noted that the Patents Act and the accompanying Rules[117] authorise Patent Agents to present such applications to the Controller.[118] Though legal, this scheme lacks efficiency and will impede the functioning of an Exchange-model. To shed some light, a 2012 RTI enquiry made public that a total of 1127 out of merely 5561 applications from the year 2006 to 2012 had been pending.[119] If an Exchange traded market were to be established, the number of license agreements will multiply exponentially. Requiring rigorous compliance with this stipulation will become problematic considering the serious backlog problems already faced by the Patents Office. It will become important to reconsider this mandatory requirement of registration with the Controller in the light of Exchange-traded patent licensing.

DRAFTING THE ULR CONTRACTS

Section 140 of the Act enjoins the licensor from imposing certain restrictive conditions on the licensees. The ULR contracts should be diligently drafted to steer clear of such illegalities. The contracts should not restrict the rights of the licensee beyond the scope of the licensed patent,

115 The Patents Act, §69(5) (1970).

116 M.B. RAO & MANJULA GURU, PATENT LAW IN INDIA 205 (1st ed., 2005).

117 The Patents Rules, Form 16 (2003).

118 The Patents Act, §127 (1970).

119 Prashant Reddy, RTIs reveal daunting backlog at Patents Office & Trademark Registry, http://spicyip.com/2012/05/rtis-reveal-daunting-backlog-at-patents.html (last visited Mar. 30, 2015).

such as placing conditions on the sale of the manufactured product, etc.[120] Grant-back provisions obligate the licensee to grant any improvements made upon the patented product or process to the licensor.[121] Grant-back provisions in license agreements are deemed to be unlawful.[122] Furthermore, provisions estopping the licensee from challenging the validity of the licensed patent are unlawful.[123] Care must be taken to incorporate provisions obligating the patentees to pay the periodic renewal fees for the patents; failing which the patent will be rendered unenforceable.[124] The ULR contracts must also grant the licensees the express right to transfer the license contract to other members of the Exchange.

After the conversion of a ULR Option into a ULR contract, the model does not envisage a uniform license period within which the ULR must be consumed. Such a period may however be incorporated into ULR contracts by the licensor, taking commercial factors into consideration. The Patents Act, however, provides that license contracts will be determined when the underlying patents cease to have force.[125] Where a ULR contract carries multiple patents, it will be determined only when all the patents expire.[126] It must be ensured that ULR contracts are not traded beyond this period.

POOLING MULTIPLE PATENTS

Even the most basic of electronic devices, today, involve thousands of patents. A fine example is a 3G mobile phone.[127] Not having licensed one patent amongst the thousands will expose the manufacturer to uncertainty, i.e., she may have to remove the product from the market if a patentee threatens infringement action.[128] This may also lead to royalty

120 The Patents Act, §§140(1)(a), (b), (c) (1970).
121 GRUNER, GHOSH & KESAN, *supra* note 2, at 451.
122 The Patents Act, §140(1)(d) (1970).
123 *Id.*
124 The Patents Act, §§53(2), (4) (1970).
125 *Id.*, §141(1).
126 *Id.*, §141(1).
127 David G. Goodman & Robert A. Myers, *3G Cellular Standards and Patents*, http://eeweb.poly.edu/dgoodman/wirelesscom2005.pdf (last visited Mar. 30, 2015).
128 Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS LAW REVIEW 1991, 1992 (2007).

stacking where a single product infringes on multiple patents leading to multiple royalty burdens.[129] Consequently, the probability of patent holdup to extract higher-than-optimal royalties increases.[130] Patent pooling is one of the solutions suggested and used over time. Patent pools are voluntary contractual arrangements to pool a number of patents into a single license package.[131] Nonetheless, pools are difficult to form, and parties incur heavy transaction costs. It is suggested that the Exchange play a pro-active role in encouraging licensors to pool their patents into a single ULR contract. Care must be taken to ensure compliance with Sections 3 (Anti-competitive agreements) and 4 (Abuse of Dominant Position) of the Competition Act, 2002. Simultaneously offering a limited number of ULROs for the individual patents (from the pool) will remove the element of coercion from the package, ensuring its legality.[132]

INFRINGEMENT LITIGATION

The Indian Patents regime accords to the patentee (licensor) the exclusive right to bring a suit for infringement.[133] The exclusive licensee[134] and the licensee to whom a compulsory license has been granted[135] are the only statutory exceptions. A non-exclusive licensee cannot bring an infringement suit in her own name.[136] However, the interests of both the licensor and the licensee are served by preventing a third party from infringing the patent. A third party's unlicensed use will cost the licensor the ULR fees.[137] Similarly, the licensee will be interested in preventing an

129 *Id.* at 1993.

130 Einer Elhauge, *Do Patent Holdup and Royalty Stacking lead to Systematically Excessive Royalties*?, 4 J. COMPETITION L. & ECON. 535, 536 (2008).

131 GRUNER, GHOSH & KESAN, *supra* note 2, at 476; Anne Layne Farrar & Josh Lerner, *To Join or Not to Join: Examining Patent Pool Participation and Rent Sharing Rules* 2, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=945189 (last visited Mar. 30, 2015).

132 The Patents Act, §140(1)(d) (1970).

133 *Id.*, §48.

134 *Id.*, §109.

135 *Id.*, §110.

136 Pravin Anand, T. Saukshamaya & Aditya Gupta, India, in PATENT LITIGATION: JURISDICTIONAL COMPARISONS 201, 203 (Massimo Sterpi et al. eds., 2011); Suchita Saigal, Parul Kumar & Aditya Verma, Licensing Intellectual Property Rights' Use, in THE LAW OF BUSINESS CONTRACTS IN INDIA 92, 96 (Sairam Bhat ed., 2009).

137 GRUNER, GHOSH & KESAN, *supra* note 2, at 409.

infringing competitor unburdened by ULR fees.[138] The patentee is bound to bring an infringement suit when her interests are affected. Standing to sue, however, becomes problematic when the costs of litigating the infringement are greater than the private returns to the patentee; she may not have the incentive to bring the suit. To protect the licensees' interests, contractual obligations should be placed on the licensor to bring a suit if any instances of infringement come to her notice or are brought to her notice by the licensee(s). It is also suggested that reasonably pre-determined costs of litigation be incorporated into the licensee fee of each ULR contract.

PROSPECTUS DUE DILIGENCE

The prospectus offers scope for substantial correction of information asymmetries between the licensors and the licensees. Comprehensive diligence will be a crucial signaling measure on the licensor's part.[139] Though the must-haves may vary on a case-by-case basis, the following are certain standard requirements. The foremost requirement is the validity of the patent, its enforceability and the term remaining. Patents can cease to have force if timely payment of renewal fee is not made.[140] Second, the scope of the patented information must be published. Third, the possibility that competitors may design around the patent should be examined. The prospectus should identify the presence of any blocking patents, their validity and the means to design around them. Further, information regarding past infringement litigation, licensing, assignment, etc. should be provided. The ownership of the patent and the consent of co-owners,[141] if present, must be published.

V. CONCLUSION

The patents literature has yet to recognise the full-fledged role of an organised market for licensing. This article is a small step towards understanding whether, and how, this can be realised. The patents licensing market is plagued by both acute transaction costs and information asymmetries. The failed IPXI Exchange did not recognise the importance

138 GRUNER, GHOSH & KESAN, *supra* note 2, at 409.
139 MANKIW, *supra* note 37, at 471.
140 The Patents Act, §§53(2), (4) (1970).
141 *Id.*, §50(3).

of counteracting both adverse phenomenon. This article has proposed an IP Exchange that trades patent licenses through options that can be exercised by the licensee at the time of her choice. While the centralised Exchange will reduce transaction costs, using ULR options will correct information asymmetries. The result will be a competitive patent-licensing market that allows for market-based price discovery and allocates patents resources efficiently. The article has addressed legal challenges to the proposed model. It has provided solutions to meet the statutory requirements for licensing, and the due diligence of the patents. Suggestions have also been made for drafting the ULR contracts and for protecting the interests of the licensee against potential infringement.

JOINT AUTHORSHIP IN CINEMATOGRAPHIC FILMS : THE CONUNDRUM OF THE PRIMARY DIRECTOR

Alwyn Sebastian[*]

From the Berne Convention, 1886 to the TRIPS Agreement, 1994, the international comity has always been in support of protecting literary works from being distorted, mutilated, illegally copied, adapted, reproduced and translated. However, the world is divided roughly into two vis'a'vis according copyright protection to creators of copyrightable works: the droit d'auteur system and the common law system. While the former focuses on the moral rights of the author, the later propagates the big pocket theory and protects the economic interests of the author. India, being a common law country, has disregarded the 2010 Bill in the Parliament to accord joint authorship to the director of a cinematograph film, citing economic non-feasibility as the reason. This paper traces the origin of copyright law, both nationally and globally, in an attempt to persuade the Parliament to strike a balance between the two regimes.

I. INTRODUCTION

Bollywood cinema is highly renowned throughout the world for its entertainment value, music and performers.[1] Many regard Bollywood as second to Hollywood and the best regional cinema in the world.[2] Even within India, many States have developed their own regional cinema taking inspiration from Bollywood. States like Kerala, Tamil Nadu, West Bengal, etc. date their cinematic history to the beginning of the 20th Century, making them some of the oldest regional cinemas in the country.

However, it is extremely unfortunate that only on-screen performers get all the recognition. The backstage crew hardly get recognized for their efforts. This is because viewers are blinded by stage presence and action rather than the work that goes behind it. Therefore, the Indian copyright law provides protection to producers of the

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1 See Baldoon Dinghra, *Indian Cinema and Culture*, United Nations Educational Scientific and Cultural Organization, (27/12/1963) *available at* http://unesdoc.unesco.org/images/0018/001852/185220eb.pdf (last visited 05/09/2015).

2 *Id.*

cinematograph film, thereby accrediting them with immense responsibility and importance. In the eyes of law, all contributors to a cinematograph film are equally important and hence are accorded separate protection.[3]

A cinematograph film consists of the intertwining of various copyrightable works like musical work, dramatic work and literary work.[4] These works are extremely intrinsic to the making of a film.[5] No film can be completed without the combined efforts of the composer, producer, lyricist, script writer, director, actors, graphic designer and other supporting crew. Nevertheless, the law only protects those contributors who contribute in the form of the aforementioned works. But the producer of the film takes charge and becomes the license holder of all these works, leaving the director legally unprotected. This was justified by taking recourse to the Supreme Court Judgement in *Indian Performing Rights Society v. Eastern India Motion Picture Association*[6] wherein the Apex Court, on the basis of Section 17(b) and 17(c) of the Act, concluded that the producer of the cinematograph film was the first owner of the copyright and no copyright subsists in the lyricist or the composer unless there is a contract to the contrary between them and the producer.[7]

In most cases, the revenue is generated by the producer and therefore all economic rights of the individual copyright owners of the film are licensed to him in order to allow him to recover the profits from his investment. It is rather regrettable that the one who holds the money power is the one that one who owns the economic interest in the copyright. The 2012 Amendment to the Copyright Act has made a futile attempt to establish some parity in the equitable distribution of rights in cinematograph films.[8]

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3 See Trilochan Verma, *Optimal Copyright Protection for Media and Bollywood Industry*, Intense IP Services, July, 2014 *available at* http://lawyersupdate.co.in/Optimal-Copyright-Protection-in-Bollywood-and-Media-Industry.pdf (last visited 05/09/2015).

4 PASCAL KAMINA, FILM COPYRIGHT IN THE EUROPEAN UNION 22 (Cambridge University Press, 2002).

5 *Id.*

6 AIR1977 SC 1443.

7 Abhai Pandey, *Inside Views: Development in Indian IP Law: The Copyright (Amendment) Act, 2012 and its Functioning so far,* IP Watch, (23/10/2014) *available at* http://www.ip-watch.org/2014/10/23/the-indian-copyright-amendment-act-2012-and-its-functioning-so-far/ (last accessed 06/09/2015).

8 Abhai Pandey, *Inside Views: Development in Indian IP Law: The Copyright (Amendment) Act, 2012,* IP Watch, (22/01.2013) *available at* http://www.ip-

The 2012 Amendment conferred the producer of a film, the 'right to store'[9] the film in digital medium and also amended the definition of Cinematograph Film under Section 2(f). Instead of containing the oppressive powers of the producer, the Act conferred the producer with additional powers. Also, amendments have been made to Sections 18, 19 and 33 to protect the right of composers, script writers and lyricists to royalty for the non-theatrical use of their works in films, and for any use of their works in sound recordings.[10] The centrifugal role of the producer was upheld, leaving the director's contribution unrewarded.

One major amendment that was proposed to be introduced in 2010 involved the elevation of the legal status of the director of a cinematograph film with that of the producer.[11] A director of the film plays a pivotal role as he spends considerable amount of time administering the screenplay, music, dialogues, camera shots, performers, etc. He acts as the linchpin to the structuring and completion of the cinematograph film.[12] It is he who strings together the various facets of the film to produce a final product. However, a producer merely supplies the finances required to run the film.[13] He solicits advertisers, marketers and promoters in order to circulate his production, both nationally and internationally.[14]

Considering that both directors and producers of a cinematograph film are equally important in the administration of the film, the Copyright Amendment Bill, 2010 attempted to place both of them on a similar

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watch.org/2013/01/22/development-in-indian-ip-law-the-copyright-amendment-act-2012/ (last accessed 03/09/2015).

9 The Copyright Act, 1957, § 14.

10 Nandita Saikia, *The Impact of the 2012 Amendment on the 1957 Act*, Indian Copyright (14/06/2012) *available at* http://copyright.lawmatters.in/2012/06/impact-of-2012-amendments-to-copyright.html (last assessed 06/09/2015).

11 VIRGINIA WRIGHT WEXMAN , FILM AND AUTHORSHIP 23 (Rutgers University Press, 2013).

12 *Rights, Camera, Action! IP Rights and the Filmmaking Process,* World Intellectual Property Organization, p.58, *available at*: http://www.wipo.int/edocs/pubdocs/en/copyright/869/wipo_pub_869.pdf (last assessed 10/09/2015).

13 *Id.* at 60.

14 Karjala, Dennis S. (1995), Statement Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary, Copyright Term, Film Labeling and Film-Preservation Legislation, Hearings on H.R. 989, H.R. 1248 and H.R. 1734, 104th Cong. 290-91.

pedestal as joint authors of a film. However, when the 2012 Amendment was passed, this proposal was discarded. A 'work of joint authorship'[15] has been defined to mean a work where the contribution of one author cannot be differentiated from the other. By making the producer and director joint authors in the film, the director will not just be treated as an employee of the producer but as a creative contributor to the film itself. The *droit d'auteur* system[16] and the American system[17] of according director protection are the two varying legal systems in this regard, which will be discussed in detail in the later part of this paper.

An author of a work enjoys both moral and commercial rights *vis-à-vis* his work. The economic rights under Section 14 include the right to sell, give on hire, communicate to public and make copies of the film.[18] Moral rights include the right of paternity and integrity.[19] These moral rights allow the author to maintain a suit for distortion of his work[20] or to claim acknowledgment of authorship of his work even post licensing the work.[21] If a director is contractually employed by the producer, then he is denied of these rights and is only entitled to the royalty that is due to him or a portion of the profits of the film, whichever is decided in the contract.

The paper is divided into five parts. The first part elucidates the legislative developments that have taken place in the legal protection of cinematograph films and its contributors. The second part illustrates the difference between joint authorship and co-authors and why producers and directors should be made joint authors. The third part describes the 2012 Amendment by highlighting the change in the legal position. The fourth part critically analyses the amendment and its failure to incorporate the 2010 Bill. The last part contains suggestions and concluding remarks.

15 The Copyright Act, 1957, § 2 (z).
16 *Supra* note 12 at 59.
17 *Id.*
18 The Copyright Act, 1957, § 14 (d) (i), (ii) & (iii).
19 The Copyright Act, 1957, § 57.
20 V. T. Thomas v. Malayalam Manorama AIR 1989 Ker 49.
21 Amarnath Singhal v. Union of India 2005 (30) PTC 253.

II. LEGISLATIVE DEVELOPMENTS

When the Copyright Act, 1957 was passed by the Parliament, '*cinematograph films*'[22] was included as a copyrightable work within the meaning of Section 13 of the Act. Also, the owner of the cinematograph film is an author, who is widely regarded as the 'producer' of the film.[23] A producer of a cinematograph film is one who takes the initiative and responsibilities of making the film.[24] However, the current practice is a far cry from what the law requires. Producers are labelled as producers merely because of their financial pooling. They play a very miniscule part in making the film and focus more on marketing the film. Yet, they are conferred the tag of 'author' of the film. The other compartments of the film such as the lyrics, screenplay, props, stage setting, photography, dialogues, music compositions, etc.[25] which play a substantial part in the 'making' of the film are all eclipsed in the copyright of the producer.

Many countries do not recognize the rights of performers, actors, directors and other creative contributors to the film. However certain countries, like the U.S., have strong union representations that support these contributors. For example, The Screen Actors Guild campaigns for the rights of non-star actors to receive a decent remuneration and also payments linked to the exploitation of the film.[26] The 2012 Amendment did protect the rights of various authors in the film to receive royalty.[27] However, it failed to address the concerns of the directors, still treating them as contractual employees of the producer.

Similarly, the director of the film plays a critical role in assembling all components of the film and producing the end result. Therefore he requires to be accorded proportional importance. The Parliament introduced a Copyright (Amendment) Bill, 2010 with a view to ensure that both the producer and the principal director are made first owners[28] of the

22 Defined subsequently by an Amendment in 1994 w.e.f. 10.5.1995, § 2(f).
23 Nandita Saikia, *The Bollywood Amendments - Film, Music and Indian Copyright Law (2010 to 2012),* p. 3 *available at* http://ssrn.com/abstract=1566350 (last assessed 01/08/2015).
24 The Copyright Act, 1957, § 2 (uu).
25 *Supra* note 12 at 50.
26 *Id.* at 53.
27 The Copyright Act, 1957, § 19(8).
28 The Copyright Amendment Bill, 2010, Clause 5.

copyright *vis-à-vis* the cinematograph film.[29] An explanation was also introduced under Section 2(z) of the Act to this affect.[30] The explanation to the Section categorized a cinematograph film as a 'work of joint authorship'.[31] This meant that the producer and principal director of the film would be considered joint authors and owners of the film. The main objective of this move was to uplift and reward the director for his contribution in the film.

Indian Copyright law derives mainly from English common law. The Statute of Anne also regarded the author of a 'dramatic work' to be the producer.[32] Of course, presently, all statutes categorise films separately from dramatic works.[33] Therefore, historically, directors have never really been conferred authorship over the film.

Although authorship and ownership are considered two different aspects in copyright law, as a general rule, the producer, who is the author of the copyright is also conferred ownership over the film.[34] Therefore all contributors of the film who expend creative inputs to the film are kept second in hierarchy to the producer of the film. This runs contrary to the very jurisprudence of copyright law, which was intended to secure creativity and not money power.[35] However, sadly, the law has continued to protect producers irrespective of their minimal creative inputs.[36]

As discussed earlier, every author has certain commercial and moral rights associated with his work. In order to avail the statutory rights of

29 Amendment to § 2(d)(v), Copyright Act, 1957.

30 "A cinematograph film shall be deemed as a work of joint authorship except in cases where the producer and the principal director is the same person."

31 The Copyright (Amendment) Bill, 2010, Amendment of Section 2 - § 2(ix).

32 The Statute of Anne undoubtedly had copyright vest in authors. However the authors were dependent on printers to publish their work and hence had to licence their work to the printer. This excessive dependability on printers led to authors losing their ability to utilize their copyright effectively.

33 Gallini, Nancy and Winter, Ralph A., 'Licensing in the Theory of Innovation', 16 Rand Journal of Economics, 237-252 (1985).

34 The Copyright Act, 1957, § 17.

35 Goldstein, Paul, 'Copyright and the First Amendment', 70 Columbia Law Review, 983-1057 (1970).

36 Fisher, William, 'Reconstructing the Fair Use Doctrine', 101 Harvard Law Review, 1659-1795 (1988).

publication[37], paternity and integrity (moral rights) and other rights under Section 14 (economic rights), it is necessary that such person be an author[38] of the work. A script writer, composer, lyricist, recording label and the producer are considered authors[39] under the Act. However, a director is not an author. Therefore, he can only exercise those rights that are conferred to him under the contract under which his services were hired. Since an author is usually defined as a creator of the work[40], it makes it harder to accept that the director should not be conferred authorship over the film.

The landmark decision in *Najma Heptulla* v. *Orient Longman Ltd.*[41], concluded that the work of two authors could not be severed and that the product was a result of an active and close intellectual collaboration.[42] Hence the court regarded the product to form a 'work of joint authorship'. The contribution of each author should be indistinguishable with respect to the final product, but not so with respect to the nature of work done.[43] However the court did not lay down any standard to determine the degree of collaboration that was necessary to determine joint authorship.[44] No such issue has come before the court as yet. The contribution of the director to the film cannot be severed from the element of 'creativity and originality'[45] of the author (producer).

This injustice was proposed to be corrected by the Copyright (Amendment) Bill, 2010. This amendment draws its inspiration from various directives passed by the European Union. The Directive on Rental and Lending Rights[46] and the Directive on Satellite Broadcasting and Cable

37 P. NARAYANAN, INTELLECTUAL PROPERTY LAW 279 (Eastern Law House, 3rd ed. 2007).
38 The Copyright Act, 1957, § 2(d), 17.
39 The Copyright Act, 1957, § 2(d).
40 *Supra*, note 37 at 274.
41 AIR 1989 Del 63.
42 *Id.*
43 Cf, Meltzer v. Zoller 520 F Supp 847 (DNJ 1981); Stuart v. Barrett (1994) EMLR 307; Redwood Music Ltd. v. B. Feldman & Co. (1979) 1 RPC 1.
44 LIOR ZEMER, THE IDEA OF AUTHORSHIP IN COPYRIGHT 191 (Ashgate Publishing Ltd., 2007).
45 Alfred C. Yen, *Restoring the Natural Law: Copyright as Labor and Possession*, 51 Ohio State Law Journal 517, 517 (1990).
46 Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property.

Retransmission[47] made provisions for directors to be considered the author of the film. The 1993 directive harmonized these two directives and also states that many member states have recognized the producer and director as co-authors.[48] Under EU law, the principal director is considered to be the first owner of the copyright. This was enunciated in *Martin Luksan* v. *Petrus van der Let*[49] which protected the right of the principal director against exploitation of the film, which is considered to be a moral right under Indian copyright law.

The 2010 Bill tried to incorporate these directives by making the principal director, the co-author of the copyright. Therefore, the proposed amendment in India borrows heavily from the above harmonization. However, the parliamentary revision of the Bill in 2011 removed the aforementioned proposition based on the recommendations of the Parliamentary Standing Committee.

III. JOINT OWNERSHIP v. CO-OWNERSHIP

There exists a huge difference between co-ownership and joint ownership of a copyright in the legal scenario. Co ownership can be of two types – owners in common or joint owners.[50] Hence joint ownership is a subset of co-ownership.[51] Joint owners are those who own the copyright, jointly and severally.[52] One owner cannot divest any right in the property owned without the consent and permission of the other. Therefore, joint owners of a copyright need the permission of the other in order to assign or license their copyright. This ensures that both owners are in control over each other's actions. As separate individuals, they own nothing. Their ownership is completely dependent on the other. Each owner survives the

47 Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission.

48 *Id.*

49 Case C-277/10 Judgment of the Court (Third Chamber) of 9 February 2012. Also See, C-429/08 Football Association Premier League Ltd and Others [2011].

50 Lauri v. Renad, [1892] 3 Ch 402.

51 LADDIE, PRESCOTT AND VITORIA et. al., THE MODERN LAW OF COPYRIGHT AND DESIGNS 43 (Butterworths Law, 4th ed. 2011).

52 Harshad Govardhan Sondagar v. International Assets Reconstruction Co. Ltd., (2014). 6 SCC 1.

other.[53] This echoes the English position: No co- owner can grant a licence without the consent of all the other owners.[54] This position was reiterated in *Angath Arts Private Limited* v. *Century Communications Ltd. and Anr*[55], where the court stressed on the inter-dependability of joint authors of the copyright.

In ownership in common, the owners hold an individual share in the rights of the property. They have distinct, notional shares in the property owned. One owner does not survive the other. The share of the deceased owner will vest in his or her legal representatives.[56] The rationales behind the decision of the Parliament that the co-ownership between the principal director and the producer should be of a joint ownership and not an ownership in common are as follows:

Rights of joint owners in a copyright are indivisible.[57] Therefore, owners of the copyright cannot hold separate and distinct rights in the copyright. Also, when the copyright is assigned or licensed, the agreement would be clear and precise as the copyright is owned jointly and therefore all rights are held together and not separately.[58] Therefore the producer and primary director of the film can be made joint owners in the cinematograph film, also making them joint licence holders of the other works (literary, musical and dramatic) in the film. Apart from the EU, its member states and other non-member states such as Australia, the law in most common law countries do not recognize the right of the director to be regarded as an author of the cinematograph film.

53 Nav Sahitya Prakash and Ors. v. Anand Kumar and Ors, AIR 1981 All 200. The court held that a co-owner of a copyright is different from a co-owner of a tangible property in that his rights are not divisible with the other co-owner/s.

54 Powell v. Head (1879) 12 Ch D 686.

55 2008 (4) Bom. C.R. 838.

56 Smt. Vishnawati vs Bhagwat Vithu Chowdhry AIR 1970 All 389.

57 H.G. Henn, *Magazine Rights A Division of Indivisible Copyright*, 40 Cornell L. Rev. 413, 411 (1955).

58 In the case of Angath Arts Private Limited v. Century Communications Ltd. and Anr., [2008 (4) Bom C.R. 838] the High Court of Bombay held that the 'Joint owner of a copyright cannot, without the consent of the other joint owner, grant a licence or interest in the copyright to a third party'.

IV. THE 2012 AMENDMENT

The Copyright (Amendment) Bill, 2010 proposed to restore the order by providing for joint ownership of copyright in films. However, the PSC (Department-Related Parliamentary Standing Committee on Human Resource Development) rejected the proposal to amend Section 2(d)(v) of the earlier Act so as to have the principal director be a joint author of a film, noting that the principal director is not treated as the author of a film in jurisdictions like that of the USA. In the US, the director is appointed through a work-for-hire contract by the producer, just like in India. However, A-level directors oftentimes negotiate for a final cut clause in the contract[59], which allows them to decide the final shape of the movie. Furthermore, the status of directors is protected by the fact that they have union agreements[60] that provide them with rights against exploitation, unlike in India. Hence it was wrong on the part of the PSC to compare the position of directors in India and the USA.

The report submitted by the PSC reasoned out why it proposed to eliminate the particular amendment from the Bill. It pointed out that directors in India are protected by union arrangements, similar to that in the U.S. It cited the WCT[61], WPPT[62] and the Rome Convention[63] as other sources that do not recognize the principal director to be the author of the film. It also pointed out that the 2010 Bill and the Berne Convention[64] failed to define the principal director, leaving it ambiguous. Finally, it argued that if directors were to be made authors, producers would no longer engage the services of directors.

What the PSC failed to understand is the very core of copyright protection regime and the need to safeguard originality, innovation and creativity.[65] Any person whose creative inputs have been invested in the

59 *Supra*, note 12 at 58.

60 *Id.* at 59.

61 WIPO Copyright Treaty, S. Treaty Doc. No. 105-17, 36 I.L.M. 65(1997).

62 WIPO Performances and Phonograms Treaty, S. Treaty Doc. No. 105-17, 36 I.L.M. 76 (1997).

63 Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations [1992] ATS 29 / 496 UNTS 43.

64 Berne Convention for the Protection of Literary and Artistic Works S. Treaty Doc. No. 99-27 (1986) 1161 U.N.T.S. 3.

65 Abraham Drassinower, *Sweat of the Brow, Creativity, and Authorship: On Originality in Canadian Copyright Law,* 105, 107 1 UOLTJ (2003-2004).

work should be considered the author of the work and must be protected. The utilitarian/economic theory of copyright law[66] states that the purpose of copyright protection is to incentivise creativity and innovation and encourage investment in literary works. The Berne Convention clearly highlights the need to protect such literary works by conferring economic and moral rights[67] on the author of the work. These rights were intended to protect the creator of the work and preserve the inherent interest of the creator over the creation. However, the PSC decided to overlook the same in light of economic practice and feasibility.

India needs to take inspiration from the *droit d'auteur* (right of author) system rather than the common law system of looking into the economic rights of the author.[68] The focus in common law regimes is on the work; not so much the author.[69] This shift from acknowledging the right of the author to his work's integrity to focusing on monetary considerations[70] is inconsistent with the scope of the Berne Convention. Therefore, the Indian legislature needs to take a balanced approach by appropriately intertwining the best from both systems.

It appeared that the government had accepted the recommendations of the PSC in this regard, and all of the provisions in the 2010 Bill which related to having the principal director be a joint author of a film — and consequently, a joint owner — along with the producer were deleted from the 2010 Bill in 2011, and were not re-introduced by way of the 2012 Act.[71]

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66 Peter S. Menel, *Intellectual Property: General Theories*, 129, 130 UCLA L.R. (1999).

67 Article 6*bis*, Berne Convention for the Protection of Literary and Artistic Works S. Treaty Doc. No. 99-27 (1986) 1161 U.N.T.S. 3.

68 Christine L. Chinni, *Droit D'auteur Versus The Economics Of Copyright: Implications For American Law Of Accession To The Berne Convention,* 145, 147 14(2) Western New England Law Review (1992).

69 See Russell J. DaSilva, *Drait Moral and the Amoral Copyright: A Comparison of Artists' Rights in France and the United States*, 28 1 BULL. COPYRIGHT SOC. (1980).

70 See Martin A. Roeder, *The Doctrine of Moral Right: A Study in the Law of Artists, Authors and Creators*, 554, 556 53 HARV. L. REV. (1940).

71 Nandita Saikia, *Principal Director as an Author of the Film*, (30, Apr. 2010) *available at*: http://copyright.lawmatters.in/2010/04/principal-director-as-author-of-film.html (last assessed 08/09/2015).

V. CRITICAL APPRAISAL

The recommendations of the PSC, although insightful, needed to be scrutinised properly by the government before accepting. The propositions of the PSC are debated and analysed in the following manner:

1. **Defining Principal Director** - The 2010 Bill did not define the term, principal director. This does not mean that the Parliament can scrap a progressive amendment for the lack of a little clarification. Most movies have a clear and precise director who is acknowledged in the credits of the movie. He may be assisted by other directors but his position as the primary director remains undisputed. The lack of a definition in the 2010 Bill and the Berne Convention cannot be a reason for the Parliament to come to a conclusion that a definition cannot be formulated to that effect.

   The Berne Convention[72] was the first international document that was aimed at protecting literary works. The Convention placed its focus on protecting the moral rights of authorship.[73] The idea of primary directors being made authors came about only in the EC directives in 1993. Since the Berne Convention came into force in 1961, it cannot be expected to define a term, whose existence in relation to copyright originated two decades later. It is high time that the Parliament stops plainly borrowing from foreign statutes and starts applying its mind.

   Although 'principal director' is not a term used in common parlance in the film industry, the director who plays the most prominent role in administering the affairs of the movie can easily be identified as the principal director. The inability to accurately define the term 'principal director' cannot be reason enough to deprive the creator of the cinematograph film of his right of authorship.

2. **Role of the Director** – The PSC recommended that since the role of the producer is more central to the making of the movie, it is he who should be considered as the author of the film. However, the ground reality does not reflect the same. It is known to all that the producer's interest in the film is purely monetary. It is the director who provides

72 *Supra*, note 64.
73 *Id.*

his creativity and skill in the making of the movie. If 'making' of the movie meant financing the movie, then the PSC's recommendations hold water. But if one were to break it down to the fundamentals of copyright law, it is the creator of the copyrighted work who is the true owner of the copyright.[74] Therefore it is opined that the director should be given due credit in the ownership of the cinematograph film.

As seen in the EU, the courts have recognized the role of the director and his importance with regard to the decision making process of the company. Most member States in the EU recognize the right of directors to exercise a claim if the film has been distorted or mutilated.[75] The same needs to be applied in India. Even though producers of the film can part with the economic rights over the film, the moral rights under Section 57 cannot be assigned[76] to the director.

3. **Alternative Remedies** – The PSC recommends that the director has sufficient safeguards from being misappropriated. Usually, the director is employed by the producer through a contract of service. Therefore the director is under the control of the producer at all times. His employment can be terminated at the will of the producer. Hence the remedies available to the director are limited to the boundaries of the contract of employment. A director cannot be equated to an employee under the control of the producer. Creativity cannot be made to serve money.[77] Therefore the director must be given the status of 'author'; a status that he deserves to hold. Since it is established that authors are the ones who are entitled to moral rights and no one[78] else, it is unfair on the part of the Indian copyright regime to deny a creator, the rights of integrity and paternity over his work. Also, it is upon the discretion of the producer of the film to decide if he wants to part with the economic interests and rights in the film. In both cases, the director is the one at the lower end of the sea saw.

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74 *Supra*, note 66; See, Gordon, Wendy J., *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent and Encouragement Theory*, 1343, 1469 41 Stanford Law Review (1989).

75 *Supra*, note 41.

76 *Supra*, note 70 at 558.

77 Wendy, *Supra*, note 74.

78 *Supra,* note 70.

4. **Employment Issues** – Most directors today are employed and remunerated by the producer. Hence, the director is at a weaker bargaining position when compared to the producer. The law cannot sit back and allow years of unjust practice, justify the subservience of the director. Nobody should be allowed to buy creativity and originality and take credit for the work. Directors must demand for greater economic rights such as right to publication, reproduction, translation, etc. There is a need for a strong union representation to lobby for the collective interests of the directors.

   In the U.S., directors negotiate for a final cut clause in the work-for-hire contract under which their services are employed. However in India, the directors are not given such right. However, in some cases, the director is also the script writer of the movie. Even though he licenses his literary work to the producer, he retains the moral rights over the work. Nevertheless, the same does not apply for the musical work and dramatic work associated with the film. In relation to musical work, the choreographer should also be conferred joint authorship with the author of the dramatic work.

VI. CONCLUSION

It is rather unfortunate how the law confers copyright ownerships to producers of cinematograph films and sound recordings. The modicum of creativity that is so intrinsic to a copyright had vanished in mid air, allowing owners of recording studios and financers of movies to become owners of copyrights. This is a very capitalist tendency, which would affect the pillars of copyright protection in the long run. Economic and moral rights are equally important. One cannot supersede the other for the purposes of practicality and feasibility. It is time for the Parliament to step up and take charge by restoring true democratic ideals in the copyright law.

Copyright law was meant to protect creative works of the mind. By allowing producers to be sole authors of copyrights, one is allowing them to economically exploit the work of the innovative and ingenious. A director must be made a joint author owing to his creative contribution to the film. It is recommended that the Parliament reconsiders the 2010 Bill and implement the same through an amendment in the law. These days there exist production houses that spend loads of money in making the movie. The owners of these houses are the producers who also play the role of the

director in order to cut the remuneration costs of directors. Although the amendment may incentivise this practice, in cases where a movie is directed (which applies in majority of the cases) by a director, he will no longer be subordinate to a creative non-contributor.

THE GREAT BEYOND : UNDERSTANDING PATENTS IN OUTER SPACE

Aakanksha Mishra[*]

With the globalization of economies, liberalization of space policies, new technological developments and privatization of some of the space segments, new trends have emerged in the space industry that demand a shift in policies and approaches in this industry. Space exploration is a costly affair and hence collaboration with the private sector by state-owned space agencies has become vital for the purpose of acquiring the requisite financial and technical resources to support such activities. These activities are witnessing increased private participation. The private players are naturally more conscious of their "property", both in tangible and intangible forms. Such private financing is motivated by the expectation of returns in the future from the R&D investment. Limited exclusive rights conferred by intellectual property protection would thus bring competitive benefits to right holders. The legal regime governing outer space and patents is subject to two different schools of jurisprudence- the patent regime supports monopoly rights for the person using the intellectual labour whereas Space law emphasizes on principles like "province of all mankind", " benefit of all countries", which call for common benefits. However, can this become a reason for denying patent rights to a person for his genuine intellectual labour in contributing to the development of space related activities? Though at present there is no reported instance of conflict relating to patents in outer space, the pace of technological development could throw up such complexities in the near future – hence there is no better time to clarify the patent regime in space related activities.

INTRODUCTION:

International agreements declare that no government can claim outer space or celestial bodies in outer space as its own.[1] Private firms seeking to invest in potential space enterprises frequently point to these

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1 Art. II, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1967), 18 UST 2410, 2413 (1969) (hereinafter Outer Space Treaty).

provisions as a major barrier to the future commercial development of space. Such businesses contend that the absence of intellectual property rights prevent them from obtaining external financing, hinder the protection of their investments in space, and deprive them of the assurance that they can appropriate income from their investment.[2]

The following paper is an attempt to ascertain the feasibility of granting patent rights in outer space, the legal system governing it and the need for an international framework to bring about coherence in the outlook of different states on this issue. Part I of the paper explores the current legal framework governing Outer Space as well as Intellectual Property Rights and highlights the core differences in the jurisprudence behind both these legal regimes. Part II deals with extension of territorial Intellectual Property laws into outer space and the questions of jurisdiction that such extraterritorial application of IP laws brings to the fore. Part III looks into international efforts made for cooperation in the field of space related patents.

PART 1: THE LEGAL BACKDROP: DIVERGENCE IN PATENT LAW AND OUTER SPACE LAW- THE SEED OF CONFLICT

1.1. Legal Framework governing Outer Space

A number of United Nations Treaty provisions can have an impact on property rights in space.[3]Most notably, the Outer Space Treaty prohibits governments from claiming sovereignty over space or for any celestial body. Therefore, no nation can give its citizens or any other nation exclusive use of any territory.[4] The principle of space as the province of all mankind and using space only for the benefits for mankind is a central

2 HENRY R. HERTZFELD , FRANS G. VON DER DUNK, *Bringing Space Law into the Commercial World: Property Rights without Sovereignty*, 6 CHI. J. INT'L L. 81 2005-2006

3 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1967) 18 UST 2410, 2413 (1969); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (1968), 19 UST 7570 (1969); Convention on Registration of Objects Launched into Outer Space (1975), 28 UST 695 (1978); Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (1979), 1363 UN Treaty Ser 3 (1984)

4 Art. II, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1967), 18 UST 2410, 2413 (1969)

theme of international agreements. However, legal scholars continue to debate over the precise legal consequences which should be drawn from the equation that space, as province of all mankind, should be regarded as *terra communis* as opposed to *terra nullius,* [5]a conception under which a nation may eventually claim sovereignty. *'Terra Communis'* is a term used to denote concepts of public domain and common heritage of mankind and is often contrasted with '*terra nullius*,' the concept of ownerless property which in international law is used to describe a territory which is not subject to the sovereignty of any state.

The Outer Space Treaties prohibit nations from recognizing sovereignty claims over celestial bodies. The OST, as well as subsequent treaties dealing with outer space, incorporate the core principle of "non-appropriation." This principle forbids nations from claiming territory or resources in outer space or on celestial bodies.[6] The non appropriation principle is intended to effectuate the OST's other goal of exploring and exploiting outer space resources for the benefit of all nations regardless of their level of development.[7] There is a debate as to whether the principle of Non appropriation is applicable to private commercial actors. This principal, however, is most easily applicable to claims made against tangible property, namely, those of "territory and of natural resources." It has been suggested that certain intangible property rights, specifically intellectual property rights, fall outside the ambit of the non appropriation principle.[8] This was confirmed by the Agreement concerning the International Space Station. [9]

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5 LOTTA VIIKARI, FROM MANGANESE NODULES TO LUNAR REGOLITH, Faculty of Law, University of Lapland, Rovaniemi (2002)

6 Steven Freeland, *Symposium: Issues in Space Law: Up, Up, and... Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space,* 6 CHI. J. INT'L L. 1, 11-12 (2005); Leo B. Malagar & Marlo Apalisok Magdoza-Malagar, *International Law of Outer Space and the Protection of intellectual Property Rights;* 17 B.U. INT'L L.J. 311, 345 (1999)

7 Steven Freeland, *Symposium: Issues in Space Law: Up, Up, and... Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space,* 6 CHI. J. INT'L L. 1, 11-12 (2005)

8 Gabriel Lafferranderie, *Basic Principals Governing the Use of Outer Space in Future Perspective, in* ESSENTIAL AIR & SPACE LAW: CURRENT PROBLEMS AND PERSPECTIVES FOR FUTURE REGULATION 5, 16 (Marietta Benko & Kai-Uwe Schrogl eds., 2005), at 13

9 Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the

The Moon Treaty was written to further define international rights and obligations that were first set forth in the Outer Space Treaty.[10]Specifically, Article XI of the Moon Treaty forbids the right of private ownership of any part of the surface of the moon as well as private ownership of lunar resources. Article XI also calls for the establishment of an *"international regime, including appropriate procedures, to govern the exploitation of the natural resources of the moon".* [11] The Moon Agreement, the last of the Space Treaty to be adopted, goes further by declaring the moon to be the common heritage of mankind.[12]This terminology suggests that an even higher principle of equity would be applied to the moon's surface-if one nation or its citizens were to exploit lunar resources, the technology employed to do so and a portion of the proceeds thus garnered would have to be shared with all nations. By essentially precluding proprietary rights and profits, this scenario would greatly diminish the impetus for commercial development. Although the regime is intended to ensure that the exploration/ exploitation of outer space serves the common heritage of mankind,[13] it is this provision that is commonly faulted for the failure of the overwhelming majority of the signatories of the Outer Space Treaty to sign and ratify the Moon Treaty.[14] It has been suggested that the failure of broad support for the Moon Treaty is born of concerns that an international regime that appears to reject all notions of private property ownership would extend beyond the moon and serve as a bar to private investment in the exploration of space.[15] This lack of support from the international community indicates a tacit recognition that both private and public actors have a role to play in the exploration and exploitation of outer space. Thus,

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Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, Jan. 29, 1998, 1998 UST. LEXIS 212

10 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1363 U.N.T.S. 21

11 Art 11, Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1363 U.N.T.S. 21

12 Art 11(1). Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1363 U.N.T.S. 21

13 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, 1363 U.N.T.S. 21, Art.11

14 John S. Lewis, Christopher S. Lewis, *A Proposed International Legal Regime for the Era of Private Commercial Utilization of Space,* 37 GEO. WASH. INT'L L. REV. 745, 753 (2005)

15 John S. Lewis, Christopher S. Lewis, *A Proposed International Legal Regime for the Era of Private Commercial Utilization of Space,* 37 GEO. WASH. INT'L L. REV. 745, 753 (2005) at 754

even with the Moon Agreement's entry into force, only eleven states have ratified it, and an additional five states have signed it. None of the sixteen States are major space-faring nations, except for France and India, which have signed but not ratified the Treaty. Future enforcement of the Moon Agreement's common heritage provisions obviously remains questionable.[16]

1.2. Legal Framework governing Patents

"Intellectual property rights" describe a diverse array of personal property rights that exist over intangible "intellectual" creations. As defined by the Convention Establishing the World Intellectual Property Organisation, intellectual property includes, inter alia, rights relating to "*literary, artistic and scientific works*" and "*inventions in all fields of human endeavour*".[17]In the context of the commercialisation of outer space, the most important intellectual property rights are the *industrial* forms of intellectual property; the forms of intellectual property that provide protection for industry over its investment in the research and development of new technology. [18] Generally the product of such investment will be *"inventions*", solutions to specific technical problems. The main intellectual property rights necessary to establish a viable commercial space program are therefore those that protect "i*nventions*", namely patent grants.[19] Conferment of patent rights is based on the principle that every invention needs to be rewarded by providing protection in order to stimulate intellectual creations.[20]The patent regime advocates for monopoly rights for the person using the intellectual labour.[21]The inventor would be entitled to reap the benefits of his or her invention by getting exclusive rights to use it for a limited period of time. Patent rights are "*strictly territorial*," meaning that

16 Christopher Miles, Assessing *the Need for an International Patent Regime for Inventions in Outer Space*, 11 TUL. J. TECH. & INTELL. PROP. 59 2008

17 Art 2(viii), Convention Establishing the World Intellectual Property Organization (14 July 1967) 828 UNTS 3

18 World Intellectual Property Organisation, *WIPO Intellectual Property Handbook: Law, Policy and Use,* (March 15, 2015), http://www.wipo.org/about-ip/en/iprm/

19 Marguerite Broadwell, *Intellectual Property and the Economic Development of the International Space Station*, Speech to the Space Technology and Applications International Forum (2000)

20 *Creative Commons* ,TAKING IT GLOBAL, http://issues.takingitglobal.org/intprop?gclid=CLyp5_mivpACFQssewod8zrEPQ (March 20, 2015)

21 Alejandro Piera, *Intellectual Property in Space Activities: An Analysis of the United States Patent Regime*, XXIX AIR & SPACE L. 42, 46 (2004)

patent rights are limited to the jurisdiction of the state that has granted them.[22] National rules concerning intellectual property protection do not extend beyond national borders. Despite internationalisation of standards, patents remain essentially domestic rights. Patents are granted unilaterally by governments of individual States. Although multilateral treaties have achieved a measure of universality for domestic protection standards, the international community has yet to achieve universality of enforcement.[23] International law however has a further significant interface with patent law, in determining the limits of States' ability to enforce domestic patent legislation. The patent will only be effective in preventing the user's exploitation of the invention where the granting State has jurisdiction in international law to enforce its law against the user.[24]

1.3. Divergence and Conflict

The major source of conflict is the difference in the origin and applicability of the patents regime and the regime governing outer space. Patent law is fundamentally national in its origins and scope of application, notwithstanding efforts towards international harmonization.[25] The patent laws of each nation are different owing to the history of a nation, its social conditions, economic situation etc. Harmonization is a journey towards minimization of such differences existing in the patent systems of different countries. The trend towards globalization in the trade arena has had a direct effect on the harmonization of national intellectual property laws through the World Trade Organization (WTO) and regional trade organizations.[26] In contrast to intellectual property laws, the regime

22 JON 0 NELSON, INTERNATIONAL PATENT TREATIES 1 (OCEANA PUBLICATION) (2007)

23 Christopher DeCluitt, *International Patent Prosecution, Litigation and Enforcement*, (1997) 5 TULSA J OF COMP AND INT'L L 135, 144-146

24 Christopher DeCluitt, *International Patent Prosecution, Litigation and Enforcement*, (1997) 5 TULSA J OF COMP AND INT'L L 135, 144-146

25 Anna-Maria Balsono & Bradford Smith, *Intellectual Property and Space Activities: A New Role for COPUOS?*, *in* OUTLOOK ON SPACE LAW OVER THE NEXT THIRTY YEARS 363 (Gabriel Lafferranderie & Daphne Crowther, eds., 1997)

26 Takeshi Isamaya, *Towards Desirable IP Systems ?- Taking the Patent System as an Example*, Chairman's Note for the Informal Meeting of the Heads of Patent Offices in Developed Nations, May 19-20, 1999 available at http://www.eps.nagoya-u.ac.jp/examin/991d/991dej.html

governing outer space is essentially extra territorial in its origin and application.[27]

The strong national root of patent regime has three major consequences. First, the patented invention is protected only in the country or countries where it is registered and not outside. Second, the law of the State where the invention is said to have been infringed shall be applicable for the determination of the infringement of patents. Third, the jurisdiction shall be exercised by the courts of that State where the invention is said to have been infringed.[28] On the other hand, the strong international roots of space law favour uniform law to govern activities in outer space. It also tends towards the recognition of interests of everyone as opposed to the individual interest recognized by the patent regime.[29]

Intellectual property rights are based on a *'strict territorial'* approach and on the other hand outer space is not subject to national appropriation and free use shall be carried out for the benefits and interests of all countries.[30] The concept of province of all mankind and common heritage of mankind advocate for sharing of benefits in outer space law is antagonistic to the individualistic patents regime. Therefore, one of the important questions in the field is, can a patent be granted at all for an invention created in outer space? While it is not easy to reconcile these two different approaches, protecting intellectual property rights arising out of space activities is vital to the sustainable development and commercialization of outer space. It will be devastating to space development were private entities to lose their interests and enthusiasm in space activities.[31]

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27 Ruwantissa Abeyratne, *The Application of Intellectual Property Rights to Outer Space Activities*, 29 J. SPACE L. 1 (2003)

28 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010.

29 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010

30 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010

31 Anna Maria Balsano, Intellectual Property within Public International Research Organizations: The Example of the European Space Agency, *The Proceedings of the 36th Colloquium on the Law of Outer Space,* IISL 3 (1993)

Is it justifiable to extend the scope of space law concepts to such an extent so as to deprive an inventor from deriving benefit from his or her intellectual labour? The answer seems to be negative. The obvious reason for conflict between the patent regime and the outer space regime is that the space treaties were entered into at the time when States were the only actors in the field of outer space, and the concept of patent or invention in outer space was virtually unknown. Therefore States are the major subjects of space law, and consequently the rights conferred upon space activities are public in nature.[32] When the Outer Space Treaty was drafted, it was primarily directed to state actors, as the participation of private entities in outer space activities was not yet contemplated.[33] However, Article VI of Outer Space Treaty suggests that member states will retain some level jurisdiction over spacecraft on their respective registries, stating that member states will "*bear international responsibility for national activities in outer space ... whether such activities are carried on by government agencies or by non-governmental entities...*". The space treaties are not oriented towards the protection of any private rights.[34]

With increased private space activities, we are confronted with the challenge of striking a delicate balance between private rights and the public rights. If private rights are not guaranteed, no one would be willing to conduct innovative activities in outer space, which would in turn adversely affect the scientific and technological development.[35] Developing a fair scheme to strike the balance between private interests, which generate innovation, and the wider interests of humankind is not easy. Any solution to the problem would involve some compromise in both fields.

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32 S. G. Sreejith, *The Pertinent Law for Outer Space Related Intellectual Property Issues: An Odyssey into TRIPS*, 45 INDIAN J. INT'L L. 180, 183 (2005).

33 Christopher Miles, Assessing *the Need for an International Patent Regime for Inventions in Outer Space*, 11 TUL. J. TECH. & INTELL. PROP. 59 2008

34 Christopher Miles, Assessing *the Need for an International Patent Regime for Inventions in Outer Space*, 11 TUL. J. TECH. & INTELL. PROP. 59 2008

35 Anna Maria Balsano, *Intellectual Property within Public International Research Organizations. The Example of European Space Agency*, *in* PROCEEDINGS OF THE THIRTY-SIXTH COLLOQUIUM ON THE LAW OF OUTER SPACE 3, 4 (1994)

PART 2: PATENTS IN OUTER SPACE

2.1. Jurisdiction in case of patent infringement in space

The creation of intellectual property rights in space involves the creation of personal property rights in an area not within the territory of any particular State, but rather an international area common to all. As such, any application of domestic law in such an area must necessarily be judged against the international law governing State conduct in respect of the area.[36] With regard to applicability of national patent regulations, problems occur when an invention is used or infringed in outer space, because these regulations are applicable only on the territory of the specified State which, **by** definition, excludes the extraterritorial domain of outer space. Nonetheless, a State retains jurisdiction and control over objects it sends into outer space.[37] The jurisdiction under the Outer Space Treaty is not only confined to space objects registered with the State, but also extends over any personnel thereof, while in outer space or on a celestial body. In other words, the State of registry exercises jurisdiction on the personnel even when such personnel are outside the space object. [38] Hence, the simple solution to this legal gap would be to make patent law applicable to space objects under the jurisdiction and control of a given country. Therefore any patent infringement in outer space, whether inside the space object or outside in outer space, on the Moon, or other celestial bodies is subject to the jurisdiction of the State where the space object is registered.[39] However this type of jurisdiction exercised under Article VIII of Outer Space Treaty will bring forth the problem of conflict of multiple jurisdictions. In a case where the space station is registered in one State and space vehicle carrying the astronauts conducting the inventions is registered in another State, by virtue of Article VIII, the State registering the space station would undoubtedly exercise jurisdiction over the activities in the space station. Similarly, the State registering the space vehicle carrying the

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36 Tim Smith, *A Phantom Menace? Patents and the Communal Status of Space*, 34 VICTORIA UNIVERSITY OF WELLINGTON LAW REVIEW 545 (2003)

37 Art VIII, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205

38 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010

39 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010

astronauts would exercise jurisdiction over any activity conducted by those astronauts in outer space since Article VIII also confers personal jurisdiction, which extends to an activity conducted outside the space object. Similar problems will also arise in case of exchange of crew among two or more space stations. Hence applying the IP rules of the state of registration of the space object is not a full proof solution and is fraught with difficulties like conflict of jurisdiction situations.[40].

However extension of terrestrial IPR laws of the country of registry is not devoid of conflicts. Let us understand this with a simple illustration.

The space station or a station on the Moon or other celestial body is registered in one State (State A) and the space vehicle carrying the astronauts conducting the inventions therein is registered in another State (State B). By virtue of Article VIII, the State registering the space station i.e. State A will undoubtedly exercise jurisdiction over the activities in the space station. Similarly, the State registering the space vehicle carrying the astronauts i.e. State B would exercise jurisdiction over any activity conducted by those astronauts in outer space, since Article VIII also confers personal jurisdiction, which extends to an activity conducted outside the space object. The same problem would arise in case of exchange of crew among two or more space stations. This leads to situations of conflicting jurisdiction.[41]

According to the Registration Convention, a launching state is defined as (1) a State which launches or procures the launching of a space object or (2) a State from whose territory or facility a space object is launched. The *'launches or procures the launching of'* language is somewhat ambiguous and therefore provides a potential means for a private actor to escape the obligations set forth in the Outer Space Treaty.[42] In other words, a private commercial entity might be able to select which jurisdiction applies aboard its spacecraft by where it is headquartered, where its

40 Imre Anthony Csabafi, *The Concept Of State Jurisdiction,* in INTERNATIONAL SPACE LAW 112 (1971)

41 Imre Anthony Csabafi, *The Concept Of State Jurisdiction,* in INTERNATIONAL SPACE LAW 112 (1971)

42 Bernhard Schmidt-Tedd & Michael Gerhard, *Registration of Space Objects: Which Are the Advantages for States Resulting from Registration, in* ESSENTIAL AIR & SPACE L. 126 (Marietta Benko & Kai-Uwe Schrogl eds., 2005)] at 126

production facilities are located, or even where it chooses to register the spacecraft.

Therefore, in the wake of private space activities, the jurisdictional issue needs to be clarified immediately. Otherwise, it might ultimately result in forum shopping by private entities whereby they will register their objects under the most favourable regime to defeat the purpose of the law.[43]

2.2. Extension of terrestrial IPR laws into Outer Space

2.2.1 US Patents in Space Act

The combined effect of the Outer Space Treaty and the Registration Convention is to enable launching States to extend their laws, including their patent laws, to their registered space objects. [44]Consistent with the framework established by the Outer Space Treaty, in 1990 the United States extended the reach of its patent laws to U.S.-registered spacecraft by enacting 35 U.S.C. § 105. Section 105 provides that "*any invention made, used, or sold in outer space on a space object or component thereof under the jurisdiction or control of the United States shall be considered to be made, used or sold within the United States for the purposes of [U.S. patent laws].*"[45] Therefore, an invention conceived or first reduced to practice on a U.S.-registered spacecraft is deemed to have been made in the United States.[46] Further, an infringement lawsuit based on a U.S. patent for activities concerning the making, use, or selling of an invention in outer space on a U.S. - registered spacecraft may be brought in a U.S. court and would succeed if the activity is covered by the claims of the U.S. patent. The Patents in Space Act also allows for the United States to enter into a future agreement with another Outer Space Treaty member state which would allow the United States to

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43 Bradford Lee Smith and Elisabetta Mazzoli, *Problems and Realities in Applying the Provisions of the Outer Space Treaty to the Intellectual Property Issues*, *in* PROCEEDINGS OF THE FORTIETH COLLOQUIUM ON THE LAW OF OUTER SPACE 169, 171 (1998)

44 FRANCIS LYALL & PAUL B. LARSEN, SPACE LAW: A TREATISE 2 (Ashgate, 2009) at 124-27

45 Patents in Space Act, 35 U.S.C. § 105 (1990)

46 Theodore U. Ro, Matthew J. Kleiman, Kurt G. Hammerle, "Patent Infringement in Outer Space in light of 35 U.S.C. § 105: Following the White Rabbit down the Rabbit Loophole", 17 B.U. J. SCI. & TECH. L. 202 (2011)

retain jurisdiction and control over patents aboard a spacecraft on that member state's registry.[47]

One of the few cases to interpret the "patents in space" law provision of 35 U.S.C. 105(a) is Hughes Aircraft Co. v. United States.[48] The court noted that "*The legislative history indicates that the purpose of the law was 'to clarify U.S. patent law with respect to its extraterritorial application aboard U.S.-flag spacecraft, in order to encourage private investment in research and manufacture conducted in outer space.'... Moreover, the legislative history suggests that the Act was consistent with international law.*"[49]

In *Decca Limited v. United States*[50], the underlying technology concerned a worldwide radio navigation system known as "Omega" which was operated by the United States Government. The system included components of a system located in foreign countries and called for the placement of receivers in ships and aircraft so as to retrieve positional information while travelling on or over the high seas. In issuing its opinion, the court in *Decca* established that, for "system" or "apparatus" claims to a patent, the determinative factors to consider in deciding whether use of the patented system occurs within the United States are: (1) whether "control of a system" occurs on U.S. territory, (2) whether the system is "owned" by a U.S. entity, and (3) whether there is "beneficial use" in the U.S.38 Based on these factors, the Decca court found that the United States Government could be subjected to the court's jurisdiction for an infringement claim on a U.S patent.[51]

2.2.2 ISA Model

In 1998, Canada, the ESA, Japan, Russia, and the United States entered into a multilateral agreement concerning the International Space Station.[52] It contains explicit provisions for protection of intellectual property rights.[53]

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47 Patents in Space Act, 35 U.S.C. § 105 (1990)

48 29 Fed. Cl. 197 (1993)

49 *Hughes Aircraft Co. v. United States*, 29 Fed. Cl. 197 (1993)

50 Decca Limited v. United States, 210 Ct. Cl. 546, 544 F.2d 1070

51 Theodore U. Ro, Matthew J. Kleiman, Kurt G. Hammerle, "Patent Infringement in Outer Space in light of 35 U.S.C. § 105: Following the White Rabbit down the Rabbit Loophole", 17 B.U. J. SCI. & TECH. L. 202 (2011

52 Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the

During the negotiations of the IGA, several definitions were proposed to define unambiguously the term "intellectual property rights". The definition given in Article 2 of the Convention establishing the World Intellectual Property Organization (WIPO) was retained.[54]

Article 21 of the Inter-governmental Agreement talks about intellectual property rights aboard the space station and is particularly focused on patent protection. The International Space Station is divided into modules, or elements, each of which is under the jurisdiction and control of a participating nation .Under Article 21 of the Inter-governmental Agreement, each module is the territory of the state to which the module is registered for purposes of intellectual property law.[55] Moreover, while recognizing that disclosure requirements for obtaining patents vary from state to state, Article 21 forbids Partner States from imposing the procedural requirements concerning the secrecy of patents on nationals of other states. Lastly, Article 21 forbids recovery of damages for infringement in multiple ESA member states for intellectual property created in an ESA element.[56]Article 21 therefore reflects the transposition of national law to outer space.[57]

The Space Station Agreement is the latest multilateral agreement that addresses the issue of private property rights in space. It is a landmark cooperation between the contracting nations as it articulates two

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Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, Jan. 29, 1998, 1998 UST. LEXIS 212

53 Art. 21, Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, Jan. 29, 1998, 1998 UST. LEXIS 212

54 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

55 Art. 21, Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, Jan. 29, 1998, 1998 UST. LEXIS 212

56 Christopher Miles, *Assessing the Need for an International Patent Regime for Inventions in Outer Space*, 11 TUL. J. TECH. & INTELL. PROP. 59 2008

57 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

fundamental principles- firstly, despite the lack of territoriality on which terrestrial intellectual property rights are based, there is a right to protection of intellectual property in outer space and secondly, the parties to the Agreement are presently content to extend quasi-territorial jurisdiction to objects under their direct control in outer space without having to adopt a universal intellectual property regime for outer space.[58]

R. Oosterlinck in his seminal piece *'The Intergovernmental Space Station Agreement and Intellectual Property Rights'* notes*:*

> *"The whole fiction of Art. 21 is based on the registration of space objects in application of Art. VIII of the Outer Space Treaty. Some authors give an attributive character to the registration, thereby admitting that through registration of a space object by a State, laws of that State could be applicable on that space object. A similar approach has been used for ships and aircraft whereby the registration determines to some extent the applicable law. The rationale behind this approach is that since ships and aircraft are moving from one State to another, the legal status would change continuously. This approach, however, is debatable for objects launched into outer space since contrary to what is the case for ships and aircraft; an object in outer space does not cross any frontiers. But, according to others, the registration is only declaratory in that the legal status on the space object or personnel thereof is not altered by the launching into outer space of this object."*[59]

PART 3: INTERNATIONAL CO-OPERATION

3.1. WIPO's Contribution and Commitment

World Intellectual Property Organization is an intergovernmental organization and one of the specialized agencies of the United Nations system of organizations. WIPO is responsible for the promotion of the protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with

58 Christopher Miles, *Assessing the Need for an International Patent Regime for Inventions in Outer Space*, 11 TUL. J. TECH. & INTELL. PROP. 59 2008

59 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

other international organizations, and for the administration of various treaties dealing with intellectual property.[60]

The Program and Budget of WIPO for the 1996-97 biennium [document AB/XXVI/2, Item 03(11)] mandates:

> "*The International Bureau will study, prepare, convene and service a meeting of consultants in each year of the biennium to study, the desirability and feasibility of adopting rules and/or recommending principles, common to all countries and interested inter-governmental organizations, for the intellectual property protection of inventions and literary and artistic works which were created or are used in outer space."* [61]

To implement this mandate, the International Bureau of WIPO submitted, in April 1996, an outline of questions to experts in this area. After receiving opinions of the experts in the field, the International Bureau prepared a draft study.

In July 1999, a Workshop on Intellectual Property Rights in Space was held in conjunction with the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). The recommendations made by the Workshop were amended and adopted by the plenary of the Conference. The recommendations noted that due to increased participation of private sector in space related activities, issues of intellectual property protection in this sector have gained prominence. This must be taken care of in the form of by harmonizing international intellectual property standards and legislation relating to intellectual property rights in outer space with a view to enhance international coordination. It noted that in this context it becomes important to examine issues like extraterritorial application of national intellectual property legislations to outer space ownership and use of intellectual property rights developed in space activities; and contract and licensing rules. The

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60 *Issue paper prepared by the International Bureau of WIPO*, INTELLECTUAL PROPERTY AND SPACE ACTIVITIES, April 2004 (available at : http://www.wipo.int/export/sites/www/patentlaw/en/developments/pdf/ip_space.pdf)

61 *Discussion paper prepared by the International Bureau,* MEETING OF CONSULTANTS ON INVENTIONS MADE OR USED IN OUTER SPACE, Geneva, March 6 and 7, 1997

recommendations enjoined all States to provide appropriate protection of intellectual property rights in space-related technology, and also facilitate educational activities in relation to it.[62]

While recognizing the importance of intellectual property for the exploration of outer space, questions have been raised as to whether the protection and enforcement of intellectual property rights may conflict with the said fundamental principles in terms of access to knowledge and information derived from space activities and in terms of the freedom of exploration and use of outer space[63].

Another issue relates to the interpretation of Article 5ter of the Paris Convention for the Protection of Industrial Property, which provides for certain limitations of the exclusive rights conferred by a patent in the public interest in order to guarantee the freedom of transport (doctrine of temporary presence). Whether the doctrine of temporary presence also applies to space objects, for example, in the case of the transport of patented articles to or from a Space Station through a launching site in a foreign country is an issue that needs clarification. WIPO is actively engaged in finding solutions to this wide arena of questions that have come forward in relation to the nexus between IPR and outer space. The last paragraph of Article 21 of Inter-Governmental Agreement of ISS concerns the temporary presence doctrine. This doctrine provides for certain limitations on exclusive rights in cases where ships, aircraft or land vehicles temporarily visit foreign countries. Such· temporary presence is not considered an infringement of the rights of a patentee. This doctrine is based on Article 5 of the Paris Convention to which all Partner States are a party. In fact, section 6 of Art. 21 of the IGA rephrases the wording of Article 5 by explicitly including space objects as "aircraft or land vehicles".[64]

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62 *Discussion paper prepared by the International Bureau,* MEETING OF CONSULTANTS ON INVENTIONS MADE OR USED IN OUTER SPACE, Geneva, March 6 and 7, 1997

63 *Discussion paper prepared by the International Bureau,* MEETING OF CONSULTANTS ON INVENTIONS MADE OR USED IN OUTER SPACE, Geneva, March 6 and 7, 1997

64 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

3.2. Need for an International Agreement governing patents in outer space

Since outer space is not subject to national appropriation, it is difficult to accept that national laws can be applicable to activities carried out in outer space. To reconcile this, the fiction that these activities are taking place on earth has been introduced so as to transpose territorial IPR laws into outer space. For the time being this approach will be sufficient but when activities in outer space increase it will be necessary to look for other solutions.[65] One solution would be to draft a Convention on "Intellectual Property - Space Law". Under this Convention, outer space would be considered as one territory for which patents would exist and whose effect would be limited to outer space. [66]

CONCLUSION:

The development of the International Space Station ushers in a new era of exploitative private utilisation of space, where the major products of space use are intellectual inventions. To assure private investment in space development, it is necessary that these products are sufficiently protected from third party interference through efficient intellectual property protections. Nevertheless, regard should also be had to the status of space as a *"common area"* which has been fundamental to the understanding of space use since the very beginning.[67]

The uncertainty in the patent regime governing outer space has made it not conducive to attract the much-needed private investment for activities in outer space including the Moon and other celestial bodies. Walking from the Japanese module to the European Space Agency module on the International Space Station may dramatically alter the legal rights sought to be enforced. This state of affairs undermines the legal certainty required by industry to invest in space activities. Thus, industry itself recognises a need to *"achieve harmonisation of the use of [intellectual property rights] in space activities … It seems the only hope for such a situation would be some sort of*

65 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

66 R. Oosterlinck, *The Intergovernmental Space Station Agreement and Intellectual Property Rights*, 17 J. SPACE L. 23 1989

67 Tim Smith, "A Phantom Menace? Patents and the Communal Status of Space", 34 Victoria University of Wellington Law Review 545 (2003)

international legislation … a uniform legislation must undoubtedly be proposed on a global level."[68] The individualistic national responses have been a major source of contention in the patent regime.[69] The piecemeal efforts by the international community in this regard, haven't led to much progress either. Therefore, this is high time for having an international framework to govern the patent regime in outer space.

68 B L Smith "An Industry Perspective on Space-Related Intellectual Property Rights" (September 1995) 15 *ECSL News (*available at http://esapub.esrin.esa.it/ecsl/ecsl15/ecsl15sm.htm)

69 Sandeepa Bhat B, *Inventions in Outer Space: Need for Reconsideration of the Patent Regime*, 36 J. SPACE L. 1 2010

POST-REGISTRATION QUALITY CONTROL MEASURES FOR GEOGRAPHICAL INDICATIONS IN INDIA: THE WAY FORWARD

Tania Singla[*]

Presently, almost all of the Indian Geographical Indications ("GIs") awareness campaigns seem to be focused only on the registration of GI products. Even though branding and promotion of Indian GI products has started receiving some attention both on the domestic and international front, the legal and policy discourse on GIs have, at least until now, completely ignored the introduction of quality-control and maintenance measures for goods produced under the GI tag. In this background, this paper focuses on the relevance and necessity of post-registration quality control measures, along with the de minimis *statutory and policy framework currently in place to account for quality in GIs. Towards these ends, the paper identifies the problem involving the interface between GIs as a collective intellectual property right and its linkages with quality and product/process standards. Few short case studies are presented to highlight the various combinations of statutory and self-voluntary mechanisms associated with different GIs products in India. It then briefly discusses the experiences of two comparative jurisdictions — the United States and the European Union — regarding the GI regulatory framework and corresponding quality control. It then analyzes the status quo in India and discusses the limitations of Indian GI law in this regard. The conclusion comments on the reasons for failure of the Indian GI regime regarding quality control and suggests that decentralized mechanisms for different GIs yet governed by a uniform statutory framework is the way forward.*

What do Banarasi Sarees, Darjeeling Tea and Kashmir Pashmina have in common, beyond the fact that they are familiar to every Indian and even consumers abroad? All three of these have been registered as GIs, which means that no producer outside the demarcated and identified geographical regions of Benaras, Darjeeling or Kashmir can market these goods under these specific or deceptively similar labels. In India, the GI protection is available through a *sui generis* system operationalized through legislation exclusively dealing with GI protection viz. the Geographical Indications of Goods (Registration & Protection) Act, 1999 ("**GI Act**"),

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followed by the Geographical Indications of Goods (Registration and Protection) Rules, 2002 ("**GI Rules**")[1]. The Intellectual Property Office (GI registry) in India has been able to successfully register around 215 Indian GIs involving agricultural products, handicrafts and manufactured products.[2] An equal number of applications for Indian and foreign GIs are still pending registration.[3]

The definition of 'geographical indication' adopted under the GI Act states: "…an indication which identifies such goods as *agricultural goods, natural goods or manufactured goods* as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a *given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin*…"[4] But under the Act, names that do not denote the name of a country or region or locality can be considered for registration as long as they relate to a specific geographical area and are used in relation to goods originating from that region[5].

This provides the leeway for extending protection to other famous symbols such as "Alphonso mangoes"[6] and "Basmati Rice"[7].

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1 Bishwajit Dhar and Kasturi Das, *Operationalization of GI Protection in India: A Preliminary Exploration,* (March 11, 2015), http://www2.warwick.ac.uk/fac/soc/csgr/events/conferences/ conference2007/papers/das.pdf .

2 Official Website of the Controller General of Patents, Designs and Trademarks, (March 11, 2015), http://ipindia.nic.in/girindia/treasures_protected/registered_GI_12June2014.pdf.

3 Official Website of the Controller General of Patents, Designs and Trademarks, (March 11, 2015), http://ipindia.nic.in/girindia/application_Status/Annexure7_Applications_Pending_StateWise_15December2014.pdf and http://ipindia.nic.in/girindia/application_Status/Annexure8_Applications_NonIndianPending_15December.pdf.

4 Geographical Indications Act, S. 2(e) (1999).

5 *Id.*, *see* Explanation.

6 Alphonso Mango has not been formally registered as a GI but the application for its registration is currently pending before the GI registry. *See* Official Website of the Controller General of Patents, Designs and Trademarks, (March 11, 2015), http://ipindiaservices.gov.in/GirPublic/ViewApplicationDetails.aspx?AppNo=139&Index=1.

7 Basmati has not been formally registered as a GI but the application for its registration is currently pending before the GI registry. *See* Official Website of the Controller General of Patents, Designs and Trademarks, (March 11, 2015), http://ipindiaservices.gov.in/GirPublic/ViewApplicationDetails.aspx?AppNo=145&Index=1.

Presently, almost all of the GI awareness campaigns seem to be focused only on the registration of GI products[8]. Even though branding and promotion of GI products has started receiving some attention both on the domestic and international front[9], the Indian Government and the surrounding legal discourse on Indian GIs have, at least until now, completely ignored the introduction of quality-control and maintenance measures for goods produced under the GI tag. Quality assurance is central to the success of the Indian GI regime and the next section seeks to fortify the claim by identifying how the consumer perception of quality has a sharp influence on the economics of GIs.

A. THE QUALITY FACTOR IN THE GI EXPERIENCE

Geographical Indications are not merely indications of source; in their simplest form, they also signal the link between the "a product's reputation, quality or characteristic and its geographical origin"[10]. In the market, consumers often find it difficult to assess product quality without search or experience and normally possess limited information about the valuable attributes of the product[11]. The producers, on the other hand, possess full information about the product attributes and quality relative to other goods in the market[12], resulting in the natural chaos of asymmetrical information. The information asymmetry negatively impacts the market: it can be, and often is, exploited by certain producers who may be inclined to lower the quality of the goods supplied[13]. Shapiro's model on reputation (1982 and 1983) suggests that reputation operates as a signaling device which transmits information about a certain quality to the consumers, thereby reducing the consumer's search costs[14]. GIs also operate similarly

8 Vrinda Kulkarni and Viren Honda, *Pre- and Post- Geographical Indications Measures for Handicrafts in India*, J. INTELL. PROP. RTS., 463, 467 (2011).

9 Winson Thomas, *Economic Competitiveness through Geographic Indications*, INT'L J. OF MKTG. FIN. SERV. MGMT. RES., 182, 183 (2013).

10 Cerkia Bramley, *A Review of the Socio-Economic Impact of Geographical Indications: Considerations for the Developing World*, WIPO WORLDWIDE SYMPOSIUM ON GEOGRAPHICAL INDICATIONS, 54 (2011).

11 *Id.* at 55.

12 *Id.*

13 *Id.*

14 Carl Shapiro, *Premiums to High Quality Products as Returns to Reputation*, Q. J. ECON. (1983),

and therefore, have a direct impact on consumer welfare by leading them towards goods of a higher quality[15].

The core objective of obtaining a GI registration is to create a distinct reputation for the product so that consumers will eventually move from the point of brand awareness to brand preference, where they are willing to pay a higher price ("premium") for the brand product and, at the same time, refuse to accept other alternatives[16]. Surveys conducted by UNCTAD among EU consumers show that for GI registered agricultural products, customers are willing to pay a premium of 10–15 % whereas for non-agricultural products, the premium could range anywhere between 5-10%[17]. Most consumers expect GI products to be of a higher quality than non-GI products[18]. Empirical studies also show that in case of foodstuffs, labelling of GIs does not operate as the most important quality attribute[19]. Instead, consumers value food safety inspection more[20]. Consumer perception regarding GI labels has important economic implications as it directly influences consumer preferences for the product[21]. Louriero and McCluskey (2000) found that Spanish consumers were willing to pay a premium for fresh meat products labeled with a Protected Geographical Indication (PGI) label, Galician Veal, which is regulated by the European

15 Thierry Coulet, *Assessing the Economic Impact of GI Protection*, in EXTENDING THE PROTECTION OF GEOGRAPHICAL INDICATIONS: CASE STUDIES OF AGRICULTURAL PRODUCTS IN AFRICA, 101, 103 (Michael Blakeney et al. eds., 2013); Luisa Menapace and Gian Carlo Moschini, *Quality Certification by Geographical Indications, Trademarks and Firm Reputation*, EUR. REV. AGRIC. ECON. 539, 540 (2012).

16 Amarjit Singh, *The Role of Collective Marks, Certification Marks and Geographical Indications*, (March 11, 2015), http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=81475.

17 Shashikant Bagade and Deven Mehta, *Geographical Indications in India: Hitherto and Challenges*, RES. J. PHARMA. BIO. CHEM. SCI., 1225, 1230 (2014)

18 Ramona Tuber, Corinne Langinier and Sven Andersons, *The Economics of Geographical Indications: Welfare Implications*, Working paper #2011-6, (March 11, 2015) http://ageconsearch.umn.edu/bitstream/103262/2/Lit-Overview_GI_Paper_04_2011.pdf.

19 Wim Verbeke, *Food Quality Policies and Consumer Interests in the EU* in CONSUMER ATTITUDES TO FOOD QUALITY PRODUCTS: EMPHASIS ON SOUTHERN EUROPE 13, 17 (Marija Klopčič, Abele Kuipers and J. F. Hocquette eds., 2013).

20 *Id.* at 18.

21 John Crespi and Stephan Marette, *Some Economic Implications of Public Labeling*, (March 11, 2015), http://www.farmfoundation.org/projects/03-65CrespiMarettepaper.htm.

Union because the certification is directly associated with food safety in addition to quality[22].

The association of reputation with quality is not unique to GIs; trademarks also operate as useful information tools for consumers by allowing them to equate the quality of a good with a distinct brand and business, thereby reducing consumer confusion and their search costs[23]. This creates a natural incentive for every business to produce and maintain a "consistent quality over time and across consumers"[24] thereby encouraging the firm to invest in quality (as expected by the customers) and brand value lest it loses customer loyalty[25]. Unfortunately, the incentive to maintain quality does not naturally arise in the case of GIs, which being a public good, is prone to the classic "free-rider" problem[26]. GIs represent not only the quality of the product but also the *collective* reputation of the association or group of producers in a certain region (who participate in the production of the GI product) and which is carried forward through tradition over time[27]. A realistic assessment of "club assets"[28] such as the GI requires us to take into account and tackle the possibility of free-riding by 'insiders'[29] i.e. by individual producers within the collective group of producers who legally produce a GI product (as a registered proprietor or

22 Loureiro, M. L. and McCluskey, J. J., *Assessing Consumer Response to Protected Geographical Identification Labeling*, AGRI. BUS., 309, 314 (2000).

23 GianCarlo Moschini, Luisa Menapace and Daniel Pick, *Geographical Indications and the Competitive Provision of Quality in Agricultural Markets*, AM. J. AGRI. ECON., 794, 794 (2008).

24 William Landes and Richard Posner, *The Economics of Trademark Law*, TRADEMARK REP. 267, 289 (1988).

25 The Economics of Trademarks in *Brands And Reputation in the Global Marketplace*, World Intellectual property Report (2013), WIPO Economics and Statistics Series, (March 11, 2015) , http://www.wipo.int/edocs/pubdocs/en/intproperty/944/wipo_pub_944_2013.pdf

26 Lina Monten, *Geographical Indications of Origin: Should They Be Protected and Why? An Analysis of the Issue from the U.S. and EU Perspectives*, Santa Clara High Tech. L. J., 315, 335 (2005).

27 Bramley,*supra* note 10,at 56 ; Moschini and Menapace, *supra* note 23, at 800.

28 Daniela Benavente, *The Economics of Geographical Indications: GIs modeled as Club Assets*, Graduate Institute of International and Development Studies Working Paper No: 10/2010 , (March 11, 2015), http://graduateinstitute.ch/files/live/sites/iheid/files/sites/international_economics/shared/international_economics/publications/working%20papers/2010/HEIDWP10-2010.pdf

29 *Id.*

authorized user) but have succumbed to producing inferior quality of goods in a bid for higher profit margins. Given that effect, unlike trademarks, the regulation structures for GIs need to be supported by an independent and customized legislative framework which must account not only for verification of source but also quality certification to ensure that the GI products ascribe to the registered specifications.

B. THE INDIAN GI EXPERIENCE: CASE STUDIES

It is often suggested that the collective-action problem within the GI with regard to quality maintenance can be alleviated to a certain extent by "some regulatory process that polices the quality and technique among producers in the GI".[30] Despite the stakes involved for consumers, not much attention has been paid to post-registration quality control measures exclusively for Indian GIs. It is worthy of note that at the time of application under the GI Act, a combined reading of Section 11(2) and Form GI-1 suggests the applicant group should identify an 'Inspection Body', which is responsible for quality control of the products within the GI.[31]. The Inspection Body may be strengthened with an independent neutral agency to maintain the quality standards post-registration of GI[32]. However, the framework has not proved to be effective as there is no statutory liability imposed on Inspection bodies in the event they fail to conduct periodic verification of compliance with the product specifications of the associated GI[33]. At present, if other authorized users or consumers want to hold an authorized user (who has been diluting the quality of the GI product) accountable, the only course of action available is under Section 27 for cancellation of the registration of the authorized user[34].

The need for an preventive regulatory mechanism to ensure and control quality for Indian GI products is accentuated by reports of popular

30 Kal Raustiala and Stephen R. Munzer, *The Global Struggle over Geographical Indications*, EUR. J. INT'L L., 335, 360 (2007).

31 Form GI-1, Application for Registration of a Geographical Indication under Section 11 of the Indian GI Act and Rule 23 of the GI Rules, (March 11, 2015), http://ipindia.nic.in/girindia/Form_GI1.pdf.

32 Draft Manual of Geographical Indications Practice and Procedure, (March 11, 2015), http://ipindia.nic.in/manuals/DraftManual_GI_PracticeProcedure_31March2011.pdf.

33 There is no legislation at present that governs the qualifications and the nature of responsibilities of Inspection bodies and the liability that may be imposed on such bodies for failure to act in accordance with their responsibilities.

34 Geographical Indications Act, S. 27 (1999).

GI products losing their markets to adulterated products sold by 'insiders' . Further, cheap raw material imports are aiding the sale of inferior-quality products, which are handed to the unaware consumer in the name of the GI-registered product and at premium prices. This section focuses on certain Indian GI products where 'free-riding' by insiders has become the norm and has negative impact on the market for other the producers within the GI.

I. Banaras Sarees and Brocades

A popular item among the womenfolk in India, Banarasi Sarees have enjoyed a distinguished reputation since the Mughal era on account of their fine silk, gold or silver brocade or *zari* and opulent embroidery[35]. To protect the authenticity of the weaving tradition of the Banarasi sarees, nine organizations - Banaras Bunkar Samiti , Human Welfare Association (HWA), joint director industries (eastern zone), director of handlooms and textiles Uttar Pradesh Handloom Fabrics Marketing Cooperative Federation, Eastern UP Exporters Association (EUPEA), Banarasi Vastra Udyog Sangh, Banaras Hath Kargha Vikas Samiti and Adarsh Silk Bunkar Sahkari Samiti filed the application for GI registration in 2007 and finally secured the GI in 2009[36]. Despite the industry's reputation both in the domestic and international markets[37], the weavers have been facing stiff competition from cheap silk fabric imports from China and Surat[38]. To

35 *Dream of Weaving: Study & Documentation of Banaras Sarees and Brocades*, A Project of the Textiles Committee and the Human Welfare Association, (March 11, 2015), http://textilescommittee.nic.in/writereaddata/files/banaras.pdf.

36 Binay Singh, *Banarasi sarees get copyright cover*, THE ECONOMIC TIMES, September 18, 2009, (March 11, 2015), http://articles.economictimes.indiatimes.com/2009-09-18/news/28410802_1_gi-status-banarasi-silk-gi-registration.

37 Statistics suggest that the annual turnover of the industry is Rs. 30,000 million (approx.$500 million). *See* Amit Basole, *Authenticity, Innovation and the Geographical Indication in an Artisanal Industry: The Case of the Banarasi Sari*, Working Paper 2014-09, Department of Economics, University of Massachusetts, (March 11, 2015), http://repec.umb.edu/RePEc/files/2014_09.pdf.

38 Amit Basole, *Knowledge, Gender and Production Relations in India's Informal Economy*, Dissertation submitted to the University of Massachusetts, February 2012, (March 11, 2015), http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1530&context=open_access_dissertations; Shefalee Vasudev, *Ground Report: The Banarasi Bind*, LIVEMINT, November 23, 2013, (March 11, 2015), http://www.livemint.com/Leisure/5h1lnyORjhtn9Pr0Z4wiXL/Ground-Report--The-Banaras-bind.html.

compete, studies show that master weavers and artisans have resorted to strategies such as passing-off synthetic fibers for silk and power loom fabric as handloom and compromising on the quality of dyes and designs[39]. The penetration of the markets by these inferior quality products has reached a point where the ordinary Indian consumer can no longer be sure of the quality of the Banarasi saree she is buying raising transaction costs for the consumer and unfortunately, reduced sales for the artisans of the industry[40].

Five inspection bodies were identified by the applicant group in its GI application viz. the Department of Handlooms (Government of Uttar Pradesh), the Development Commissioner (Handlooms), The Weavers' Service Centre, Master Weavers' Self-Regulation and the Textiles Committee. The role of the Textiles Committee is arguably the most prominent; it is a statutory body whose main objective is "*to ensure the quality of textiles and textile machinery both for internal consumption and export purposes*"[41]. The Export Promotion and Quality Assurance division of the Textiles Committee is an Accredited Inspection body in India under **ISO 17020**[42] and provides a host of inspection services for importers/traders/exporters/manufacturers for textiles[43]. The Textile Committee is also the implementation agency for the Handloom Mark, which certifies that the product being purchased is genuinely handwoven[44]. This presents a picture quite similar to the European Model where the certification bodies for agricultural produce are accredited in accordance with European standard EN 45011 or ISO/IEC Guide 65[45].

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39 Amit Basole, *Authenticity, Innovation and the Geographical Indication in an Artisanal Industry: The Case of the Banarasi Sari*, Working Paper 2014-09, Department of Economics, University of Massachusetts, (March 11, 2015), http://repec.umb.edu/RePEc/files/2014_09.pdf.

40 Vasudev, *supra* note 18.

41 The Textiles Committee Official Website, (March 11, 2015), http://textilescommittee.nic.in/about-us/about-us

42 ISO 17020 standard specifies general criterion for the competence of impartial bodies performing inspection. It also specifies independence criteria of inspection bodies.

43 Textiles Committee Official Website, (March 11, 2015), http://textilescommittee.nic.in/services/services-0.

44 The Textiles Committee Official Website, (March 11, 2015), http://textilescommittee.nic.in/about-us/handloom-mark .

45 Susanne Padel, *The European Regulatory Framework and its implementation in Influencing Organic Inspection and Certification Systems in the EU*, March 2010, (March 11, 2015), http://certcost.org/Lib/CERTCOST/Deliverable/D14_D11.pdf.

However, until now, all of the Textiles Committee's efforts in the sphere of GIs, though laudable, have been geared entirely towards facilitating the GI registration of unique textile products of the country[46]. There are no special quality or process certification schemes currently in place for GI products, including for those products for which it is listed as an Inspection body, to ascertain whether the GI products are actually being produced in accordance with the registered specifications. At present, the Banarasi Saree operates with a multitude of certification marks such as the Silk Mark and the Handloom Mark[47]. The Silk Mark Organization of India (SMOI), the registered owner of the SILK Mark, recently introduced a high security nano-particle-embedded fusion label as a mark of purity for Banarasi Silk to enable customers to verify the authenticity of the source of silk[48]. Despite being aware of the negative impact of inferior quality sarees, stakeholders in the industry are unable to take action due to the complex market dynamics involved[49].

II. The Kashmir Pashmina

One among a rich variety of craft items associated with Kashmir, the Kashmir *Pashmina* refers to the extremely soft woolen fabric with fibers spun out of the Pashmina Goat called 'Capra Hiracus'[50]. It is known for its "fineness, warmth, softness, desirable aesthetic value, and timelessness in fashion"[51]. The application for GI registration of the Kashmir Pashmina was an initiative undertaken by the Craft Development Institute (CDI) to secure protection for the local artisans against the mushrooming power looms and fake *pashminas* flooding the markets. CDI only acted as a

46 The Textiles Committee Official Website, (March 11, 2015), http://textilescommittee.nic.in/services/geographical-indications.

47 Krishna Dwivedi and Souvik Bhattacharya, *Restore glory of the Banarasi Sari*, THE HINDU BUSINESS LINE, December 21, 2012, (March 11, 2015), http://www.thehindubusinessline.com/opinion/restore-glory-of-the-banarasi-sari/article4226412.ece.

48 Ajay Kumar, *Banarasi Silk gets Nano-mark of purity*, THE HINDUSTAN TIMES, May 30, 2012, (March 11, 2015), http://www.hindustantimes.com/india-news/banarsi-silk-gets-nano-mark-of-purity/article1-863590.aspx.

49 *The Protection of Geographical Indications in India: Issues and Challenges*, Briefing Paper, The Energy and Resources Institute (TERI), (March 11, 2015), http://www.teriin.org/div/briefing_paper_GI.pdf.

50 Ishrat Yaqoob et. al., *Pashmina Shawl – A Traditional Way of Making in Kashmir*, INDIAN J. TRAD. KNOW., 329, 329 (2011).

51 *Id.*

temporary registered proprietor of the GI since the GI was assigned to TAHAFUZ, a society of diverse Kashmiri artisans, as and when the latter was registered under the Societies Act[52]. The traditional weavers are under severe strain due to the machine-made Semi Pashmina Shawls and imitations of the Kashmiri brand that are being spun in Amritsar and China and sold to the innocent consumer[53].

Though at the time of application, the identification of an Inspection Body was suspended to a later time[54], the responsibility for ensuring quality control for the Kashmir Pashmina was finally handed over to the Pashmina Testing and Quality Certification Centre (PTQCC) in 2013[55]. The Kashmir Pashmina Mark (GI) will be imprinted on the shawls at the PTQCC after verification of the weaving technology, the spinning method and the genuineness of the raw materials[56]. In order to ensure greater authenticity, a micro-chip known as the Secure Fusion Authentic Label (SFAL) will be attached to the product with a unique number that can be read under infrared light[57]. The system is in a nascent stage and it might be a bit early to judge its effectiveness but as a matter of policy, it is believed to be a step in the right direction. It is quite remarkable that unlike a lot of other prominent GIs, there is no certification mark that is associated with the Kashmir *Pashmina*.

52 Form GI-1, (March 11, 2015), http://ipindiaservices.gov.in//GI_DOC/46/46%20-%20Form%20GI-1%20-%2009-12-2005.pdf.

53 Sanjiv Singh, *Geographical Indication: A Case Study of Kashmir Pashmina (Shawls)*, NEWMAN INT'L J. MULTIDISCIPLINARY STUD., 96, 100 (2014).

54 Form GI-1, *supra* note 62.

55 *J&K weaves plan to save Pashmina; Power Looms Fake*, THE INDIAN EXPRESS, July 13, 2013, (March 11, 2015), http://indianexpress.com/article/india/india-others/jk-weaves-plan-to-save-pashmina-power-looms-fake/.

56 *GI mark for handwoven pashmina shawls*, BUSINESS STANDARD, August 5, 2013, (March 11, 2015), http://www.business-standard.com/article/pti-stories/gi-mark-for-handwoven-pashmina-shawls-113080501152_1.html.

57 Masood Hussain, *Now Micro-chip Embedding into the Pashmina Shawls to Assure its Authenticity*, THE ECONOMIC TIMES, August 6, 2013, (March 11, 2015), http://articles.economictimes.indiatimes.com/2013-08-06/news/41132034_1_pashmina-shawl-farooqui-crore.

III. Darjeeling Tea

The Darjeeling tea contributes just over one percent to the total tea production in India (10.85 million kilograms of Darjeeling tea as compared to 981 million kilograms of total production)[58]. But the reputation of the Darjeeling tea remains unparalleled due to its distinctive quality and flavor and has made the region a hallmark, underscoring the fact that the incomparable quality of the tea is largely attributable to its geographical origin[59]. It has been cultivated, grown and produced in the Darjeeling district of West Bengal by the local population for over one and a half centuries and still remains one of the most coveted black teas in the world[60].

The Darjeeling Tea industry set a milestone in Indian GI history; it was the first GI to be registered in India post the enactment of the GI Act in 1999[61]. Even though the tea industry in India lies in the hands of the private sector, the Ministry of Commerce has exercised statutory control since 1933 under various enactments culminating in the Tea Act, 1953[62]. The Tea Board, a statutory authority established in 1953 under the Tea Act, has administered the use of the Darjeeling Logo to ensure that it is applied only to such Tea as has been certified by the Board as conforming to the characteristics of Darjeeling Tea[63]. The role of the Inspection Body has been entrusted by the Board to Intertek Agri Services, which provides

58 *Managing the Challenges of the Protection and Enforcement of Intellectual Property Rights*, WIPO Case Studies on Intellectual Property, (March 11, 2015), http://www.wipo.int/ipadvantage/en/details.jsp?id=2540.

59 *Id.*

60 *Id.*

61 Sudhir Ravindran and Arya Mathew, *The Protection of Geographical Indication in India – Case Study on 'Darjeeling Tea'*, Report, Property Right Alliance, (March 11, 2015), http://www.altacit.com/pdf/The%20Protection%20of%20Geographical%20Indication%20in%20India%20Case%20Study%20on%20Darjeeling%20Tea.pdf.

62 S.C. Srivasatava, *Protecting the Geographical Indication for Darjeeling Tea* in MANAGING THE CHALLENGES OF WTO PARTICIPATION: 45 CASE STUDIES, 231(Peter Gallagher, Patrick Low and Andrew Stoler eds., 2005).

63 Statement of Case, 17 October 2003, GI Registry, 240, (March 11, 2015), http://ipindiaservices.gov.in//GI_DOC/1/1%20-%20Statement%20of%20Case%20-%2017-10-2003.pdf.

overall testing and inspection expertise for agricultural commodities, foods, and related products[64].

To ensure genuineness in the exports of Darjeeling Tea, a system of certification for the authenticity of the exported Darjeeling Tea by the Board was made mandatory under the Tea Act in 2003[65]. All dealers in Darjeeling Tea are bound to enter into a licence agreement with a Tea Board on the payment of an annual licence fee and under the agreement, *inter alia*, are required to furnish information regarding production and manufacture of Darjeeling tea and its sale, through auction or otherwise[66]. On the basis of the information supplied, the Tea Board is able to track and compute the total volume of Darjeeling Tea produced and sold in a particular period[67]. Certificates of origin are then issued for export consignments under the Tea (Marketing and Distribution Control) Order, 2000, read with the Tea Act, 1953, which are to be compulsorily cross-checked at all customs checkpoints in India[68]. This ensures the sale-chain integrity of Darjeeling tea is maintained until the consignments leave the country[69]. Under this authentication process, 171 companies dealing with Darjeeling tea have registered with the Tea Board, 74 of which are producer companies and 97 trader/exporter companies[70].

The Tea Board has also registered the 'Darjeeling Logo' and the word 'Darjeeling' as Certification Trademarks, which are available for use to any dealer in Darjeeling Tea only under a licence agreement[71]. In order to monitor the legitimacy and quality of Darjeeling Tea produced by the licensees for exports *and* domestic markets, it has been provided that every licensee is required to submit a sample of the tea sold by him to the Tea

64 List of Inspection Agency Approved by the Board, Order of the Tea Board, May 6, 2005, (March 11, 2015), http://www.teaboard.gov.in/pdf/policy/List_of_Insp_Ag_under_TDEC_05.pdf.

65 Tea Marketing (Control) Order, Section 3 (2003).

66 S.C. Srivastava, *supra* note 71.

67 *Id.*

68 *Id.* at 232.

69 *Id.*

70 *Managing the Challenges of the Protection and Enforcement of Intellectual Property Rights*, WIPO Case Studies on Intellectual Property, (March 11, 2015), http://www.wipo.int/ipadvantage/en/details.jsp?id=2540.

71 Regulations Governing the Use of Darjeeling Logo Certification Marks, Rule 4, (March 11, 2015), www.teaboard.gov.in/pdf/policy/India.doc.

Board[72]. Further, the Board reserves the right to inspect, prior to and after the grant of license the premises of any licensee where tea is being processed, manufactured, packed or stored, to ensure that the standards laid down by the Proprietor are being adhered to and complied with[73].

The initiatives taken by the Tea Board in the field of monitoring and quality assurance, in collaboration with the Darjeeling Planters' Association (which is the only producers' forum in Darjeeling) are the reason why Darjeeling Tea continues to enjoy an untarnished reputation not just in India but across the globe.

IV. The Alphonso Mango Controversy

In 2014, EU had imposed a temporary ban on the import of Alphonso mangoes and four vegetables from India, causing a major upheaval in the EU-India bilateral trade ties and the Indian farmers' annual estimates of profits[74]. The decision was taken by the EU Standing Committee on Plant Health because 207 consignments of Alphonso mangoes and vegetables, which had been imported from India, were found to be contaminated by pests such as fruit flies and other quarantine pests[75]. The ban was recently lifted by the EU[76]. At present, Alphonso mangoes are not formally registered as a GI but the application is pending before the GI registry[77]. But the news of this ban has underscored the importance of quality certification for agricultural products and as a soon-to-be registered

72 *Id.*, Rule 5.2.

73 *Id.,* Rule 5.3.

74 *EU bans Indian Alphonso mangoes, 4 vegetables from May 1*, THE HINDU, April 28, 2014, (March 11, 2015), http://www.thehindu.com/news/international/world/eu-bans-indian-alphonso-mangoes-4-vegetables-from-may-1/article5956482.ece.

75 *Mango ban: India threatens to drag EU to WTO*, THE HINDU, May 2, 2014, (March 11, 2015), http://www.thehindu.com/news/mango-ban-india-threatens-to-drag-eu-to-wto/article5970369.ece.

76 Parvathi Menon, *EU lifts ban on Indian mangoes*, THE HINDU, January 21, 2015, (March 11, 2015), http://www.thehindu.com/news/national/european-union-lifts-ban-on-indian-mangoes/article6805864.ece.

77 Official Website of the Controller of Patents, Designs and Trademarks, (March 11, 2015), http://ipindiaservices.gov.in/GirPublic/ViewApplicationDetails.aspx?AppNo=139&Index=1.

GI with immense export potential[78], the Alphonso Mango certainly deserves our attention.

The mandate of inspection and certification for agricultural food products has been entrusted to Agricultural and Processed Food Products Export Development Authority (APEDA), a statutory body established by the Government of India in 1986[79]. APEDA fixes standards and specifications for agricultural products for the purpose of exports and also has powers to carry out inspection at storage houses where such products are kept to ensure quality[80]. For maintaining highest quality standards in mangoes, state-of-the-art packaging houses have been set up in major production zones to ensure a uniform quality across export consignments[81]. To account for different country requirements, APEDA has put in place internationally recognized treatment facilities like hot water treatment, vapour heat treatment and irradiation facilities at various places along the production belt[82]. These facilities are supplemented by a unique product identification system, supplemented by the traceability networking and Residue Monitoring Plan, which have been developed for consumer safety wherein APEDA can even issue a product recall in case of exigencies[83].

The Alphonso Mango, once it is registered as a GI, would need its consignments to be subject to another layer of verification of source and compliance with registered specifications. The applicant group, Dr Balakrishna Sawant Konkan Krishi Vidyapeeth (BSKKV) has stated that the BKSSV, along with the Department of Horticulture, College of Agriculture will decide on a Standards and Quality Committee which will operate as the Inspection Body and maintain high standards in the quality

78 The UK alone imports nearly 16 million mangoes every year and the market for the fruit is nearly 6 million pounds annually. *See EU bans Indian Alphonso mangoes, 4 vegetables from May 1*, THE HINDU, April 28, 2014, (March 11, 2015), http://www.thehindu.com/news/international/world/eu-bans-indian-alphonso-mangoes-4-vegetables-from-may-1/article5956482.ece.

79 APEDA Official Website, (March 11, 2015), http://apeda.gov.in/apedawebsite/about_apeda/About_apeda.htm.

80 *Id.*

81 APEDA Official Website, (March 11, 2015), http://apeda.gov.in/apedawebsite/SubHead_Products/Mango.htm.

82 *Id.*

83 *Id.*

of the mango[84]. The success of this model of self-regulation can only be assessed once the GI is registered and the Committee begins to operate.

These case studies demonstrate the disparate and scattered forms of regulations that exist in India for GI products primarily due to the lack of a formal regulatory mechanism. The next section outlines the dominant models of formal regulatory mechamisms that are currently ensuring quality control for GI products in other regions of the world.

C. REGULATORY MECHANISMS FOR GIS

At present, there are two dominant models of formal regulatory mechanisms for quality control and maintenance for GI products currently operational in different political regimes across the world: (a) European-style *sui generis* quality scheme and (b) American-style quality scheme based on certification marks. These schemes differ substantially with regard to the requirements of application and the nature of the process of certification involved.

I. European-Style *Sui Generis* Quality Scheme

The EU maintains a distinct approach and position on the issue of international protection of GIs, when compared with the US. Unlike the US, European national laws and the Community IP law recognize GI as a distinct IP right[85]. The EU has passed a number of regulations to govern the grant and operation of GIs, the most significant of which was Council Regulation 2081/92 "*on the protection of geographical indications and designations for agricultural products and foodstuffs*," and its subsequent amendments.[86] The

84 Form GI-1, (March 11, 2015), http://ipindiaservices.gov.in//GI_DOC/139/139%20-%20Form%20GI-1%20-%2022-09-2008.pdf.

85 Johann Robert Basedow and Davide Bonvicini, *The EU-US Trade Dispute on Geographical Indications: Two Scorpions in a Bottle?, (March11, 2015),* http://graduateinstitute.ch/files/live/sites/iheid/files/sites/mia/users/Imene_Ajala/public/WTO%20Seminar%202009/Basedow,_Bonvicini_-_The_EU-US_trade_dispute_on_Geographical_Indications.pdf.

86 Council Regulation 2081/92 of 14 July 1992 on the Protection of Geographical Indications and Designations of Origin for Agricultural Products and Foodstuffs, 24/07/1992, p. 1, as amended by Council Regulation 535/97 of 17 March 1997, OJ L 83, 25/03/1997, p. 3 and Council Regulation 692/2003 of 8 April 2003, 17/04/2003, p. 1; Monten, *supra* note 26.

Regulation was then repealed in 2006 and replaced by Regulation 510/2006 which is the current community legal instrument that governs the protection of geographical indications and designations of origin solely for agricultural products and foodstuffs in the European Union[87].

The EU has been careful not to sideline quality in its drive to expand geographical indication protection as is evident from current regulations in EU law which lay down stringent standards under quality schemes for guaranteeing the quality of all European agricultural products[88]. These schemes also aid the identification of products and foodstuffs that have been farmed and produced to certain specifications. , Further, the European Commission recently adopted the EU agricultural product quality policy under Regulation 1151/2012[89].

The standards under these quality schemes are enforced through competent authorities designated by Member States ("Competent authorities") responsible for official controls carried out to verify compliance with the legal requirements related to the quality schemes under Regulation 1151/2012[90]. Reports of the control activities of these Competent authorities must be included within the multi-annual and annual national control plans submitted by every Member State to the EU[91].At the time of registration of a Protected Designation of Origin ("PDO") and a Protected Geographical Indication ("PGI"), the applicant group is required to identify one or more certification bodies, which will ensure that the product specifications associated with the GI product are met before the goods are placed on the market[92]. They are required to comply with and, as from 1 May 2010 be accredited in accordance with European standard EN 45011 or ISO/IEC Guide 65[93]. The operation of the certification bodies is in turn

87 Irena Kireeva, *European Legislation on Protection of Geographical Indications: Overview of the EU Member States' Legal Framework for Protection of Geographical Indications*, (March 11, 2015), http://www.ipr2.org/storage/European_legislation_on_protection_of_GIs1011.pdf.

88 Regulation (EU) No 1151/2012 of the European Parliament and the Council on Quality Schemes for Agricultural Products and Foodstuffs, art. 1(2012).

89 Regulation (EU) No 1151/2012 of the European Parliament and of the Council on Quality Schemes for Agricultural Products and Foodstuffs, (2012).

90 *Id.,* art. 36.

91 *Id.* art. 40.

92 Kireeva, *supra* note 31.

93 *Id.*

scrutinized by the aforesaid Competent authorities[94]. Thus, a system of checks and balances has been integrated within the GI mechanism of the EU.

II. American-Style Quality Scheme based on Certification Trademarks ("**CTMs**")

Under the current US law, there is no distinct IP right available for protection for products on the basis of geographical origin[95]. The principal method by which GIs can be protected under US law is by means of a certification mark, under the aegis of the federal trademark law[96].

Even though there is no separate recognition granted to GI under the IP regime in the US, the government plays an active role in ensuring that the value of the quality associated with the certified product is not diluted due to 'insiders'. In most instances, the authority that registers and consequently, exercises control over the use of a geographical term as a certification mark is a governmental body or a body operating with governmental authorization[97]. The U.S. government has separate inspectors for various agricultural types of food and beverages in order to ensure quality maintenance and control post registration for GI certification marks[98]. Consumers and competitors are presumed to have the highest interest in maintaining accuracy and certified standards and therefore, can file an opposition or cancellation proceeding against the certification mark or bring an action in federal court where the prescribed standards are not met[99].

This overview suggests that the European and American systems represent the manifestation of two polarized philosophical approaches where the former places at the heart of the IP law the preservation of the knowledge and distinctiveness associated with traditional and cultural goods

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94 egulation 1151/2012, *supra* note 37, art. 38 and 39.

95 Bruce A. Babcock and Roxanne Clemens, *Geographical Indications and Property Rights: Protecting Value-Added Agricultural Products*, MATRIC Briefing Paper 04-MBP 7, (March 11, 2015), http://www.card.iastate.edu/publications/DBS/PDFFiles/04mbp7.pdf.

96 Inessa Shalevich, *Protection of Trademarks and Geographical Indications*, BUFF. INT. PROP. J., 67, 73 (2008).

97 *Id.*

98 *Id.*

99 *Id.*

along with the promotion of healthy competition and innovation, more so in a world that is getting increasingly globalized. The American approach focuses entirely on the objective of promoting competition and innovation and operates on a general consensus among US experts that GIs are harmful to the economy "as they are deemed to be untradeable, collective and conserve old-fashioned production methods."[100] The intent and inclination of Indian GI Act has always been closer to the European ideal than the American one; its very purpose is to ensure that the Indian traditional products achieve a distinct status such that they do not lose their commercial viability in the throes of globalization. Any formulation of a regulatory framework for the Indian scenario must not lose sight of this factor while balancing the interests of the consumers and producers of GI products.

D. CONCLUSION – WHERE WE STAND AND THE WAY AHEAD

It is not a matter of dispute that GI labels, in order to be valuable to registered producers, must be able to create value for their products. The prevailing GI regime in India borrows heavily from the regulatory framework of trademarks and consequently, it is highly producer-centric, focusing solely on the rights of the rights of the registered producers under the GI. But legitimate interests of consumers cannot, and should not, be ignored; providing quality assurance and promoting consumer welfare has been found central to the success of any GI regime across the world, especially the European model. Unfortunately, the Indian GI Act promotes neither; there are no checks and balances incorporated within the regime to ensure quality control among the GI products except perhaps Section 27 which provides for cancellation of the authorization of the user. The current GI regime has proved to be ineffective due to two reasons: *first*, at the time of enactment, the Legislature failed to consider the 'free-riding' problem among insiders and the consequent need for external quality verification and *second*, Section 27 is an extreme measure and often, other authorized users despite being aware of unfair practices do not complain due to the complex market dynamics involved.

India would do well to adopt the European approach considering that it embodies a natural flexibility to accommodate the different nature and standards of quality that may be required for different categories of

100 Basedow and Boncivini, *supra* note 16.

products. It is, however, also emphasized that the European quality control regime is at present limited to ensuring quality control only for agricultural products. Therefore, the formal regulatory mechanism for Indian GI products must possess a broader framework accounting for both agricultural and non-agricultural products. The case studies have highlighted the different mechanisms of regulation currently associated with some of the most prominent Indian GIs, showcasing a fragmented framework of quality-control structures across the country. This is viewed as an advantage rather than a handicap as GIs across the country face different issues and in order to strengthen the overall GI framework to address a diverse range of issues, a decentralized yet effective mechanism should be the way forward for every GI registered under the GI Act. However, to attain a certain degree of certainty in the nature of obligations and liability of Inspection Bodies under the GI Act, the Legislature must either consider the inclusion of a chapter on the responsibilities of Inspection bodies within the GI Act or enact a separate statute altogether for the same.

These are suggestions that hope to initiate discussion within the relevant academic circles and while there may be disagreement on whether and how these suggestions must be implemented for a regulatory mechanism, one thing is certain: a regulatory mechanism for quality control of GI products must be initiated and instituted by the Indian government without further ado.

DO YOU WANT TO KNOW A (TRADE) SECRET?—A CRITIQUE OF PRIVACY ISSUES PARAMOUNT TO TRADE SECRET LAW

Ryan Logan[*]

I. INTRODUCTION

The concept of intellectual property typically involves discussing patents, trademarks, and copyrights. These primary categories are highlighted in most law and business courses as being the only types of intellectual property. However, there is a fourth type of intellectual property, which plays a vital role for both businesses and individuals, known as trade secrets.

One purpose of protecting your intellectual property rights is to maintain a limited monopoly to garner the most economic value possible. What if it were possible to remove the "limited" aspect, and maintain the economic monopoly indefinitely? One of the strongest appeals of utilizing trade secret protection succeeds in that purpose. Trade secrets have the potential to create an indefinite, economic monopoly over a product or an invention. However, there are some strong drawbacks to following that path, which can result in a serious detriment to the trade secret holder.

In order to understand the distinctions between trade secrets and other areas of intellectual property, a basic understanding of copyright, trademark, and patent law is essential. This paper will give a brief overview of those three primary types. Subsequently, this paper will discuss the evolution of trade secret regulation, and the core aspects of trade secret law, at individual state levels and globally, followed by a discussion and critique of two key issues with trade secret law, including both reverse engineering and the "trade secret oxymoron." Finally, this paper will include three possible solutions to these primary issues, both in the conjunctive and in the alternative,

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and where trade secret law could raise future privacy concerns for individuals and companies.

II. COPYRIGHT, PATENT AND TRADEMARK EXPLAINED

Intellectual property entails all types of creations of the mind, be it artistic works, a design, an invention, symbolism or imagery, used in commerce.[1] One of the most important decisions an inventor or creator has is determining what type of intellectual property he or she possesses, and what protections he or she should pursue. Of the various options, people typically consider only copyrights, patents, and trademarks, which are all federally regulated.[2]

Congress gained power to establish both copyrights and patents through the Constitution.[3] Additionally, copyrights and patents have been codified, both in the United States Patent Act[4] and the Copyright Act of 1976.[5] Conversely, the constitution does not explicitly give Congress the power to create trademark law. Instead, trademark law has been codified and protected under the Lanham Act.[6] Each has a strong historical context for protection, going back to English law and even earlier. All three of these types of intellectual property are regulated by some federal office. The United States Copyright Office, as an extension of the Library of Congress, regulates copyrights, and the United States Patent and Trademark Office (USPTO), an independent agency, regulates patents and trademarks.

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1 *What is Intellectual Property?*, World Intellectual Property Organization, http://www.wipo.int/about-ip/en/.

2 *See* 17 U.S.C. § 101 *et seq.*; 35 U.S.C. § 101 *et seq.*; 15 U.S.C. § 1051 *et seq.*

3 U.S. Const. art. 1, § 8, cl. 8. "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." This clause, sometimes referred to as the "Copyright and Patent Clause" gives Congress distinct powers to regulate both copyrights and patents.

4 35 U.S.C. § 101 *et seq.*

5 17 U.S.C. § 101 *et seq.*

6 15 U.S.C. § 1051 *et seq.*

Copyrights generally entail: literary works; musical works; dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; sound records; and architectural works.[7] However, merely creating one of these works is not enough. For a copyright to be enforceable, it must be an original, creative work fixed in a tangible medium of expression.[8] Originality requires some minimal degree of creativity (sometimes referred to as having a "low modicum of creativity"), "possess[ing] some creative spark, 'no matter how crude, humble, or obvious'"[9]; fixed requires it to be in a tangible form; and expression is the creation of the mind that the copyright protects. The expression is the person's creative work, captured in the tangible form (for example the lyrics of a song, or the words of a book).

The longevity of a copyright is typically, for an individual, the life of the individual, plus seventy years after his or her death.[10] Though someone can license or transfer their rights to another, the extent of this protection does have a definite end, and thus, a limited, economic monopoly exists. One important aspect about copyrights is that a copyright arises as soon as it is created, without any necessity to register them. However, registration of a copyright is the only way in which a person can claim and exert their rights against those who misappropriate or illegally use their work.[11] Additionally, registration of a copyright establishes prima facie evidence that the copyright is valid.[12] However, while a registered copyright conveys protection

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7 17 U.S.C. § 102.

8 Id.

9 *Feist Publications, Inc. v. Rural Telephone Service Company, Inc.*, 499 U.S. 340, 345 (1991).

10 17 U.S.C. § 302. The law also determines the length of time for a joint work, in which the copyright endures for a term consisting of the last surviving author and then 70 years after the last surviving author's death. Additionally, for works determined to be "anonymous works, pseudonymous works, and works made for hire," the duration of the copyright is either ninety-five years from the year of its first publication, or 120 years from the year of its creation, whichever expires first.

11 *Copyright Basics*, Copyright, United States Copyright Office (May 2012), http://www.copyright.gov/circs/circ1.pdf. "Before an infringement suit may be filed in court, registration is necessary for works of U.S. origin."

12 *Copyright Basics*, Copyright, United States Copyright Office (May 2012), http://www.copyright.gov/circs/circ1.pdf. " If made before or within five

over a wide array of authorships (be it music, literature, or even sculptures), there still remains a limited economic monopoly in the copyrighted work.

Patents, on the other hand, are limited to a "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[13] Additionally, a patent must be novel, non-obvious, and useful.[14] Generally speaking, being "novel" means that no one else has already created or patented the invention. "Non-obvious" aims to restrict patents to inventions of subject matter where "as a whole [the subject matter] would [not] have been obvious at the time the invention was made to a person having ordinary skill in the art to which the claimed invention pertains."[15] "Useful" means that an invention operates for a specific purpose, and accomplishes that purpose. The level of usefulness does not need to be significant, just merely operative.

The purview of patents includes utility, design, and plant patents, but the aspect of "first to file" grants only to those who first submit their applications the ability to maintain the limited, economic monopoly. This monopoly is time regulated, such that a utility or plant patent only exists for twenty years from when the patent is filed, and a design patent only exists for fourteen years from when the patent is granted. Once these time limits are exhausted, the patented invention goes into the public domain, and anyone can utilize and duplicate the invention. Of primary importance is that if someone fails to register his or her patent within one year of public disclosure, he or she will lose the ability to patent the invention, and that invention lapses into the public domain. Thus, federal registration is the key to maintaining the limited, economic monopoly.

Finally, trademarks, which are regulated by the same agency as patents, provide for protection of a "word, phrase, symbol and/or

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years of publication, registration will establish prima facie evidence in court of the validity of the copyright and of the facts stated in the certificate."

13 35 U.S.C. §101.

14 35 USC § 102-104.

15 5 U.S.C. § 103.

design that identifies and distinguishes the source of the goods of one party from those of others."[16] The number of things that can be trademarked ranges from the "McDonald's ™ Arch" image to even a trademark of a color, such as "John Deere Green ™." While federal registration is not required, various benefits exist, much like copyright law, when someone successfully registers a trademark. Primary among them is that registration notifies the public of an ownership claim, creates a prima facie presumption of validity, and allows for the exclusive use of that mark in commerce.[17]

However, there are various levels of trademarks in terms of uniqueness and distinctiveness, and what level a trademark is determined to be can influence the immediate protections afforded the mark. These levels include: fanciful, arbitrary, suggestive, descriptive, and generic. A fanciful trademark generally involves a made up word, such as "Exxon ™" for gasoline, to identify a good. An arbitrary trademark uses an existing word that typically is not associated with that product, for example Apple ™ selling computers. A suggestive mark will suggest to the consumer what the product does, such as Greyhound for bus transportation. A suggestive mark is distinguished from a descriptive mark in that it "requires imagination, thought and perception to determine the nature of the goods or services in question."[18] In the example of Greyhound ™ for bus transportation, the viewer of the trademark must make a mental leap to recognize the relationship between greyhounds (the dogs) running and a transportation company (moving between locations). Each of these three, fanciful, arbitrary, and suggestive, are considered prima facie legitimate, and so long as another entity is not using the mark in commerce, each will be afforded protection.

However, a descriptive mark, such as "Chick-Fri" for fried chicken mix, generally describes some portion of the good. These types of marks need to acquire a "secondary meaning"[19] in order to

16 15 U.S.C. § 1127.

17 15 U.S.C. § 1057.

18 Intellectual Property Law Dictionary § IV:1-S-10.

19 Annie Hiaring, *Proof of Distinctiveness and Secondary Meaning of Trademark or Service Mark*,22 Am. Jur. Proof of Facts 3d, 691 (updated April 2014). A mark can be proven to have acquired a second meaning by its association with a specific

gain the status and protection from trademark law. The final type, a generic mark, is afforded no protection, and generally states the product being sold. An example of a generic trademark is using the word bread to sell bread.

One of the biggest problems a company or individual must combat is having a trademark become generic. For a mark to become generic, the public's view of the product must not be separated from the meaning. To allow further protection of the mark would be like granting a monopoly in the product itself, not the word.[20] An example of a mark that has been genericized is "escalator." Originally trademarked by the Otis Elevator Company, the word escalator is now a generic term to describe escalators. To only allow Otis Elevator Company to use the word escalator would grant a monopoly on that product (the escalator), requiring other companies to find different words to describe the same device. However, by proper policing and regulation, a company can try to avoid genericide.

Federal registration allows a company to maintain its trademark and the economic monopoly, reaping the benefits of both goodwill and brand recognition in the marketplace. Trademarks, unlike patents and copyrights, have the possibility of creating an indefinite (in terms of time) economic monopoly, since a trademark will not lapse unless someone stops paying to maintain it, or it is no longer being used in commerce (sometimes referred to as being abandoned). For example, the oldest trademark still in use in the United States was registered in 1884.[21] The practical nature, however, is that most trademarks do not last indefinitely, and most either fall out of use naturally, or are abandoned intentionally.

As evidenced above, the three primary types of intellectual property govern most types of inventions, creations, and identifiers

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product. The proof required is fact specified, and can range "from showing extensive use of a mark over time to promulgating market surveys demonstrating that a term, product shape, or label design that has a primary, descriptive meaning has also acquired a 'secondary meaning' to the public as a trademark."

20 Intellectual Property Law Dictionary § IV:1-G-1.

21 *See* Word Mark: Samson, Serial number 70011210.

commonly used in the marketplace. Each form is individually protected by regulations and laws, controlled either by the federal court system or an independent agency. However, for each to obtain adequate protection, registration is necessary. While these channels are options for an individual who wishes to maintain some limited, economic monopoly, there is another option, trade secret law, which could result in an unlimited, economic monopoly for the creator of the intellectual property.

III. Trade Secret Law Distinguished

The question remains of, why use a trade secret? Trade secret law can be viewed as filling the gap where other types of intellectual property does not afford protection. While there are specific criteria to obtain a copyright, patent, or trademark, a trade secret may be something that, on its own, is not able to obtain a patent, copyright, or trademark. Generally speaking, trade secret law would not conflict with trademark law, since trademark protection stems from commercial recognition, and company reputation, to sell a product. However, trademark law may be utilized in protecting a particular aspect of a trade secreted product. There are possible combinations of all types of intellectual property. For example, a trade secret can be utilized regarding the "process" and not the product itself, even though the product may be patented, the instructions copyrighted, and the brand name trademarked.

One of the most important aspects of intellectual property is determining which channel to pursue when you come up with an idea. Even if another channel (copyright, patent, or trademark) exists, the channel of claiming a trade secret is an often overlooked option. A trade secret is "any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others."[22] Unlike copyrights, patents, and trademarks, trade secrets have been left to the states to regulate.[23]

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22 Restatement (Third) of Unfair Competition § 39 (1995).

23 Kurt M. Saunders, *Can you keep a (trade) secret? – The Pennsylvania Uniform Trade Secrets Act*, 75 Pa. B.A. Q. 139, 139 (2004).

The seminal case regarding what entity regulates trade secrets was decided in *Kewanee Oil Co. v. Bicron Corp.*[24] The case led to a holding of 6-2, with Justice Powell abstaining, favoring the States' rights to regulate trade secrets. In summary, Kewanee Oil Company, an Ohio corporation, developed a process to create and grow crystals useful in detecting ionizing radiation after spending nearly $1 million.[25] Multiple former employees of Kewanee Oil left the company, forming and/or joining Bicron Corp., which started creating the same crystal.[26] Kewanee Oil sued for misappropriation, stemming from, as a condition of employment, that the former employees could not disclose the confidential information they had obtained while working at Kewanee Oil.[27] The district court granted a permanent injunction against Bicron using Kewanee's trade secrets, however, the Court of Appeals for the Sixth Circuit held that the trade secret laws of Ohio were pre-empted by federal patent laws.[28] Thus, the Supreme Court of the United States granted certiorari regarding the issue of "whether state trade secret protection is pre-empted by operation of the federal patent law."[29] Lower courts had reached different conclusions on this question, and thus the Supreme Court took the case to rule ultimately on the matter.[30] Though the case decided the issue of preemption of trade secret law, it first references key aspects that still hold true to trade secret law today.

First, while the crux of trade secret law is privacy, one is allowed to disclose the secret to another, if that disclosure is done in confidence and under an obligation for the new person to keep it secret.[31] This obligation can be accomplished in a number of ways, including nondisclosure agreements, licensing deals, and noncompete agreements. Thus, disclosure to an employee or manufacturer, typically regarded as a licensee, is permitted, so long as some measure is in place to prevent accidental or improper disclosure.

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24 *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).
25 *Id.* at 473.
26 *Id.*
27 *Id.* 473-474
28 *Id.* at 474
29 *Id.* at 472.
30 *Id.*
31 *Id.* at 475

Second, the case discussed the primary cause of action in a trade secret suit. This cause of action is misappropriation, which occurs when an unauthorized use of a trade secret, which has been entrusted to an individual, is improperly revealed.[32] Third, to further distinguish trade secrets from patents, the court mentions that only minimal novelty is required.[33] Whereas novelty is one of the key aspects in issuing a patent, minimal novelty is a less substantial burden to meet for a trade secret. Finally, the court mentioned the limited scope of other forms of intellectual property, stating "the subject matter of a patent is limited to a 'process, machine, manufacture, or composition of matter, or… improvement thereof.'"[34] This limited scope is nonexistent for trade secrets, or at least is not as concretely defined, leaving room for interpretation.

In addition to outlining some key aspects of trade secret law which separate it from other types of intellectual property, *Kewanee Oil* answers the important question of who currently regulates trade secret law and the rationale for keeping trade secrets distinct. The Supreme Court's rationale for both upholding and distinguishing trade secret law stems from the holders' rights of an independent, limited monopoly which all forms of intellectual property law provide.[35] They realized that allowing regulation by the states would be not a hindrance in accomplishing the full purposes and objectives of Congress through the enactment of patent law.[36] Thus, the two laws could coexist.

Furthermore, the court recognized that a discovery that may fall outside of the scope of patent law "does not destroy the value of the discovery to one who makes it, or advantage the competitor who by unfair means, or as the beneficiary of a broken faith, obtains the desired knowledge without himself paying the price in labor, money, or machines expended by the discover."[37] By realizing that non-patentable discoveries maintain value, the Supreme Court ultimately

32 *Id.*
33 *Id.* at 476.
34 *Id.*
35 *Id.* at 485-87.
36 *Id.* at 479.
37 *Id.* at 482.

allowed for the ability to trade secret creations and ideas beyond the scope of the other types of intellectual property.

Additionally, because Congress had been silent on regulating trade secret law, the Supreme Court felt that the proper position was to allow the states make and regulate their own trade secret laws.[38] Overall, "trade secret law promotes the sharing of knowledge, and the efficient operation of industry,"[39] and further allows individuals another option to obtain economic benefits from their creations.

While *Kewanee Oil* may have established what entity regulates trade secrets, it did not establish any concrete standards for states to follow. Thus, a uniform code was written and published by the Uniform Law Commission in 1979, and amended in 1985, called "The Uniform Trade Secrets Act." The Uniform Trade Secrets Act (UTSA)[40] tries to provide a framework that each state could adopt. Currently, forty seven states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands have all adopted some version of the UTSA.[41]

The purpose of the UTSA was to codify common law principles, particularly in distinguishing trade secrets from patents. As such, the UTSA lays out specific concepts and sections, each serving the purpose of furthering the goal of protecting trade secrets. One of the key sections of the UTSA is the section on injunctive relief. As adopted in some form or fashion by most states, injunctive relief may arise when actual or threatened misappropriation occurs, and will persist until the trade secret ceases to exist.[42] In addition, the injunction can be continued to eliminate commercial advantage for a reasonable period of time after the trade secret ceases to exist

38 *Id.* at 493.

39 *Id.*

40 *Trade Secrets Acts*, Uniform Law Commission the National Conference on Commissioners on Uniform State Laws, http://www.uniformlaws.org/Act.aspx?title=Trade%20Secrets%20Act.

41 While 47 states have currently adopted some version of the UTSA, New York, North Carolina and Massachusetts have their own ways to protect trade secrets.

42 Unif. Trade Secrets Act § 2(a) (amended 1985).

because of misappropriation.[43] Currently, this period of time following trade secret cessation is determined by the court. However, further guidelines should be put in place to statutorily define the length of the continued injunction, as will be discussed later in this paper.

Another important aspect of the UTSA is the damages that someone can seek following misappropriation of a trade secret. These damages include both actual loss and unjust enrichment caused by the misappropriation.[44] Furthermore, exemplary damages are available if willful and malicious misappropriation occurs. An award of attorney's fees is only permitted when: a claim of misappropriation is made in bad faith, a motion to terminate an injunction is made or resisted in bad faith, or if willful and malicious misappropriation occurs.[45] However, a claim of misappropriation has a statute of limitations length of three years from the point on which the misappropriation was realized or should have been realized.[46] This statute of limitations, as is common with many causes of action, serves the purpose of not creating unlimited protections for trade secret owners.

Finally, the UTSA requires a decree of secrecy of court proceedings. This section dictates that a court:

> [s]hall preserve the secrecy of an alleged trade secret by *reasonable means*, which may include granting *protective orders* in connection with discovery proceedings, hold *in-camera hearings*, *sealing the records* of the action, and *ordering any person involved in the litigation not to disclose an alleged trade secret* without prior court approval.[47] (Emphasis added)

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43 *Id.*

44 Unif. Trade Secrets Act § 3(a) (amended 1985).

45 Unif. Trade Secrets Act § 4 (amended 1985). In addition to willful and malicious misappropriation, this section applies to both bad faith claims of misappropriation and bad faith resistance of an injunction.

46 Unif. Trade Secrets Act § 8 (amended 1985).

47 Unif. Trade Secrets Act § 5 (amended 1985). The official comments to the UTSA also reference the necessity to restrict disclosures and/or appoint disinterested experts to hear secret information and report those conclusions to the court.

While this section provides for some protections, it does not address all possible solutions. While the phrase "may include" is used, well defined, statutory measures are necessary to assure complete protection.

One key aspect of the UTSA is to protect against misappropriation. Misappropriation can be summarized and defined as the acquisition of someone else's trade secret through improper means.[48] This rather amorphous definition is further explained by defining the word improper. Improper, according to the drafters, "includes, but is not limited to, theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy or espionage through electronic or other means."[49] As stated, the UTSA attempts to protect against improper means, but there are proper means of discovering a trade secret[50]. One of the focuses of this paper is to emphasize the need to create limited protections against even proper acquisitions.

However, to better protect trade secret holders, the federal government adopted the Economic Espionage Act of 1996, which maintains provisions and consequences for theft and misappropriations of trade secrets.[51] The act specifically lays out federal punishments for individuals who misappropriate or steal another's trade secret. This is a federal punishment for misappropriation, even though trade secret law is left to the states to govern. Chief among these punishments is the possibility of a fine, imprisonment, or both.[52] Most states have also enacted criminal penalties for misappropriation or theft of trade secrets.[53]

48 Unif. Trade Secrets Act § 1 (amended 1985).

49 *Id.*

50 Unif. Trade Secrets Act § 1, Cmt. 1 (amended 1985). These means include: discovery by independent invention, discovery by reverse engineering, discovery under a license from the owner of the trade secret, observation of the item in public use or on public display, and obtaining the trade secret from published literature

51 18 U.S.C. § 1831 *et seq.*

52 *Id.* at § 1832(a)

53 *See* 18 Pa.C.S.A. § 3930.

IV. VARIOUS APPROACHES TO TRADE SECRET LAW—INDIVIDUAL STATES AND GLOBALLY

Pennsylvania, like most of the forty seven states who have adopted the UTSA, tracks the act almost identically. Currently, the enacted statute provides for injunctive, monetary, and potentially attorney's fees as relief.[54] In addition, the enacted statutes still require "secrecy" of all parties involved in the matter.[55] As stated, not all states have enacted the UTSA. New York, for example, has no applicable statute, and instead relies on common law to regulate trade secrets.[56] Though New York has not codified any of their common law, the basic definitions of a trade secret, as well as the available remedies, are similar to the UTSA. These similarities are to be expected, since the goal of the UTSA was to codify common law. Furthermore, North Carolina, like New York, has a separate process in which it regulates trade secrets. Adopted as the North Carolina Trade Secrets Protection Act, the act provides similar remedies and damages for trade secret holders.[57] Though North Carolina may have adopted an independent act for trade secret regulation, the purpose of all the protections is to protect the holder from improper acquisitions. Regardless of which state the trade secret holder is in, the time period to bring a lawsuit (i.e. the statute of limitations) is almost universally three years.

The point of distinguishing between how different states determine and regulate trade secrets is to show that though similarities in protections may exist, there is no specific or even well-established "best answer" to the question. Overall, if all the states have adopted the same component parts, either through adoption of the UTSA, individual state acts, or merely common law principles, those principles should be adopted federally, and allow for federal regulation to avoid any discrepancies that may arise state to state. Thus, since the purpose of each state's protection is to afford relief to a trade secret holder whose trade secret has been misappropriated,

54 12 Pa.C.S.A. §§ 5303, 5304, and 5305.

55 12 Pa.C.S.A. § 5306.

56 *Trade Secrets Law in New York*, Digital Media Law Project (May 6, 2008), http://www.dmlp.org/legal-guide/new-york/trade-secrets-law-new-york.

57 N.C.G.S.A. § 66-152 *et seq.*

federal regulation would allow for an easier and more concrete way to establish this effect.

Take, for example, a company who sells products throughout the country, or even globally. Each state may have different core requirements through alterations in the adoption of the UTSA, or different common law principles that govern. Leaving trade secret law to be decided by the states creates the possibility of inconsistency between the states, and disadvantages individuals and companies who would have to bring different lawsuits, in different states, under different rules. Federal regulation would diminish these issues. However, trade secret issues are not only present in the United States, but can exist globally, particularly for "famous" or well-known products, such as Coca Cola.

Global regulation of trade secrets is governed by regulations enacted by WIPO (the World Intellectual Property Organization). While WIPO acknowledges that the conditions for the information to be considered a trade secret is different country to country, there are some general standards which have been referenced in Article 39 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).[58] Generally speaking, they include:

(1) The information must be secret;

(2) It must have commercial value because it is secret; and

(3) It must have been subject to reasonable steps by the rightful holder of the information to keep it secret.[59]

Though not exactly mirroring the UTSA, or common law principles of various states, WIPO's overall basis for maintaining a trade secret is essentially the same. Thus, it would be reasonable to create a federal version of these principles, so that trade secret protection not only covers creations within the country, but also for global entities.

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58 World Intellectual Property Organization, *How are trade secrets protected??,* http://www.wipo.int/sme/en/ip_business/trade_secrets/protection.htm.

59 *Id.*

V. TRADE SECRET AND REVERSE ENGINEERING

As stated above, reverse engineering is deemed a "proper" means of acquiring someone's trade secret.[60] Reverse engineering, as defined by the court in *Kewanee Oil*, is accomplished "by starting with the known product and working backward to divine the process which aided in its development or manufacture."[61] In simpler terms, reverse engineering is taking something apart to find out what it is made of. However, reverse engineering must be accomplished through fair and honest means, in that the acquisition of the product pre-reverse engineering must be lawful (i.e. the product was not stolen or misappropriated).[62]

Defining reverse engineering is easier than applying it in specific cases. For example, Coca Cola has maintained a trade secret in the recipe for its soda since the end of the nineteenth century.[63] As required by the Food and Drug administration[64], Coca Cola must place on its label the ingredients used while making the soda. Does knowing the ingredients of the soda mean that Coca Cola has forfeited its trade secret? Knowing the ingredients alone should not warrant trade secret cessation. However, under the rule from *Kewanee Oil*, does it not assume that starting with the known product (the soda) and working backward to divine the process (adding the ingredients together) which aided in its development or manufacture (the end result is soda), is a successful reverse engineer?

To put it simply, the answer should be, and most likely would be, no. A trade secret should not be considered completely reverse engineered merely because one of the constituent parts is known. In the previous example, the ingredients on the label of the soda *may* represent all of the ingredients that go into processing. However, Coca Cola may have ingredients that are not listed on the bottle.

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60 Unif. Trade Secrets Act § 1, Cmt. 1 (amended 1985).

61 *Kewanee Oil* at 476.

62 Unif. Trade Secrets Act § 1, Cmt. 1 (amended 1985).

63 *The Chronicle of Coca-Cola: A Global Business*, The Coca-Cola Company (Jan. 1, 2012), http://www.coca-colacompany.com/history/the-chronicle-of-coca-cola-a-global-business.

64 21 U.S.C. **§ 1 *et seq.***

Additionally, Coca Cola may have a specific ingredient that they purchase from a particular part of the world. Thus, the general ingredients are not the only important ingredients; other factors can be critical in determining commercial value. These factors could include: the process of mixing and adding the ingredients, the exact amount of each ingredient added and even the storage, bottling, or "aging" processes of certain aspects, each of which could attribute to the specific trade secret. Certain courts applying the UTSA have referenced the idea that "the more difficult, time consuming, and costly it would be to develop the product, the less likely it can be considered to be 'reverse engineerable.'"[65] Thus, the more steps that go into making the product, the less likely reverse engineering is possible.

Thus, the law should adopt a federally regulated plan that allows for parting and parceling out the various components that make up the end product, so as to provide various layers of protection to a trade secret holder. The "part and parcel" approach would allow Coca Cola to admit that, while their ingredients are now known, that is not the true essence of what separates them from, for example, RC Cola, or even Pepsi. This approach also helps to defend misappropriation lawsuits, because the amount of disclosure an individual or company would have to make at trial would be less, since the different components can be separated from one another.

There would be a legitimate argument that there should be no protections afforded to those individuals who have their trade secrets successfully reverse engineered, simply because utilizing a trade secret, and not another channel of intellectual property, has them assuming the risk of not having federally established protections against reverse engineering. By assuming the risk of utilizing the channel of a trade secret, a company or individual would be alerting their competition, and those skilled in the field, at a chance to duplicate and replicate their invention through proper means. If successful, there would be no penalty to use, create, and sell that product in the marketplace.

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65 Kurt M. Saunders, *Can you keep a (trade) secret? – The Pennsylvania Uniform Trade Secrets Act*, 75 Pa. B.A. Q. 139, 146 (2004).

While this is true, the core question of "what does it mean to successfully reverse engineer something?" is still prevalent. Unless proven by some extrinsic evidence, a company or individual be unlikely to admit the product or item was successfully reverse engineered. Instead, an individual or company would claim that there were other aspects not contemplated by the reverse engineer. By allowing an individual to claim component parts of the trade secret, so long as one component was still secret, the trade secret could be regarded as still intact. In the Coca Cola example, admission of even the exact location of where they purchase their ingredients would then not reveal the true core of the trade secret, which is the amalgamation of *all* the parts.

VI. THE TRADE SECRET OXYMORON

The operating factor behind maintaining a trade secret is that it is kept secret. However, to protect against a claim of misappropriation, you have to admit or disclose your trade secret; thus, the "trade secret oxymoron." As mentioned above, misappropriation lawsuits are handled in the state courts, under the state's specific trade secret laws. These lawsuits generally start from the same point-- whether or not a trade secret exists to be misappropriated.[66] Initially, the burden is on the trade secret owner to prove both that a trade secret exists and someone misappropriated it.[67] Thus, the crux of the problem. How can someone meet this burden of proof, and still maintain a trade secret, if the trade secret needs to be disclosed?

By requiring an individual or company to disclose a trade secret to even proceed with the lawsuit contradicts the requirement of "not being generally known," since revealing the trade secret would be defeat that purpose. While the court may employ various measures to prevent public knowledge of the proceedings, the harsh reality is that information "leaking" and even disobedience of a judicial order threaten a company that wants to sue for misappropriation. The necessity to create a system that allows for a

66 *Id.*
67 *Id.*

presumption of validity, much like patents, copyrights, and trademarks, needs to take effect, in order to maintain the integrity of trade secret law.

One of the curious aspects of trade secret misappropriation is that, generally speaking, the basis of these claims relies on a wrongdoing that is distinct from trade secret law itself.[68] For example, a breach of contract claim may exist where two parties have contracted to maintain secrecy and someone has either disclosed the secret intentionally or inadvertently. Thus contract law may govern the remedies a party may seek. The necessity to regulate misappropriation claims within the purview of trade secret law should be realized. Furthermore, juries decide most misappropriation claims. Though the jury may be instructed to keep the proceedings secret, accidental or even intentional disclosure by a juror can, potentially, keep a company or individual constantly in the court system, suing for misappropriation claims. Not only would this cause problems for the holder, but it would also backup the court system with constant claims regarding the same trade secret.

Regulations need to be enacted, through an independent agency better equipped to both keep the trade secret confidential and with the expertise of handling intellectual property disputes, to protect the individual holder and "proper" reverse engineers of someone's trade secret. Thus, while there are judicial remedies for misappropriation of an individual's trade secret, the purpose of the trade secret is to establish an indefinite economic monopoly in which the amount of profit or economic advantage available is substantially higher than any damages a court can enforce. Concrete laws need to be enacted to establish these remedies.

68 Michael Risch, *Why do we have trade secrets?*, 11 Marq. Intell. Prop. L. Rev. 1, 3 (2007). "The basis for these claims is that trade secret misappropriation relies for the most part on wrongdoing that is independent of any "trade secret law," relying instead, for example, on breach of contract or trespass claim.

VII. SUMMARY OF POSSIBLE SOLUTIONS FOR TRADE SECRET ISSUES

It is necessary to develop feasible and reasonable measures to both protect trade secrets, but not detract from other forms of intellectual property. As such, one possible solution to both the privacy situation, and also trade secret litigation in general, is to establish federal, statutory regulation. Currently, as mentioned above, trade secret law is left to the purview of the states. If Congress were to federally adopt either the Uniform Trade Secrets Act or some other statutes, Congress could establish, and nationally regulate, how trade secrets are handled. Additionally, federal regulation could provide an option to register one's trade secret, under a secrecy order. These secrecy orders could be controlled by the already existing USPTO (United States Patent and Trademark Office), or Congress could give power to a separate agency that handles trade secrets only. The Patent and Trademark office already has experience with both providing, and requiring secrecy orders for certain patents. By allowing both registration, and having a specialized agency with prior knowledge not only of trade secrets, but intellectual property in general, would provide for a more efficient litigation process.

However, as with other types of intellectual property, registration would not be mandatory. If someone felt that his or her trade secret would be fine without registration, he or she would still have that option to not register. However, registering a trade secret could provide a statutory, prima facie presumption of legitimacy, and provide for an easier chance of bringing and succeeding in a trade secret lawsuit (must like copyright, patent and trademark law). As it sits now, to successfully bring a trade secret lawsuit, a company or individual claiming their trade secret has been misappropriated must establish a trade secret existed to begin with. Having a statutory presumption of a legitimate trade secret would not only allow for less disclosure in a possible public record, but would also establish the basis for a successful lawsuit.

In addition to having a statutory presumption, registration of one's trade secret would allow adjudicative reviews by agency officials who are experienced in dealing with intellectual property claims.

Currently, patent litigation regarding who owns the patent occurs within the USPTO, and is decided by the Patent Trial and Appeal Board. This board's sole purpose is to decide on issues from who filed first, to whether or not the patent successfully meets the criteria of non-obvious, useful, and novel. Thus, by creating an independent entity to adjudicate trade secret disputes, the necessity to bring in outside sources would be minimized. As with all types of agency actions, the parties would then have the option to appeal any decision to the United States Court of Appeals, but the trade secrets would still have an increased level of protection, because the number of people privy to the appellate proceedings could be kept minimal. Either by holding statutorily mandated in-camera reviews, or closed sessions hearing and appeals within the agency itself, the holder's trade secret is more likely to remain confidential.

This solution addresses not only the issue of the "trade secret oxymoron," but also the issues of proper acquisition. Creating by statute various rules and regulations that must be followed would allow both for increased knowledge of the extent of one's protections, but also peace of mind of not having to worry about accidental leaking of information, or even intentional leaking of information from a trial setting.

The next two possible solutions can either be read conjunctively with, or separate to the necessity to federally regulate. If read in the conjunctive, the maximum protections of all types of intellectual property would be created.

The next possible solution to the trade secret issues would be to create a funnel into other types of intellectual property. If someone's trade secret was "successfully" reverse engineered, the ability, after public disclosure of the reverse engineered secret, to funnel into protections afforded other types of intellectual property may be beneficial. For example, a trade secret regarding a formula, or process, may have the ability to be funneled into patent, or even copyright. Courts currently, as mentioned above, have the power to continue an injunction, even if a trade secret has ceased to exist, in order to decrease commercial advantage. By both establishing federal regulation, and creating statutory time limits, the necessity of bringing

a lawsuit in the hopes of proving misappropriation, would be obsolete. The statute, and possibly the respective governing agency, would have the ability to decide the length of time following successful reverse engineering by another party, or even accidental public disclosure, for a company to maintain independent dominion over their trade secret, while knowing the eventuality of it moving into the public domain. At the very least, it would provide for some time period to maximize sole usage of their trade secret, while still promoting and encouraging reverse engineering so that no monopoly exists on a particular product or formula.

There would be possible pushback to this approach because one purpose of utilizing trade secret law is to avoid the time limit in which other forms of intellectual property are effective. If the law effectively gave someone the ability to "have their cake and eat it too," it would erode the other types of intellectual property. By allowing an intellectual property owner to maintain a trade secret after it has been disclosed to the public may prompt everyone to "risk" using a trade secret initially, knowing they have the "safety net" of further protections if the trade secret is disclosed. However, this type of erosion can be legislatively determined, and statutorily regulated.

Take for example a copyright. A person's "copyright" arises as soon as it is created. Thus, if someone were to lose their "trade secret" status, they would still have the ability to copyright their work. The true issue would be with an invention or product that could have been patented. If the trade secret had been in existence longer than a patent would have afforded sole ownership and commercial advantage, granting someone an extended period of time beyond the maximum of a patent would not be "fair" or equitable.

However, this truly is a legislative matter, and thus, the agency that regulates a trade secret would need to set the period of time for both inventions that would still have a remaining "patent life" and those that would not. If there could be some consensus as to the period of time following a trade secret disclosure, the "funneling" action would be just one possible solution

A third possible solution would be to "part and parcel" trade secrets, as mentioned above, into their respective parts. Currently, patents can be obtained not only for the overall device, but any constituent part that also meets patent criteria. As such, having multiple trade secrets would solve potential inadvertent disclosures or misappropriations. As mentioned above in section IV, the recipe for Coca Cola is considered a trade secret. Each of the different aspects making the soda, from the specific ingredients, to the cooking process, and even storage and bottling process should be regarded as separate components, each worthy of their own protections. Thus, if we "part and parceled" trade secrets, protecting individual aspects of a product, the product could have layers of protection, instead of just the blanket "it's a trade secret" statement as its protection.

Courts may be reluctant to pursue, or even follow, this type of utilization. Currently, reverse engineering is a reality of doing business and selling products to the public. Various companies make minor tweaks to inventions to obtain their own patents, and thus create their own limited, economic monopolies. Encouraging persons to reverse engineer furthers the goals of the economy to find and establish legitimate advancements, and be rewarded for those successes.[69] Thus, while the "part and parcel" approach may sound good, courts may be discouraged from allowing an individual to maintain dominion of a trade secret merely because they hold one of the possibly hundreds of component parts a trade secret entails.

While this counter argument is legitimate, it ignores the key fact that even if something was successfully reverse engineered, a trade secret holder is unlikely to admit the success, unless some other extrinsic evidence can prove that all the component parts have been duplicated. Furthermore, it ignores the possibility that two individuals can have the same trade secret. As it currently sits, there is no regulation preventing two people from have the same, legitimate trade secret. These two companies would probably be in competition with each other, and thus, would try to disprove, or at least reveal the other company's trade secret to maintain their own advantages. The ability to reveal only those parts which have been successfully

69 *Kewanee Oil* at 480.

engineered, and still maintain the secrecy in the remaining parts, provides protection to the holder while also encourages economic and technological advancements.

VIII. WHERE IS TRADE SECRET LAW GOING?

This section merely presents a few possible issues that are both present today, and could become evident in the future. The first issue is that the laws will be playing "catch-up." As with most statutes that involve intellectual property, technologies are advancing faster than the law is realizing. With the dawning of more efficient and advanced technology, the problems that arise with reverse engineering could, potentially, exponentially increase. As it currently sits, the ability to reverse engineer a formula, at least to discover the general ingredients, is extremely plausible through procedures like spectroscopy and spectral analysis. As technology expands and advances, the scope of these types of scientific advances are only going to increase. Thus, protections need to be contemplated as different advancements occur, otherwise those who should be afforded protection may lose all types of protection.

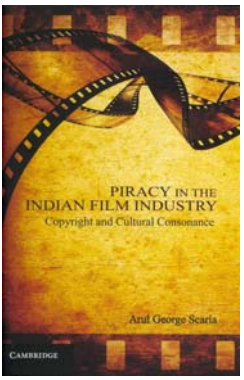
Conversely, though the law may be playing catch-up, too much regulation of other forms of intellectual property may result in erosion in the areas of copyright, trademark, and patents. If someone feels they would rather risk having their invention be successfully reverse engineered than limiting the amount of time they could receive an economic monopoly, the necessity of copyrights, patents, and trademarks may diminish. Furthermore, erosion of other forms of intellectual property can result in fewer advancements occurring, with people feeling that they have no avenue of recourse when their inventions or creations are being subjected to the public domain.

The erosion of other intellectual property also arises from illegal sources. With the advent of the technological age, hacking, as well as technological manipulation, is a serious problem. Though the current laws protect against improper misappropriation, these protections are only effective when the "misappropriator" is recognizable and traceable. Hacking, as well as anonymous "bugging" of various technologies, create serious problems that the law needs to

address, but has yet to effectively curb, when finding someone who does the "bugging" or the person who performs the hack is almost untraceable.

Finally, with the advancements in medical technology, there is a question of whether or not biological trade secrets could exist. Particularly with the advances in genomic sequencing, would it be possible to trade secret your DNA so that your susceptibility or resiliency towards different diseases and viruses is your intellectual property that you could then license out? While trade secret law may be implicated, should another, separate channel of intellectual property be created strictly regarding biological developments, or can it be encompassed in the already existing channels? Public policy, and public interest, would dictate that any advancement for the health of others should be within the public domain. The counterargument to this public interest requirement is that pharmaceutical companies already manipulate and monopolize certain drugs that, if generic and in the public domain, could be both less expensive and extremely beneficial for people.

Thus, overall, the areas of both trade secret law and intellectual property in general, are evolving. Futuristic problems that the original drafters of the various acts could not foresee are already in existence, or will exist in the near recent future. Consequently, concrete laws are necessary to protect the integrity of intellectual property, and to afford intellectual property owners the maximum protections possible for their independent creations.



PIRACY IN THE INDIAN FILM NDUSTRY- COPYRIGHT AND CULTURAL CONSONANCE- ARUL GEORGE SCARIA

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Prof. V.C.Vivekanandan[*]

Indian Film industry celebrated its centenary year in 2013 marking the first silent film released in 1913 – Raja Harischandra - barely three years after DW Griffith released the first Hollywood film. The legal enactments in India followed soon on this dream factory with the Indian Cinematograph Act of 1918. Soon followed the 1927 Cinematographic Commission, empowered by the Governor-General of India to 'consider whether it is desirable that any steps should be taken to encourage the exhibition of films produced within the British Empire generally and the production and exhibition of Indian films in particular'… Interestingly in its summary of the commission one finds what is called at that point ' Piracy of films' with a complaint form from Mr. Alex Hague of Pathé, India, a subsidiary of the French studio in India regarding un-authorized import of films demanding a copyright infringement action. The Government differed on that, as the film in the complaint was unauthorized import and not a copy. Since then the dream factories of Bollywood, Kollywood, Tollywood and other woods have relentlessly produced their dream works undeterred by inflation, ars, famine or other major catastrophes- as such events themselves became the story line for the films.

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The study of films and IP interface has been dealt in the past by authors outside India notably Prof. Shubha Gosh from US, Prof. Drexel from Germany and host of others. This repertoire of research has received a compressive research based book by Dr. Arul George Scaria titled 'PIRACY IN THE INDIAN FILM INDUSTRY-COPYRIGHT AND CULTURAL CONSONANCE' published by Cambridge University Press of India. The book is an offshoot of the author's doctoral thesis at Max Plank. The book at this point could be stated as the latest and comprehensive treatment of the subject of films and copyright in India and importantly an excellent blend of analysis and empirical findings.

Dr. Arul George's work brings out the fallacies and misconceptions surrounding the piracy issues analyzed and treated in the canvas of a cultural context. In his work he elucidates the public character of information goods and its difficulty relating to the exclusivity of intangible goods in comparison to the tangible goods. Analyzing the Indian Copyright law and its evolution he records that the law had scant public discussion in its enactment and further aggravated by over reach of Judiciary in ex-parte injunctions and John Doe orders without considering the impact of such decisions. Further the author presents a comprehensive survey results done with various stakeholders of the dichotomous views of regarding piracy as against moral values and yet that of the prevalent practice of watching pirated movies calling for a deeper understanding of such a dichotomy. In his analysis of the empirical findings – the author proceeds to discus the issues of access and affordability as an input for tackling piracy. He also advocates of a graduated enforcement policy of fines to social service to imprisonment than strong-arm enforcement policies except in the case of commercial piracy. The author concludes that there cannot be any global model on solutions to film piracy and need to be worked out from the local socio-cultural context, and the need to listen to the pulse of the consumers than white-boardroom discussions. The Author makes a strong case against blind opposition to disruptive technologies and to augment the same by the industry.

The book a comprehensive blend of empiricism and legal analysis on IP and Films is a must in IP Library and serves as a good read. Also NALSAR takes an additional pride of its Alumni Dr. Arul George Scaria' latest book in recommending the same.

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