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EDITORIAi,

In the last few decades intellectual property has come to enjoy an increasingly central position in the overall legal paradigm, affecting eve • g from trade to privacy. 111 this period, the field of intellectual property la\v has also been one that has constantly been e,□olving, as it is by necessit)ı constant!)' involved in new realms and industries. It is, quite definitely, one of the fields of law that have changed the most with technological innovations, especially the tyrpe of inno, ations that pepper our current Information Age. New technologies and markets always result in new intellectual property, and surprising!),. often with entirely new applications of intellectual property law. In this volume of the journal, the selective!}, curated articles are fine indicators of the sea of possibilities and questions, intellectual propet-ty in the modern age raises.

An excellent example of this is the first paper in the journal, where Anand and Veerendra take on the tasl<. of collating and comparing the jurisprudence on trademark issues in advertisements on internet search engines, with a focus on the Google Ad Words platform. From this comparative perspective, they study the Indian jurisprudence on the matter and how it can be improved.

In the seconcl piece, Jayanti Mishra and Neha Sehgal c n jd r the perfume and fragrance industry, arguing that it is hi h tin1e that th protection *c)f* intellectual pr perty right. l1ould be e.·tcnded to include it as well. They expl t·c this is Lie [rc)m tl1e diffi r nt

perspectives of patents, copyrights and trademarks, and from a **comparative analysis of different jurisdictions.**

In the third article, Pankhuri critically analyses the law of fair use in the US from the perspective of 'appropriation art' and the consideration it has received in recent US jurisprudence. Shefocuses &om the perspectives of two crucial cases that frame the debate, engaging with the normati e and practical aspects of the issue.

In the fourth article, Saumay and Nanki have analysed the theme of standard form patents and the need for injunctive relief for patentees. They view this in light of the applicable Indian laws and attempt to drawa balance to ensure that the right does not descend into abuse **of the right.**

In the fifth article, Swapna Sundar has discussed about theissues in monetisation of IPR jn Life Sciences and has suggested thatIf the finalgoal of commercialisation is to use the marketpipelinesof successful companies to reach the relevant market research institutions should invest effort and time, in studying such commercialentities, their goals and their agenda, in formulating **commercial trategies.**

*This*volume <)f the journal also contains an essay from the field. urbhiwritescogently from the perspective of developingnations and focuses on the critical a11d grassroots question oft.heimpact of free tradeagreements on farmer's rights in developingcountries,

particularly India. She takes apart the structure of FTAs, detaiJing how their clauses directly or indirectly affect the rights of the farmers.

Our final piece is by Professor V.C. Vivekanandan who reviews and analyzes recent trends in the field of intellectual property, through his succinct and pene·trating review of recent literature in the field. Closing the issue, the book review concludes and reiterates manyr of the themes that form a common thread through this volume.

We hope, in conclusion, that every reader of this volume will enjoy and learn from the writings, as much as we, the editors did. It has been a long and winding road to the publication of this journal, but the experience and the learning has been well worth it. Of course, no project, which is this large, could possibly be undertaken by the editors alone. We would like to thank Professor V. C. Vivekanandan, for all his assistance and encouragement in helping us come out with this issue. We would also like to thank the Vice Chancellor of NALSAR, Professor Faizan Mustafa, for his continuo"L1s st.1pport. Any errors and omissions are of course, ours and ours alone.

GOOGLE ADWORDS: A LEGAL DILEMMA TESTING THE BOUNDARIES OF CONVENTIONAL TRADEMARK JURISPRUDENCE

Aman Anand & Ramkrishna Veerendra[*]

Abstract

Google 'AdWords' is Google's advertising system in which advertisers bid on certain keywords in order for their clickable ads to appear in Google's search results. Since advertisers have to pay for these clicks, Google earns revenue from such search. In fact, the AdWords program has proven to be the major contributor to Google's 66 billion dollar revenue in 2014. Now the use of trademarks as biddable keywords has been accused of constituting infringement, with owners of such marks insinuating foul play on the part of Google and its Adwords clientele. This predicament has, to a large extent, proven to be beyond the purview of the traditional articulation of trademark jurisprudence, at least as far the Indian legal system is concerned. Courts in the West have taken efforts to concretize the law on this issue and despite diverse stands being taken, have evolved certain objective prongs and constituents which would help establish a finding of trademark infringement. This paper, from a

[*] *5th Year, ILS Law College, Pune.*

critical standpoint, attempts to comparatively analyze the law relating to such alleged trademark violation in different countries, highlighting the inadequacy of the Indian precedential and statutory jurisprudence.

I. Introduction

Google via its 'AdWords' program, namely, Google's own advertising service which allows marketers to place search results for their websites on a search engine results page by paying for them. A higher Cost-Per-Click (CPC), that is, the amount a marketer is willing to pay to Google for having their advertisement displayed, a better quality score, meaning, relevance and usefulness of the ad to the searcher, will be the factors determining how higher up in the results list will their ad be placed.

The legal dispute pertaining to the AdWords program entails allegations of trademark violation by Google. Business entities/marketers assert that in response to a search query utilizing their trademark, the display of their competitors' advertisements on the same page as the organic results leads to confusion among the consumers/searchers as to source of the advertisement, capitalizing on which competitors tend to draw these potential customers away from the marketers' website and onto theirs. This is what is seen as infringement as the latter are perceived to ride on the coat-tails of the goodwill and

distinctiveness of the entity's mark, a concept articulated as "Free-Riding". Another aftermath of this alleged infringement is "Dilution", that is to say, loss of distinctiveness of the trademark, eventually rendering it a generic term. The law on these issues has been found to be indeterminate, with a number of cases trying to expound and clarify the same, resulting in diverse stands being taken.

In India, the matter of *Consim Info Pvt. Ltd* v. *Google India Pvt. Ltd.*[1] has sprung in the wake of these alleged trademark violations with the Madras High Court holding that use of trademarks in AdWords program does not amount to infringement. Cases arising in the United States such as *Playboy Enterprises Inc.* v. *Netscape Communications*[2], *800 JR Cigar* v. *GoTo.com*[3] *and Rosetta Stone Ltd.* v. *Google Inc*[4] to name a few, deal with limbs of this alleged infringement in the form of initial interest confusion, intent of the infringer and whether use of trademarks in the AdWords program falls within the traditional meaning of the term. Despite this plethora of cases, definiteness in the law, be it in the form of statutory provisions or judicial precedents, is still found to be wanting, particularly for the Indian legal system which may witness a spike in such disputes in the near foreseeable future.

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1 Consim Info Pvt. Ltd. v. Google India Pvt. Ltd. & Ors., 2013 (54) PTC 578 (Mad) [hereinafter 'Consim'].

2 Playboy Enterprises Inc. v. Netscape Communications, 354 F.3d 1020 (2004) [hereinafter 'Playboy'].

3 800 JR Cigar v. GoTo.com, 437 F. Supp. 2d 273, 278 (D.N.J. 2005) [hereinafter 'Cigar'].

4 Rosetta Stone Ltd. v. Google Inc., 676 F.3d 144 (2012) [hereinafter 'Rosetta'].

II. 'Use' of trademark qua keyword - whether infringement?

There has been a multi-faceted approach when it comes to defining and interpreting the term 'use' of a trademark in relation to internet adwords advertising wherein the moot question which eventually comes up is whether using a trademark as a keyword via a search engine's keyword suggestion tool amounts to its infringement.

A. Position of the law in the European Union

The European Court of Justice has as recently as in 2009, in the case of *Interflora Inc.* v. *Marks and Spencer Plc.*[5] has held that an internet referencing service provider which stores, as a keyword, a sign identical to a trademark and organizes the display of advertisements on the basis of that keyword does not use that sign within the meaning of Article 5(1) and (2) of the European Union Directive 89/104 (hereinafter 'Directive') and Article 9(1) of the European Union Regulation 40/94 (hereinafter 'Regulation').

Article 5 of the Directive makes provisions as to rights conferred by a trade mark while Article 9 of the Regulation encases the rights conferred by a Community trade mark. According to Article 5 (1)(a) of the Directive or Article 9 (1)(a) of the Regulation, the proprietor of a trademark is entitled to prohibit a third party from

5 Interflora Inc. v. Marks and Spencer Plc., [2013] EWHC 1291 (Ch).

using, without the consent of the proprietor of the mark, a sign identical with that mark when that use is in the course of trade, in relation to goods or services which are identical with, or similar to, those for which that trade mark is registered and affects or is liable to affect the functions of the trade mark. Similarly, Article 5 (1)(b) of the Directive along with Article 9 (1)(b) of the Regulation state that the owner of a trade mark may prohibit the unapproved / unauthorised use by any third party, in the course of trade, of any sign where, owing to the identity or similarity of the goods or services covered by the mark and sign, there exists a likelihood of confusion on the part of the public.

The court considered that use of a trademark in the course of trade can only occur "in the context of commercial activity with a view to economic advantage" which context would include, within its ambit, selection by an advertiser, of a keyword corresponding to a trademark. However, the internet referencing service provider intervenes in a different context. The latter is paid by its clients who use the trademarks of third parties in the course of trade and therefore carries out a commercial activity with a view to economic advantage. However, according to the court, this does not mean that it uses these trademarks in the context of its own commercial communications.

As pointed out in the aforementioned case, when the use of a trademark as a keyword substantially interferes with the proprietor's use of its trademark to acquire or preserve a

reputation, such use by a third party must be regarded as adversely affecting the concerned trademark's investment function. Under Article 5(1) (a), a proprietor is entitled to prevent such use of his mark. However, if such use by a third party merely obliges the proprietor to improve his efforts to acquire or preserve a reputation such use cannot then be considered infringing. Even the fact that such use may prompt some consumers to switch from goods and services bearing that trademark cannot be successfully relied upon by the proprietor.

B. Position of the law in the U.S.

1. Use of trademark as keyword-confusion among potential consumers

The United States Court of Appeals for the Ninth Circuit, in *Playboy Enterprises Inc.* v. *Netscape Communications* [6] dealt with "trademark use". In this case, PEI claimed that defendants, in conjunction with advertisers, had misappropriated the goodwill of PEI's marks by leading Internet users to competitors' websites just as West Coast video misappropriated the goodwill of Brookfield's mark. Some consumers, initially seeking PEI's sites, may have initially believed that unlabeled banner advertisements are links to PEI's sites or to sites affiliated with PEI. Once they follow the instructions to "click here," and they accessed the site, they may well have realized that they were not at a PEI-sponsored site.

6 Playboy, *supra* note 2.

However, they may have been perfectly happy to remain on the competitor's site. Therefore, since the Internet user would have reached the site because of defendants' use of PEI's mark, such use is actionable.

The court in *800 JR Cigar* v. *GoTo.com*[7] found that 'GoTo' had made "trademark use" of the JR marks in three ways:

(a) GoTo traded on the value of the marks by accepting bids from those competitors of JR desiring to pay for prominence in search results;

(b) GoTo injected itself into the marketplace by acting as a conduit to steer potential customers away from JR to JR's competitors, ranking its paid advertisers before any "natural" listings in a search results list; and

(c) Through the "Search Term Suggestion Tool," GoTo identified those of JR's marks which are effective search terms and marketed them to JR's competitors.

2. Trademark use-confined to indicating source/origin of products

The Northern District Court in New York, in the case of *Rescuecom Corp.* v. *Google*[8] ruled in favor of Google, finding that the plaintiff's

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7 Cigar, *supra* note 3.

8 Rescuecom Corp. v. Google, 562 F.3d 123, 129-31 (2d Cir. 2009) [hereinafter 'Rescuecom'].

allegations could not establish that Google's AdWords product infringed the plaintiff's trademarks because there was no allegation of any "trademark use." The Court pointed out that "a trademark use is one indicating source or origin," i.e., "placing trademarks on 'goods or services in order to pass them off as emanating from or authorized by' the trademark owner." The court emphasized that "use" needed to be alleged as a threshold matter and was separate from the "in commerce" or "likelihood of confusion" elements.

The court found that the plaintiff failed to allege a trademark use because the plaintiff made no allegation that its trademark was displayed in any of the sponsored links about which the plaintiff was concerned.

Moreover, there was no "use" because the plaintiff did not allege that the defendant's activities prevented a link to the plaintiff's website; a user who enters the trademark "Rescuecom" into Google's search engine could still go to plaintiff's website by clicking on the appropriate link on the search results page.

Finally, the court found that an "internal use" of a trademark did not amount to a "trademark use" because an "internal use" did not place the mark on any goods, containers, displays or advertisements and because such a use was not visible to the public. If defendants are only using [plaintiff's] trademark in a 'non-trademark' way - that is, in a way that does not identify the

source of a product - then trademark infringement laws do not apply.

Courts have been examining the issue as to whether trademarked terms that are used as "meta tags", namely, snippets of text that describe a webpage's content, in websites amount to "trademark use." Although most of the decisions did not give a definitive answer to this question, the United States Court of Appeals for the Ninth Circuit in *Brookfield Communications, Inc.* v. *West Coast Entertainment Corp.*[9] hinted that such use would amount to a "trademark use," analogizing using another's trademark in one's meta tags to posting a sign with another's trademark in front of one's store.

3. Google's stand on the interpretation and scope of trademark use

Google and proponents of the narrow interpretation of "trademark use" argue that there should be "no liability under the Lanham Act absent the use of a trademark in a way that identifies the products and services being advertised by the defendant." Thus, because Google doesn't use other businesses' trademarks to identify its own services, the Google AdWords Keyword Tool does not qualify as "use in commerce" under this reading of the law.

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9 Brookfield Communications, Inc. v. West Coast Entertainment Corp., 174 F.3d 1036 (1999) [hereinafter 'Brookfield'].

In contrast, businesses trying to protect their trademarks favor a much broader reading of what constitutes "use in commerce. These trademark holders argue that although Google does not use the trademarks as an identifier of its products or services, Google uses the trademarks as a product when it sells advertising to companies who want to be associated with said trademark holder. The argument for liberal interpretation ultimately reasons that because the overriding policy of trademark law is to prevent consumer confusion, the "use in commerce" definition should be interpreted flexibly enough so as to prevent that use[10].

One argument for construing "trademark use" narrowly is that an expansive interpretation may have anticompetitive effects because it permits trademark owners to erect substantial barriers to competition. According to traditional interpretations, "trademark law strikes a careful balance to ensure that genuinely deceptive (and more recently, dilutive) uses of marks, which increase consumer search costs, are prohibited, while uses to critique or compare the mark owners products and thus enhance the flow of useful information to consumers are permitted. Overprotection skews that balance by suppressing information essential to a properly functioning market. In addition, overprotection of trademarks may also infringe on the public's freedom to choose between competing products.

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10 Isaiah F. Fishman, '*Why are Competitor's Advertising Links Displayed When I Google My Product? An Analysis of Internet Search Engine Liability for Trademark Infringement*', 5 J. MARSHALL REV. INTELL. PROP. L. 447 (2006).

Yet another policy argument in favour of a narrow interpretation of the "trademark use" requirement is that a narrow interpretation strikes a better balance among the competing policies of trademark law than its broader counterpart. The ultimate purpose of trademark protection is to foster competition. This reduces consumer search costs, promotes marketplace efficiency, and enables producers to reap the benefits of their investment in product quality and business goodwill, thus providing an incentive to strive for quality. Overprotection of marks may itself impede competition. A broad interpretation would prioritize the goals of protecting the company's interest over the other interests. This defeats the purpose of trademark law. Thus, courts should interpret "trademark use" narrowly because such an interpretation meets these goals without prioritizing one policy over the others.[11]

III. Likelihood of Confusion

As per the Lanham Act, 1947 which stands as the primary federal trademark statutory law of the United States, initial interest confusion as a theory of trademark infringement is customer sophistication that creates initial interest in competitor's product. Although dispelled before the actual sale occurs, initial interest confusion impermissibly capitalizes on goodwill associated with the owner's mark.

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11 Playboy Enterprises Inc. v. Asiafocus Int'l Inc., 1998 WL 724000 at 6-7 (E.D. Va. Apr.10, 1998) [hereinafter 'Asiafocus'].

Courts in the Ninth Circuit have revived and reinvented the "initial interest confusion" doctrine, which moves the confusion analysis to before the point of sale. "Initial interest confusion" doctrine bases infringement not on consumer confusion over what is being bought, but on what is being sought. As applied to AdWords, the doctrine reasons that a consumer may enter a trademarked keyword with the intent of seeking the corresponding trademarked good or service, but he is distracted from clicking on the correct link to the trademark holder's website because the search results page includes links to websites selling similar goods or services. Instead the consumer is diverted from the trademark holder's site to one of these competing sites. Under the "initial interest confusion" doctrine, such diversion--while not an act of traditional infringement--amounts to the alleged infringer taking unfair advantage of the consumer goodwill built up by the trademark holder.

In *800-JR Cigar* v. *GoTo.com*[12], 'GoTo' put forth the argument that there would be no "likelihood of confusion" because a consumer would not be confused between JR's retail cigar services and GoTo's search engine services because they are not related. Nevertheless, the court rejected this argument reasoning that because GoTo directed consumers to goods that were sufficiently similar to JR's products, it created a relationship between it and

12 Cigar, *supra* note 3.

JR's products which would create a relationship within consumers' minds that could be confusing.

The United States Court of Appeals for the Third Circuit has found that initial interest confusion is probative of a Lanham Act violation, recognizing that without initial interest protection, an infringer could use an established mark to create confusion as to a product's source thereby receiving a 'free ride on the goodwill' of the established mark. The concern is that this "bait and switch" will influence the buying decisions of consumers in the market for the goods, effectively allowing the competitor to get its foot in the door by confusing consumers.[13]

In an attempt to approach the issue of confusion from the consumers' standpoint, the Delhi High Court in the matter of *Yahoo Inc.* v. *Akash Arora*[14] observed that "even if an individual is a sophisticated user of the internet, he might not be a sophisticated consumer of information and such a person may find his/her way to the Defendant Internet site which provides almost similar type of information as that of the Plaintiff and thereby confusion could be created in the mind of the said person who intends to visit the internet site of the Plaintiff, but, in fact reaches the internet site of the Defendant.".

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13 Cigar, *supra* note 3.

14 Yahoo Inc. v. Akash Arora & Anr. 1999 PTC (19) 201 (Delhi).

A. Knowledge and intent as factors in establishing likelihood of confusion

In determining the factor of likelihood of confusion among the consumers, courts in the United States have lent consideration to the element of intent.

Following a policy shift in 2004, Google permitted use of third-party trademarks as keywords and also introduced the 'Keyword Suggestion Tool' that suggested relevant trademarks for advertisers to bid on but precluded use of trademarks in the advertisements' text at the trademarks owner's request. At this time, Google's internal studies suggested significant source confusion among internet users when trademarks were included in the title or body of the advertisements. Google yet again amended its policy in 2009, allowing situation-specific use of trademarks in the text of advertisements and after this policy change, no record exists of any evidence suggesting that in 2009, source confusion relating to the use of trademarks in the body of an advertisement was any less significant than in 2004. Rosetta Stone contended that Google's policies concerning the use of trademarks as keywords and in ad text created not only a likelihood of confusion but also actual confusion as well, misleading Internet users into purchasing counterfeit ROSETTA STONE software. The court ultimately reasoned that it was safe to conclude that Google

intended to cause confusion in that it acted with the knowledge that confusion was likely to result from its use of the marks.[15]

As pointed out in *Brookfield Communications Inc.* v. *West Coast Entertainment Corp.*, *Playboy Enterprises Inc.* v. *Netscape Communications Corp.*, *Rosetta Stone Ltd.* v. *Google Inc.*, *Polaroid Corp.* v. *Polaroid Electronics Corp.*, *Rescuecom Corp.* v. *Google, Inc.*[16] along with a field of other case laws, in determining a likelihood of confusion, intent of the alleged infringer is a pertinent factor. A defendant's intent to confuse constitutes probative evidence of likely confusion: Courts assume that the defendant's intentions were carried out successfully.

In the case of *Playboy Enterprises, Inc.* v. *Netscape Communications Corp.*[17], the evidence did not definitively establish defendants' intent. At a minimum, however, it did suggest that defendants did nothing to prevent click-throughs that result from confusion. Moreover, they profited from such click-throughs and they did nothing to ensure that only click-throughs based on legitimate interest, as opposed to confusion, occur. Defendants did not require that advertisers identify themselves on their banner ads. Moreover, they did not label the advertisements themselves. Perhaps even more telling, defendants refused to remove the

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15 Rosetta, *supra* note 4.

16 Brookfield, *supra* note 9; Playboy, *supra* note 2; Rosetta, *supra* note 4; Polaroid Corp. v. Polaroid Electronics Corp., 287 F.2d 492, 495 (2d Cir. 1961) [hereinafter 'Polaroid']; Rescuecom, *supra* note 8.

17 Playboy, *supra* note 2.

highly-rated terms "playboy" and "playmate" from their lists of keywords, even when advertisers requested that they do so.

The above evidence suggests, at a minimum, that defendants did nothing to alleviate confusion, even when asked to do so by their advertisers, and that they profited from confusion. Although not definitive, this factor provides some evidence of an intent to confuse on the part of defendants.

B. Determining Intent: Overt Acts

The second applicable factor is the intent of the alleged infringer. The advertiser and Google both act with bad faith when using the trademark. The advertiser's bad faith is evidenced by the use of the trademark to "free-ride" on the goodwill associated with the trademark. The advertiser is using the trademark for the purpose of tricking consumers into selecting its hyperlink in place of the hyperlink of the trademark owner. Google's bad faith is evidenced by its affirmative suggestion of trademarks as keywords and the display of the advertising hyperlinks in a manner that is clearly intended to confuse the consumer. Google recently changed the highlight color of the "sponsored links" that appear above the organic search results from a pastel blue to a very pale yellow. This change is evidence that Google is hoping to disguise the

advertisements as organic search results to increase profit by confusing consumers.[18]

In *Playboy Enterprises Inc. v. Asiafocus Int'l Inc.*[19], Playboy sued Asiafocus for the infringement resulting from Asiafocus' use of the federally registered trademark's 'Playboy' ands 'Playmate' in its HTML code. District Court granted summary judgment in Playboy's favor reasoning that Asiafocus intentionally misled viewers into believing that its website was connected with or sponsored by Playboy.

C. Intention to confuse-it's relevance in a finding of trademark infringement

As opined by the Court in the case of *Brookfield Communications Inc.* v. *West Coast Entertainment Corp.*[20], the presence of intent can constitute strong evidence of confusion but the converse of this proposition is not true. Lack of intent by a defendant is largely irrelevant in determining if consumers likely will be confused as to the source of the advertisement. Intention to confuse is not required for a finding of trademark infringement; rather this factor is relevant to the extent that it bears upon the likelihood that consumers will be confused by the alleged infringer's mark or to

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18 Brookfield, *supra* note 9; Playboy, *supra* note 2; Rosetta, *supra* note 4; Polaroid, *supra* note 16; Rescuecom, *supra* note 8.

19 Asiafocus, *supra* note 11.

20 Brookfield, *supra* note 9.

the extent that a court wishes to consider it as an equitable consideration.

IV. Dilution of a trademark

Dilution of a trademark implies detriment to the distinctive character of a trademark with a reputation typically caused when the use of sign identical or similar to the mark reduces the ability of the mark to distinguish goods and services of its proprietor from those which have a different origin. Dilution contributes to the turning of a trademark into a generic term, eventually resulting in a complete loss of the ability of the mark to create an immediate association, in the minds of consumers, with a specific commercial origin.

In determining whether a term is generic, the Court, in *Filipino Yellow Pages, INC* v. *Asian Journal Publications INC*[21], has devised the "who-are-you" and "what-are-you" test. Under this test, "if the primary significance of the trademark is to describe the type of product rather than the producer, the trademark is a generic term and cannot be a valid trademark.

The "imagination test", as developed in *Zatarains, Inc.* v. *Oak Grove Smokehouse, Inc.*[22] is a second standard used by the courts to identify descriptive terms. This test seeks to measure the

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21 Filipino Yellow Pages, INC v. Asian Journal Publications INC, 198 F-3d 1143 (9th Cir, 1999).

22 Zatarains, Inc. v. Oak Grove Smokehouse, Inc, 698 F-2d 786 (5th Cir, 1983).

relationship between the actual words of the mark and the product to which they are applied. If a term requires imagination, thought and perception to reach a conclusion as to the nature of goods, it is considered a suggestive term. Alternatively, a term is descriptive if standing alone it conveys information as to the characteristics of the product.

Upon interpreting Article 5 (1) (a) of the European Union Directive 89/104 in the light of the facts in *Interflora Inc. and Interflora British Unit* v. *Marks and Spencer plc. Flowers Direct Online*[23], the Court drew the conclusion that exercise of the exclusive right of protection conferred by the trademark on the proprietor must be reserved to cases in which a third party's use of the mark or the sign adversely affects (or is likely to) the trademark's functions, particularly the origin function.

Now whether or not the origin function of the mark is adversely affected depends on the manner in which the advertisement is displayed, implying thereby that a mark's origin function is deemed to be affected if the advertisement does not enable a reasonably well-informed and observant internet user or enables him only with difficulty, to ascertain whether goods and services referred to by the advertisement originate from the proprietor of the trademark or from an undertaking economically unconnected to it, such as a competitor.

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23 Interflora Inc. and Interflora British Unit v. Marks and Spencer plc. Flowers Direct Online, [2013] EWHC 1291 (Ch) [hereinafter 'Interflora'].

In this context, the Court, in *Interflora Inc. and Interflora British Unit* v. *Marks and Spencer plc. Flowers Direct Online*[24] while taking into consideration confusion among internet users as to the source of the services which allegedly, was detrimental to the origin function (that is, the mark's function of indicating the source/origin of the goods and services) and thereby distinctiveness of the mark itself, was eventually left with deciding *"…[W]hether the selection of signs corresponding to the trade mark INTERFLORA as keywords on the internet has had such an impact on the market for flower-delivery services that the word 'Interflora' has come to designate, in the consumer's mind, any flower-delivery service."*

A. The Federal Trademark Dilution Act, 1995

The Federal Trademark Dilution Act of 1995 is a United States federal law which protects famous trademarks from uses that dilute their distinctiveness, even in the absence of any likelihood of confusion or competition.

To determine whether the defendant's use is likely to impair the distinctiveness of the plaintiff's famous mark, the Federal Trademark Dilution Act of 1995 (hereinafter, FTDA) enumerates a non-exhaustive list of six factors that are to be considered by the courts:

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24 Interflora, *supra* note 23.

In determining whether a mark or trade name is likely to cause dilution by blurring, the court may consider all relevant factors, including the following:

(a) The degree of similarity between the mark or trade name and the famous mark.

(b) The degree of inherent or acquired distinctiveness of the famous mark.

(c) The extent to which the owner of the famous mark is engaging in substantially exclusive use of the mark.

(d) The degree of recognition of the famous mark.

(e) Whether the user of the mark or trade name intended to create an association with the famous mark.

(f) Any actual association between the mark or trade name and the famous mark.

As per the United States Court of Appeals for the Fourth Circuit in the matter of *Rosetta Stone Ltd.* v. *Google, Inc.*[25], under the FTDA, Rosetta Stone must show only a likelihood of dilution and need not prove actual economic loss or reputational injury, which is how their approach shows a crisp deviation from mark and spencer.

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25 Rosetta, *supra* note 4.

B. 'Free-Riding' on the goodwill of an eminent trademark

Furthermore in EU trade mark law, unlike in the United States, dilution protection also covers a third phenomenon, namely protection against free-riding or the taking of unjustified advantage of the reputation or distinctiveness of another's trade mark. The essence of the protection against free-riding is not the protection of the trade mark proprietor against detriment to his trade mark, but rather protection of the trade mark proprietor against the infringer receiving unfair advantage from unauthorized use of the trade mark.

In *L'Oréal and Others*, the Court characterizes free-riding as a situation where a third party attempts, through the use of a sign similar to a mark with a reputation, to ride on the coat-tails of that mark in order to benefit from its power of attraction, its reputation and its prestige, and to exploit, without paying any financial compensation and without being required to make efforts of his own in that regard, the marketing effort expended by the proprietor of that mark in order to create and maintain the image of that mark, the advantage resulting from such use must be considered to be an advantage that has been unfairly taken of the distinctive character or the repute of that mark.[26]

In the case of identical or similar goods or services, the purpose of presenting a commercial alternative to the goods or services

26 L'Oréal and Others, [2009] ECR I-5185.

protected by a trade mark with a reputation should count as due cause in the context of modern marketing relying on keyword advertising on the internet. Otherwise keyword advertising using well-known third party trademarks would be as such prohibited free-riding. Such a conclusion cannot be justified in view of the need to promote undistorted competition and the possibilities of consumers to seek information about goods and services. The point with market economy is, after all, that well-informed consumers can make choices in accordance with their preferences. The Advocate General finds it inappropriate that the trade mark proprietor could prohibit such use unless he has reasons to object the ad resulting from typing of a search term corresponding to a keyword.[27]

C. Google's liability from standpoint of Indian Anti-trust law

Apart from possibly having its Adwords program regarded as a tool, which in essence is facilitating trademark infringement over the cyberspace, Google, on a global level, finds itself levelled against with accusations of having violated anti-trust laws by misusing its dominant position and resorting to anti-competitive practices in various markets. The Indian market too finds itself echoing a similar concern, as can be seen in the matter of *Eximcorp India Pvt. Ltd.* v. *Google India Pvt. Ltd.*[28], wherein Eximcorp, while accusing Google of having abused its dominant position, alleged

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27 Interflora, *supra* note 23.

28 Competition Commission of India, Case No. 68/2010.

its business practices as being discriminatory and its bidding process conducted through its Adwords program as lacking transparency. However, the Commission concluded that there was no prima facie evidence to make out a case for further investigation despite the issues directly concerning competition law. The Commission should ideally have scrutinized the matter in a greater degree, considering the notoriety of Google with its allegedly anti-competitive practices and the various litigations that are under consideration against it in other parts of the world with respect to the same.

V. Conclusion

The complications that global trademark law is facing in the wake of the Google Adwords program, finds its roots in the policy changes that Google has undergone over the last decade whereby it permitted use of trademarks in the text of advertisements and it was as a result of this that the issue of trademark infringement via Adwords came to assume its present proportions. Upon dissection, this issue turned out to be comprising several elements such as dilution of the mark, free-riding, likelihood of confusion among the consumers among others all of which have at length been already discussed in this paper.

Globally, when it comes to ascertaining liability for such apparent trademark infringement, there is no consensus. The Court of Justice of the European Union in *Interflora Inc.* v. *Marks and Spencer*

plc.[29] observed that keyword advertising does not per se amount to infringement of trademark. On the contrary, it can be used to promote healthy competition, enabling competitors to advertise their products or services as alternatives to those of the proprietor. However, what may amount to infringement is when a "reasonably well-informed and reasonably observant user of the internet" finds himself confused as to origin or source of the goods or services being advertised, that is whether they originate from or are reasonably connected with the proprietor of the mark.

In India, as per the judgment of the Madras High Court in *Consim Info Pvt. Ltd.* v. *Google India Pvt. Ltd. & Ors.*[30], if respondents 2 to 4 use the individual words constituting the registered trademarks of the appellant in their advertisements in the sponsored links column, then such use would certainly fall within Section 2(2)(c)(ii) and Section 29(6)(d) of the Trademark's Act, 1999.

The Indian perspective, though in favor of trademark protection as far as precedents go, is still under Hon'ble Supreme Court of India's consideration. The Supreme Court, in its recent order[31] dated 19/10/2012, has directed Consim's competitors including People Interactive (Shaadi.com), Times Business Solutions (Simply Marry), and Info Edge (Jeevan Sathi) to restrain from

29 Interflora, *supra* note 23.
30 Consim, *supra* note 1.
31 *Ibid.*

displaying their names in the website of the petitioner in the "AdWords" programme of the Google.

Despite the order of the Madras High Court in *Consim*[32] being in favour of Google, there is still a lack of clarity on whether use of keyword-triggered advertisements amounts to trademark infringement. It remains to be seen what stand will be taken by courts in India now that they have come to decide upon it and extent of possible ramifications that internet service providers could be looking at in the light of the same.

32 Consim, *supra* note 1.

NAVIGATING THE NOTEWORTHY: REGULATING THE VULNERABILITY OF THE FRAGRANCE INDUSTRY

Jayanti Mishra & Neha Sahgal[*]

Abstract

The perfume industry is rapidly expanding. Perfumes today, generate about $20 billion in annual sales. This $6 billion fragrance industry is built upon a thousand different fragrances. This has led to a tremendous increase in vulnerability of these manufacturing industries leading to misappropriation of their intellectual property ergo the discussion of feasibility of protection of fragrance has gained recognition. The leitmotif of this paper is to ascertain whether fragrances fall within the purview of intellectual property protection since they are innovative creations of human mind. This paper attempts to explore the requisites that need to be complied with for grant of patents, copyright, trademark and trade dress. It argues that fragrances come within the purview of patentable subject matter in respect to the Britain and European law. Further, in light of the British, French and Dutch law, this paper provides a legalistic description of how fragrances are eligible for grant of copyrights. This paper also attempts to explore whether fragrances come under the

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purview of trade mark and trade dress protection. This paper suggests that given the original and creative nature of work in the perfume industry and the growing vulnerability of fragrances, it does not seem unreasonable that intellectual property rights protection should be extended to include fragrances within its ambit.

I. Introduction

The aroma of piping hot coffee, the smell of a new book, the smell of the mud after rain undoubtedly cost earth and heaven. It is no wonder that olfactory senses play a very important role in a person's life. It therefore comes as no surprise that the perfume industry is a $6-billion-dollar industry. These tiny vials that contain a unique blend of exotic fruits, flowers and spices are often priced exorbitantly and are coveted by us.

The foundations of the industry can be traced back to as far as the sixteenth century where the manufacturing of these fragrances was done through family enterprises, making it relatively easy for them to safeguard the proprietary information of the production process, be it distillation techniques, the composition of branded perfumes etc.[1]

This family based enterprise however underwent a radical change around the twentieth century when the reins of the fragrance

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1 Richard Stamelman, *Perfume: Joy, Obsession Scandal Sin; A Cultural History Of Fragrance From 1750 To The Present* 94 (2006).

industry shifted to the major industrialists. This led to a sharp increase in competition between them to gain prominence.[2]

This has resulted in a tremendous increase in vulnerability of these manufacturing industries leading to misappropriation of their intellectual property ergo the discussion of feasibility of protection of fragrance has gained recognition. Today, perfume industries, like other high technology industries, commonly change not only their locations, but also their employees.[3] This itinerancy has caused a component of unease among scent houses with regards to the security of their most profitable resources: recipes and other competitive innovations that can now be promptly acquired, replicated, and imparted by representatives with access to the pertinent data.

Another late twentieth century development that has unnerved fragrance manufacturers is the improving accuracy of analytical technologies in revealing a fragrance's chemical composition.[4] Unlike digital technologies that have unsettled the media industry by enabling surreptitious copyright infringement, chemical analytic technologies do not enable the illegal acquisition or distribution of intellectual property. It is generally considered lawful to use these

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2 Eugénie Briot, *From Industry to Luxury: French Perfume in the Nineteenth Century*, 85 BUS. HIST. REV. 273, 277 (2011).

3 Mathilde Tranoy, *Deux Salairiés Accusés d'avoir Vendu des Formules Aromatiques Secrètes,*NICE MATIN (2012), http://archives.nicematin.com/faits-divers/deux-salaries-accuses-d%E2%80%99avoir-vendu-des-formules-aromatiques-secretes-a-grasse.830888.html.

4 Kewanee Oil Co. v. Bicron Corp.*,* 416 U.S. 470, 490–493 (1974).

technologies, not only to obtain the fragrance formulas of competitors, but also to develop competing products.[5]

The name of a perfume is usually trademarked, the packaging may be protected by trade dress, the text on the box may be copyrighted, and the bottle could be patented.[6] The main issue is the vulnerability of the fragrances leading to misappropriation of their intellectual property rights.

This paper attempts to explore the requisites that need to be complied with for grant of patents, copyright, trademark and trade dress. It argues that fragrances come within the purview of patentable subject matter under British and European law. Further, in light of the British, French and Dutch law, this paper provides a legalistic description of how fragrances are eligible for grant of copyrights. This paper also attempts to explore whether fragrances come under the purview of trade mark and trade dress protection.

II. Patent protection for fragrance

A patent gives the owner the right to prevent others from making, using or selling the invention without permission. Patents encourage companies to make the necessary investment for innovation, and provide the incentive for individuals and

5 *Id.*

6 Smelly Rights: Copyright in Perfume, PATENT BARISTAS (2010), http://www.patentbaristas.com/archives/2010/01/19/smelly-rights-copyright-in-perfume/ (last visited Jun 28, 2016).

companies to devote resources to research and development.[7] European law provides patent holders with a twenty-year monopoly on the manufacture, use, and sale of their invention.[8] This also goes on to include all products developed using reverse engineering including sale, manufacturing or any other means. The concept of protectable "work" is an important one, which varies from country to country: some jurisdictions have open systems protecting all original works whereas others, the United Kingdom included, protect only specific types of works.[9]

The aspect of Fragrance being a subject of intellectual property rights is a very niche area which has been subject to limited discussion and debate. During the course of the paper, the authors have extensively relied on French, English and Dutch jurisdictions as they are amongst the leading jurisdictions to have delved into the topic.

The primary motive to delve into the nascent jurisprudence is to understand the positions and limitations of Intellectual Property Rights with respect to Fragrance in the Indian Context.

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7 Patent protection in the EU, - EUROPEAN COMMISSION, https://ec.europa.eu/growth/industry/intellectual-property/patents/index_en.htm (last visited Jun 28, 2016).

8 Art. 63, European Patent Convention,1973.

9 Iona Silverman, Copyright and fashion: friends at last? *European intellectual property review* (2013), According to UK law, artistic works include "graphic works, photographs, sculpture, or collage, irrespective of artistic quality and works of artistic craftsmanship.

A. Patentable subject matter

The subject matter that is potentially patentable under the Patents Act 1977 and the European Patents Convention 2000 (hereinafter referred to as 'EPC 2000') is regulated in five ways. In this section, the author shall discuss the requirements of patent protection and the attendant restrictions placed on claiming such protection.

Firstly, to be patentable, an invention must be capable of 'industrial application'. Article 52(1) of EPC 2000[10] provides that European patents shall be granted for any inventions in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. An invention is capable of industrial application if it can be used or made in 'any kind of industry'. 'Industry' is construed in its widest sense, including activities that are not for profit.[11] Apart from being used or made in any kind of industry, for an invention to be industrially applicable, it is also necessary to show that it has a 'useful purpose'[12]. This is satisfied if a patent discloses 'a practical application' or has a 'concrete benefit'.[13] As works of fashion generally fall under the category of potential patent subject-matter, the question of whether a work of fashion is "useful" is a relevant one. The global fragrance market is worth over ten billion US

10 European Patents Convention, 2000. "European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application".

11 Chiron vs. Murex, 12 [535,607] RPC (us 1996).

12 *Ibid.*

13 Human Genome Sciences v. EN Lilly [2011] UKSC 51, [107].

dollars.[14] In France, by far the largest single market, nearly all women use some kind of perfume (as do half of the men).[15] Fragrances serve a grooming and decorative function.

The fashion industry is one which thrives on constantly changing designs and compositions quickly filtering through the food chain from designer to high street, some question whether the fashion industry has any desire or need to invoke patent.[16] Although some argue that high street perfume customers are not the same as designer customers, meaning that high end designers suffer no loss from high street copycat products, recent studies show that counterfeit products cost European fashion £5 billion annually.[17] Karl Lagerfeld, the Chanel designer had enough reasons when he remarked that: "It looks like [Chanel], but there are so many copies, so it could be a copy you know."[18]

The second restriction on the subject matter protected by patents is set out in section 1(2) and Article 52(2) & (3) of EPC 2000. In essence these provide a non-exhaustive list of items that are not

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14 Catherine Seville, *Copyright In Perfumes: Smelling A Rat*, 66 The Cambridge Law Journal 49 (Cambridge University Press (CUP) 2007).

15 *Ibid.*

16 Roughton, A., Johnson, P. and Cook, T. (eds.) (2014) *The Modern Law of Patents*. 3rd edn. Butterworths Law.

17 Narayanan, P. (1998) *Patent Law*. 3rd edn, Eastern Law House.

18 Even Karl Lagerfeld can't spot a real Chanel jacket from a fake! Designer admits 'there are so many copies' it's too hard to tell, Mail Online (2013), http://www.dailymail.co.uk/femail/article-2293459/Even-Karl-Lagerfeld-spot-real-Chanel-jacket-fake-Designer-admits-copies-hard-tell.html [Accessed August 23, 2013] (last visited Jun 29, 2016).

regarded as inventions. If the subject matter of an application falls within the scope of these provisions, it will not be patentable.

The question of whether an invention is denied patent protection on the basis that it falls within one of the excluded categories in section 1(2)/Article 52(2) plays an important role in determining the types of invention protected by patents. One of the approaches used when deciding whether an invention falls foul of section 1(2)/Article 52(2) is called the 'technical effect' approach, which was developed through a series of decisions in the United Kingdom.This approach is currently applied in the United Kingdom.[19]

This approach asks a relatively straightforward question: does the invention, when viewed as a whole, make a technical contribution to the art that does not fall within one of the areas excluded by section 1(2)?

In *Aerotel v. Telco Holdings*[20], the English Court of Appeal said that, to determine whether an invention falls within one of the excluded categories of subject matter, it is necessary to undertake three separate tasks:

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19 Software patents in the UK: a refresher, Software patents in the UK: a refresher - Articles - Olswang LLP, http://www.olswang.com/articles/2011/03/software-patents-in-the-uk-a-refresher/ (last visited Apr 24, 2017).

20 Aerotel v. Telco Holdings, [2006] EWCA Civ 1371.

(1) To construe the claim;

In determining how applications should be interpreted, courts in the United Kingdom (and the EPO) have come down in favour of what is known as the 'whole contents' approach to interpretation. This means that, when considering whether an invention falls foul of section 1(2)/Article 52(2), the Courts disregard the fact that the invention has one of its elements, say a discovery, and focus instead on the invention as a whole.

(2) To identify the contribution made by the invention;

When determining whether an invention falls within section 1(2)/Article 52(2), the Courts concentrate upon the contribution or effect that the invention has upon the known art (or knowledge in the area of question). This is what the second step in the *Aerotel* test captures, under which the court is required to identify the contribution made by the invention and construe the claims to identify the contribution made by the invention.

(3) Determine whether the contribution is technical and does not fall within one of the areas excluded by section 1(2).

Once the contribution made by an invention has been identified, it is then necessary to consider whether the contribution falls within any of the categories of excluded subject matter set out in section 1(2)/Article 52(2). In determining whether an invention falls within the scope of section 1(2)/Article 52(2), the Courts

have asked whether the invention as claimed was 'technical'. The introduction of technical character (effect or contribution) as a de facto non-statutory requirement for patentability owes its origin to an imaginative interpretation of Article 52 of the EPC 1973 (now Article 52 of the EPC 2000).

Fragrance complies with all the requisites of technical approach and thus, doesn't fall within one of the excluded categories. In the unprecedented decision of *Bsiri-Barbir v. Haarmann & Reimer*[21], the Cour de Cassation ruled that perfumes "are not eligible for protection under French copyright law because they are a product of the application of purely technical knowledge and lack, therefore a discernible association with the individual personalities of their creators".[22] Since invention of perfume exhibits technical character, this can be taken to mean that it falls outside the scope of section 1(2)/Article 52(2).

Assertions that fragrances are variable and fleeting and dependent on the external environment are nothing but a feeble and weak attempt of mining a new baseless source of legal ambiguity. Chandler Burr's recent book, *The Emperor of Scent*, furnishes extensive discussion of the perfume industry, the composition of old perfumes and the design of new ones.[23] Burr's most notable

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21 Bsiri-Barbir v. Haarmann & Reimer, [2006] E.C.D.R. 28

22 MacQueen, H., Waelde, C., Laurie, G. and Brown, A. (2010) *Contemporary Intellectual Property Law & Policy*. 2nd edn. Oxford University Press.

23 Thomas G. Field, *Copyright Protection for Perfumes*, SSRN Electronic Journal (2004) (45), https://ssrn.com/abstract=573881.

contribution, however, is his attempt to explain Luca Turin's "novel theory of primary olfactory reception based on a form of inelastic electron tunnelling spectroscopy" and his lively account of why that theory has so far failed to gain acceptance.[24] Of particular relevance to possibly expanded intellectual property protection for perfume fragrance is Turin's conclusion that our sense of smell is not more subjective than colour or sound.[25]

According to a Consumer report:

> "*The blends that perfume chemists put together are designed to create different impressions at different times. The top notes are the scents you notice . . . for the first 10 to 15 minutes the perfume is on your skin. Then the middle notes surface [and] dominate for the next several hours. . . . The end notes are . . . the basis for the fragrance; they last until there's nothing left to smell. Applying a fragrance to your wrist is pointless if you're buying . . . for someone else. The bottled chemicals react with the skin's chemicals, so the same fragrance can smell slightly different from one wearer to another.*"[26]

The third restriction on patentable subject matter arises from the fact that patents are not granted for methods of medical and

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24 *Ibid.*
25 Mueller, J. (2012) *An Introduction to Patent Law*. 4th edn. Wolters Kluwer.
26 *Id at 21.*

veterinary treatment.[27] Such inventions are excluded to ensure that people who carry out medical and veterinary treatments are not inhibited by patents. The fourth restriction on the subject matter excluded from patent protection provides that a patent shall not be granted for 'any variety of animal or plants, not being a microbiological process or the product of such a process'. The fifth factor that restricts the subject matter protected by patent law is that patents are not granted for immoral inventions or inventions that are contrary to public policy.[28] The exclusions are contained in Schedule A2, paragraph 3(a)-(d), to the Patents Act, 1977 and Rule 28 of the EPC 2000 Implementing Regulations. These three restrictions clearly are no barrier to the patentability of fragrances.

III. Copyright protection for fragrance

In British legal parlance, 'copyright' is the term used to describe the area of intellectual property law that" govern the creation and use of goods having cultural significance, such as books, songs and, films. The intangible property protected by copyright law arises automatically and usually for the benefit of the author. Various rights are conferred on the owner of copyright, including the right to copy the work. The basic framework of British copyright law is largely to be found in the Copyright, Designs and Patents Act, 1988, although this has been amended significantly.

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27 The Patents Act 1977, § 4A (1).
28 *Id.*§ 1(3).

Recent EU case law indicates that the notion of a protectable work could be harmonised so that the same (open list) test applies across Europe, a change which would hugely benefit the fashion industry enabling designers to use copyright to protect a wider range of products.[29]

A. Copyright subject matter

1. British law

The Copyright, Designs and Patents Act, 1988 (hereinafter "CDPA, 1988") provides a detailed and exhaustive list of the types of creation protected by copyright law. In order for a creation to be protected by copyright, the Act stipulates that it must fall within one of the following eight categories of work: (i) literary works; (ii) dramatic works; (iii) musical works; (iv) artistic works; (v) films; (vi) sound recordings; (vii) broadcasts; and (viii) published editions (or typographical works).

Section 4(1) of CDPA, 1988 provides that a work of artistic craftsmanship is one which comes within the subject matter that is protectable as 'artistic works'. It is this closed list system which makes fashion so difficult to protect in the United Kingdom, compared with the United States, France or Germany which have a broader scope for protection.[30] It would be relatively novel, but

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29 Torremans, P. (2010) *Intellectual Property Law*. 6th edn. OUP Oxford.

30 Bently, L. and Sherman, B. (2014) *Intellectual Property Law*. 4th edn. Oxford University Press.

hardly radical, to urge that the olfactory appeal of perfumes is as deserving of protection as the aural or visual appeal of music, poetry or images.[31]

In *Hensher v Restawile*[32], the Court interpreted the expression "artistic". All the Lords gave different reasons as to why the chair in question was not artistic. Lord Reid observed that whether an object is artistic depended on whether a substantial section of the public admires the thing for its appearance; Lord Morris thought that the view of experts was important, whereas Lord Dilhorne found it to be an intuitive question.[33] Lord Kilbrandon asked the question: did the craftsman intend to make an artistic work?[34] Lord Simon agreed that the intention of the creator was important but also found it necessary to consider the impact of the work and the opinion of the craftsman's peers.[35] What we can take from the unhelpful disparity of the Lords' reasoning is that the question of whether a work is artistic is difficult to answer.[36] Lord Reid and Viscount Dilhorne said that the requirement for craftsmanship implies that a work must be hand-made whereas Lord Simon held that "craftsmanship" cannot be limited to handicraft; nor is the word "artistic" incompatible with machine production.[37]

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31 *Ibid.*
32 George Hensher Ltd v. Restawile Upholstery (Lancs) Ltd, [1976] A.C 64 HL.
33 Iona Silverman, *Copyright and fashion: friends at last?* European intellectual property review (2013) (35).
34 *Ibid.*
35 Sykes, J. (2005) Intellectual Property in Designs. Butterworths Law.
36 *Ibid.*
37 *Supra note* 30.

2. Dutch law

In contrast, the Dutch Copyright Act does not contain an exhaustive list of subject matters that can be protected.[38] Basically, anything can qualify for protection as long as it is perceptible and original.[39] Article 1 of the Dutch Copyright Law (hereinafter "DCL"), also called *Auteurswet* provides exclusive right to the author of a work of literature, science or art, to publish and duplicate such work.[40] Article 10 of DCL provides a non-exhaustive list of materials that come under the term "work". The Dutch Supreme Court has ruled that for an invention to be considered a work, it should have its own, original character with the personal imprint of the author.[41]

The Dutch Supreme Court in Lancôme case held that for the subject-matter to be original, a perfume "does not need to be new in the objective sense," but only "subjectively" novel as viewed by its creator.[42] Following this standard, the Dutch Court rejected the defendant's argument that plaintiff's perfume lacked originality and observed that:

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38 World Intellectual Property Organization, COPYRIGHT IN THE COURTS: PERFUME AS ARTISTIC EXPRESSION? http://www.wipo.int/wipo_magazine/en/2006/05/article_0001.html (last visited Jun 28, 2016).

39 *Ibid.*

40 Copyright Act,1912

41 Module 3: The Scope of Copyright Law - Copyright for Librarians, Cyber.law.harvard.edu (2016), http://cyber.law.harvard.edu/copyrightforlibrarians/Module_3:_The_Scope_of_Copyright_Law (last visited Jun 29, 2016).

42 *Ibid.*

> "*Lancôme chose 26 olfactory components out of several hundreds of components that led to this specific and unique combination, which was very popular upon its introduction to the public. The perfume is the result of the fact that Lancôme was trying to create a striking and unique scent. Since these facts were not sufficiently denied by Kecofa, the [trial court properly found the perfume to be original.*"[43]

3. French law

Article L.112-2, French Intellectual Property Code (hereinafter "IPC") provides a non-exhaustive list of the works that may be protected by copyright. Even though this list does not include perfumes and fragrances, under French law, all creations are protected by copyright if they are original, regardless of the merit of the author or the purpose of the work, and of the type of work and the form of expression. Article L.112-1, IPC protects 'the rights of authors in all works of the mind, whatever their kind, form of expression, merit or purpose', without giving a definition of originality. The word "creation" in this context requires the work to be original; that is, it should "*bear the stamp of the author's personality*".[44] This non-exhaustive list of works can obviously cause problems.[45]

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43 IP Protection for Fragrances - Intellectual Property - South Africa, Mondaq.com (2016), http://www.mondaq.com/southafrica/x/336746/Trademark/IP+Protection+For+Fragrances (last visited Jun 29, 2016).

44 Sharma, R. (2009) *Commentary on Intellectual Property Laws*. LexisNexis Butterworth.

45 *Ibid.*

Fragrance complies with all the requisites of technical approach and yet falls within one of the excluded categories. In the unprecedented decision of *Bsiri-Barbir v. Haarmann & Reimer*[46], the Court held that perfumes cannot be copyrighted by taking recourse to Article L.112-1 and Article L.112-2 of the French copyright Act, 1994. The petitioner, in this case had developed certain perfumes for the defendants. She approached the Cour d'appel de Versailles to obtain copyright protection for her work of creation. The Cour d'appel de Versailles had dismissed her claims by observing that such works does not come under the purview of copyright and thus, she had approached the Supreme Court. However, the Court observed that a perfume does not constitute the creation of a form of expression that can be copyrighted under the heading "work of a mind".[47] The Cour de Cassation ruled that perfumes "are not eligible for protection under French copyright law because they are a product of the application of purely technical knowledge and lack, therefore a discernible association with the individual personalities of their creators".[48]

The French Supreme Court has consistently upheld that a perfume fragrance cannot be granted a copyright. In *Beauté Prestige Int'l v Senteur Mazal*[49], the claimant claimed copyright in its

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46 Wadhera, B. (2012) *Law Relating to Intellectual Property*. 5th edn. Delhi: Universal Law Pub Co. Pvt. Ltd.

47 *Ibid.*

48 David, B. (2003) *Intellectual Property*. Pearson Education.

49 Senteur Mazal v SA Beauté Prestige International, (2008) 39(1) I.I.C. 113

perfume as it was being infringed by the defendant's fragrances. The Cour d'appel de Paris had ruled that, considering the decision in *Bsiri-Barbir*, perfume cannot be protected by copyright as it could embody an imprint of its creator's personality. In the year 2008, the Court reversed the decision by upholding that perfume cannot be granted copyright protection in France. In doing so it focused on the question of whether the fragrance of a perfume constitutes "a form of expression that benefits from the copyright protection intended for works of the mind", rather than going directly to the question of whether the scent was original in the sense that it bore the imprint of its author's personality, as the Cour d'appel had previously done.[50]

IV. Trademark, trade dress and fragrances

Trademark confers on the proprietor certain exclusive rights to use a particular brand in relation to specified commercial activities. In contrast with the law of passing off, registration of trademark enables traders to protect their brands before they are put on the market. Trade dress is the "total image and overall appearance" of a product, or the totality of elements that "may include features such as size, shape, colour or colour combinations, texture, graphics."[51] A product's trade dress may be a concatenation of elements that are not separately protectable as trademarks, but the

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50 *Supra* note 44.

51 Charles Cronin, Lost and found: Intellectual property of the fragrance industry; from trade secret to trade dress (Feb. 2, 2016), http://jipel.law.nyu.edu/vol-5-no-1-6-cronin/#_ftn201.

amalgamation of these elements is protectable because of its capacity to identify the source of a product or service.[52]

Trade mark provides potential protection for brands and is the most candid response to acts of counterfeiters. Traditionally, the trade mark law in most jurisdictions has been quite unfriendly to the registration of smells like fragrances. The Trade Marks Directive (First Council Directive 89/104/EEC, O.J. [1989] L 24/36) states that "*a trade mark may consist of any sign capable of being represented graphically*" (Article 1), apparently allowing the registration of smells.[53] Broadly Speaking, Trade secret can be referred to any confidential business information which provides an enterprise a competitive edge. It also remains as an alternative. However, the recently proposed European Union Trade Secrets Directive suggests that trade secrets, while intellectual assets, should not be protected as formal intellectual property rights like patents, etc., but rather as a complement or alternative to these classical IP rights.[54]

Prior to the Sieckmann[55] case which illustrated difficulties with the graphical representation of scent marks, the UK had been accepting applications for scents such as the smell of bitter beer applied to flights for darts and the smell of roses for tyres. However, after the judgement in this case, it seems certainly

52 *Ibid.*
53 *Supra* note 48.
54 *Supra* note 46.
55 Ralf Sieckmann v. Deutches Patent-und Markenamt, [2002] E.C.R. I-11737

unlikely that such trademarks will be granted. In this case, the applicant sought to register the smell of cinnamon as an olfactory trade mark, citing its chemical formula, depositing an odour sample, and stating that the scent was "*balsamically fruity with a slight hint of cinnamon*" (a description corresponding to the classification of the perfume industry in the EU).[56] The ECJ decided that the graphical representation ought to be precise, easily accessible, clear, durable, self-contained, objective and intelligible. Further, another challenge faced is that the sign must be competent of differentiating between the representation of goods of one undertaking from those of another. However, that problem is not faced in the perfume industry given "there are well-established methodologies (known as "sensorial analysis") for describing smells".[57]

In the case of *L'Oréal v Bellure* primarily dealt with the trademark infringement and comparative advertising claims in relation to imitation perfumes and the use of registered trademark in comparison lists. Amongst the major issues discussed was on that of smell-alike. L'Oréal along with its subsidiaries brought about an infringement suit against a Belgium company for making imitation perfumes at throw away prices citing infringement under Art.5(1)(a) and Art.5(2) of the Trade Marks Directive (hereinafter referred to as TMD).

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56 *Supra* note 44.
57 *Supra* note 46.

The Defendants produced perfumes which they sold in supermarkets, discount stores, markets and online in the UK which had been commissioned to smell like L'Oréal's perfumes and although their appearance was not identical, it was admitted by the Defendants that their "smell- alike" products were intended to give "a wink of an eye" to the L'Oréal products. In addition, the Defendants used comparison lists, which were provided to retailers showing the names of the L'Oréal products against those of the Defendants that were "smell-alike".

In the early stages of the case, the packaging of the Bellure products changed and was therefore no longer in issue, and the court also decided that under English law, passing off did not extend to some sort of "nebulous tort of unfair competition"[58]

However, the question as to whether references to the named smell-a-like perfumes in the comparison list were an infringement of trademark or not was referred to the ECJ. The ECJ was asked to decide if the use of their trademarks in the comparison list amounts to a violation of Art.5 (1) (a) TMD and whether Bellure had a defence under the provisions of the Comparative Advertising Directive (CAD). The ECJ was also asked to decide if the use in a comparison list was an infringement under Article 5(2) of the Trademark Directive.

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58 The L'Oreal Saga - Trademarks and Comparative Advertising | AdLaw By Request®, ADLAW BY REQUEST (2010), https://www.adlawbyrequest.com/2010/06/articles/intellectual-property/the-loreal-saga-trademarks-and-comparative-advertising (last visited Jun 28, 2016).

The Defendants sought the defence of the lawful comparative advertising as the smell of perfumes was considered to an intangible good thereby making it difficult to describe accurately. The smell of any fragrance varies from the adaptably of the same in individuals. These varying factors of the smell was considered to be factor leading to the conclusion of no unfair advantage been taken.

A comparative advertisement is permissible, if among other things, it[59]

(1) Is not misleading

(2) Does not create confusion in the market place between two competitors or their goods, services or trade marks

(3) Doesn't discredit or denigrate the goods, services or trademarks of the competitor

(4) Doesn't take unfair advantage of the reputation of the competitor's trademark

(5) Doesn't present goods or services as imitations or replicas of goods or services bearing a protected trademark or tradename.

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59 Comparative clarity? Comparative advertising and trade mark infringement in Europe, Nortonrosefulbright.com (2016), http://www.nortonrosefulbright.com/knowledge/publications/20005/comparative-clarity-comparative-advertising-and-trade-mark-infringement-in-europe (last visited Jun 29, 2016).

The ECJ negating this defensive took a different approach from that of the previous judgement and ruled that: -

(1) It is immaterial whether there is any likelihood of confusion or detriment to the proprietor as unfair advantage to be taken regardless of the same.

(2) Unfair advantage occurs when a third parry seeks to ride on the popularity of a well-known symbol or product and not paying any compensation, monetary or otherwise and benefits by the proprietors' brand value, image and prestige.

(3) The trade mark of a proprietor prevents the third part to make use of an identical mark with reference to similar goods and/or services even if use of such marks will not affect the proprietor's earning capacity.

(4) Advertiser cannot by use of comparative advertising claim that their product is a replica of a well-known trademark. Any advantage gained by using such methods will be deemed to be using unfair advantage of the reputation of the trade mark

Charles Cronin wrote that scent, flavour, and single-color marks are more readily depleted than design and word marks not because there are fewer potential marks in these classes, but rather because consumers are less able to distinguish among them than among

design, word, and sound marks.[60] However, the view that flavours and scents are problematic trademarks just because a typical consumer may not be able to distinguish between different flavours and scents is anomalous and erroneous. Given that "there are well-established methodologies (known as "sensorial analysis") for describing smells" and each fragrance has its distinct chemical composition, those fragrance compositions that are capable of being graphically-represented should get trademark protection.

Trademark protection becomes imperative for fragrances since marketers and traders use fragrances not only to conjure a narrowly defined good or service, but to mark an overall environment in which retail customers purchase the goods or services of a particular seller, such as in car showrooms, sports stadiums, airports, banks and apartment buildings that seek to distinguish themselves with customers via the deeply influential sense of smell.[61]

The case of *Kecofa v Lancôme* is considered to be one of the primary landmark cases detailing whether the smell of a particular brand has a copyright or not. The matter arose in this case where the two companies were in dispute over the smell of a perfume.

The entire dispute surrounded the French cosmetics company, Lancôme, which sold an exclusive perfume under the name

60 Charles Cronin, Genius in a Bottle: Perfume, Copyright, and Human Perception, 56 J. Copyright Soc'y U.S.A. 427 (2009)

61 *Ibid.*

Trésor (Treasure). Kecofa, a small Dutch firm, however sells its Female Treasure perfume at a tenth of the price.

This led to Lancôme filling a suit against Kecofa for a breach of their trademark, which failed since the judges felt that the consumers would in all likelihood have no problem differentiating the two products.

In 2000, after the Dutch Trademark act was updated, Lancôme tried again, but this time also claimed infringement of its copyright in the perfume. The trademark claim failed once more, but – probably to Lancôme's surprise – the copyright claim succeeded and was further sanctioned by the Dutch High Court.[62]

The Dutch Copyright Act does not contain an exhaustive list of subject matters that can be protected. Essentially, as long as a product is unique and traceable, it qualifies as a patent. The High Court ruled that the smell of a perfume may fulfil these requirements, even if only perceptible through the nose. Here the Court gave the explanation by distinguishing the scent of a perfume from its the liquid containing it, comparing the latter to the paper of a book, which is not subject matter of copyright, whereas the content of the book is. This distinction implies that a perfume that contains completely different ingredients but smells

62 William, C. (2011) *Cases and Materials on Intellectual Property*. 5th edn. Sweet and Maxwell.

the same may be infringing, while a perfume with a similar formula but a different scent would not be.[63]

The Dutch Supreme Court however took the following points into consideration to come up with a conclusive law[64]:-

1. whether copyright subsists in a perfume;
2. ownership of the any such copyright;
3. which country's national law should determine the issue of ownership; and
4. whether any such copyright had indeed been infringed

The court went on to differentiate between fragrance and scent. A scent is something associated with a specific chemical combination of substances or a particular substance or in other words it is the effluvia from a substance that affect the sense of smell. A fragrance on the other hand is a sweet or delicate odor and capable of being detected using human olfactory senses. The main difference between scent and perfume is that scent has a wider application because it is more neutral in connotation.[65]

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63 Does perfume smell have its own copyright, DOES PERFUME SMELL HAVE ITS OWN COPYRIGHT, http://www.legalserviceindia.com/article/l311-does-perfume-smell-have-its-own-copyright.html (last visited Jun 28, 2016).

64 Supra note 22.

65 Smelly Rights: Copyright in Perfume, PATENT BARISTAS (2010), http://www.patentbaristas.com/archives/2010/01/19/smelly-rights-copyright-in-perfume/ (last visited Jun 28, 2016).

It insisted that copyright can exist in a smell. It was held that as the Dutch Copyright Act contains a non-exhaustive list of things that can be a work and that subsequently, there was no reason why a smell should not be included.

It was stated that in order for a smell to obtain copyright protection it must be visible to humans, with its own and original character. In incidences when a dispute arises over a smell, the infringement must be judged on laboratory tests and panels of people asked to smell it. This could well be a landmark judgment in the field of copyright and could instigate a plethora of copyright infringement claims, especially by large fragrance companies.[66]

This is the first time a physical chemical analysis was used. A detailed list of all the olfactory substance was drawn up and the court found that 24 of the 25 substances used were identical. Ironically the 25th substance used in Female Treasure was a substitute for the one used in Trésor. Looking at this the court held that the case of copyright infringement in favor of Lancôme.

Trade dress, in particular might actually provide the much-needed intellectual property protection to the manufacturers of fragrances. The earlier discussion of patents and copyrights concluded that neither form of legal protection held much potential for safeguarding the fragrance industry's intellectual

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66 *Id.*

property.[67] After all, a patent is only granted for a period of twenty years. As French courts ultimately determined, copyright is not a viable form of protection for fragrances, despite the creative thought their creation may involve, because this intellection cannot be communicated or perceived in an effective and consistent manner.[68] Given these limitations, trade dress emerges as the most viable means of I.P. protection for fragrances. Because of its brief period of perceptibility, fragrance is more likely to be protected as trade dress when used in a multisensory combination of various stimuli like colours, images, and sounds.[69]

Trade dress protection is afforded to all the marks such as colours, fragrances and scents that are used to create a deeper emotional connect with the consumers. In recent times, the Courts have also recognized the trade dress enables consumers to distinguish one good from another.

Limited intellectual property rights protection for fragrances result in many disadvantages for the inventors of fragrances. Fore mostly, since fragrances are afforded comparatively limited intellectual property protection, any marketer or trader is not legally compelled to constrain the effective deployment of fragrances in public sales spaces. Also, since fragrances are not usually regarded as copyrightable works, they are not very freely

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67 *Supra* note 29.

68 (2016), http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf (last visited Jun 29, 2016).

69 *Supra* note 22.

released into commercial spaces. For instance, there might be no problem to Shoyeido or Diptyque if a store or a boutique lights a Shoyeido incense or Diptyque candle in their premises. This is because these are the methods in which their sales might increase at the event of consumers liking their stuff. There however, will be an objection if a large mall or boutique starts to use their air conditioning systems to disseminate the fragrances of candle or incense without authorization.

Once Shoyeido sells their incense stick, Diptyque sells their celebrated candles and Chanel sells a bottle of their famous brand No. 5, there is a little, if any control left at the hands of these producers to control how the buyer uses it. With limited intellectual property protection available to the fragrances, there are no legal mechanisms against which redressal can be seeked by the producers. Trade mark and in particular, trade dress can serve as an effective tool for the producers to regain some control or authority over the use of their products and tap the benefits of potential compensatory benefit.

For instance, if a hotel began to scent all of their properties with No. 5, rather than using their proprietary lemongrass fragrance, Chanel would likely assert a claim and even if it uses no visual evidence of the brand, Chanel would argue that by "marking" their air with the well-known No. 5, the hotel was attempting to lead consumers to believe that its hotels are legitimately associated

with this purveyor of top-tier luxury products.[70] This association might potentially sully Chanel's image and Chanel could prevent such use if it can demonstrate that consistently scenting the air of a commercial space would likely create confusion as to the source, sponsorship, or association between goods or services.[71]

Consumers become accustomed to fragrances relatively swiftly. Once a fragrance is perceived, the awareness of it wanes away in spite of the fact that we continue to be exposed to the same concentration of it in our external environment. This brief time span of perceptibility may have a bearing on its trademark capacity but it makes it more likely to be granted trade dress protection. The scent or the fragrance of a particular place is usually, the first confirmation that one is at a particular place say like, home, hotel, retailer or a spa. The aural and visual stimuli then, play a secondary role in that awareness.

The notion that a particular fragrance or scent can effectively be deployed and protected as a trade mark or trade dress adds economic and monetary value to each invention as it gives option to the producers to channelize the invention and charge fees for the use of their creation from big manufacturing and distributing houses.

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70 *Supra* note 30.
71 *Supra* note 62.

The restrictions contained in European patents convention, 2000 vis a vis patentable subject matter correspond with the restrictions envisaged by Indian Patents Act, 1977. The restrictions are contained in section 1 (2), schedule A2, paragraph 3 (a) (d) and section 4A (1) Indian Patents Act, 1977.

The Indian Patent Act, 1977 is flexible enough to include perfume invention under the purview of patent protection. However, this issue is to be decided as such a claim has not reached the courts as of now. As far as copyright law is concerned, there has been no definitive discussion on the issue of fragrance.

Indian trade mark law encompasses safety to all trademarks, that are validly registered. It falls within the 34 classes (for goods) on the basis of which trademark can be granted. However, the Indian trademark law doesn't afford trade dress protection.

Indian Laws with respect to Intellectual Property Rights of fragrance are at its nascent stage with almost no debate and discussion taking place. A county where *itr* has been used and produced since centuries, this is a matter of great importance in order to prevent the duplication of the fragrances.

V. Conclusion

Intellectual property is the creative work of the human intellect. The economic and technological development of a nation will come to a halt if no protection is given to intellectual property

rights. Therefore, the contribution of intellectual property is *sine qua non* for the industrial and economic development of a nation. The perfume industry is also rapidly expanding. Perfumes today, generate about $20 billion in annual sales[72]. The $6 billion fragrance industry is built upon a thousand different fragrances, according to the Fragrance Foundation in New York. The fragrance industry is commonly known for the production of costly perfumes, but its greatest assets are the intellectual properties behind these tangible creations.[73]

It does not seem unreasonable, given the creative and original nature of works produced by the fashion industry, that copyright should extend in some form to protect fashion.[74] In making a perfume, no doubt the smell is not a product of the creator's mind.[75] However, the fact that he identified the ability of a substance to emit a certain fragrance and the fact that the fragrance can be commercially exploited; the fact that the creator brought together a number of substances to give a particular smell must be recognized.[76] Further, a fragrance's subjective and subtle nature, coupled with the relative ease of reverse engineering,

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72 The fourth industrial revolution: tearing down the barriers between services and industry | United Nations Educational, Scientific and Cultural Organization, Unesco.org (2016), http://www.unesco.org/new/en/member-states/single-view/news/the_fourth_industrial_revolution_tearing_down_the_barriers_between_physical_and_virtual_reality/#.V3QFBRV9600 (last visited Jun 29, 2016).

73 Stop Making Scents? Skin Inc. (2016), http://www.gcimagazine.com/marketstrends/segments/fragrance/Stop-Making-Scents-264027971.html (last visited Jun 29, 2016).

74 *Supra* note 6.

75 *Supra* note 6.

76 *Ibid.*

makes it easy for originals to be copied without large investments in research. The original creator could spend millions on R & D, branding, and marketing to build up goodwill and a reputation only to have it encroached upon by a "smell-alike".[77] Over the past twenty-five years advances in analytical technologies, and increasingly stringent government disclosure regulations, have challenged fragrance manufacturers' efforts to maintain exclusive control over their most valuable assets: proprietary information relating to the creation and manufacture of fragrances.[78]

Patents, Copyrights and Trademarks are a valuable tool to protect perfume inventions in a number of ways and which may, in the future, have an even broader reach if the definition of a work is harmonised.[79] With the right lobbying effort, this may be the right time for patent, copyright and trademark to explode into the world of fashion.[80] The perfume industry waits to see the wind of change.

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77 *Supra* note 35.
78 *Supra* note 44.
79 William, C., Llewellyn, D. and Aplin, T. (2010) *Intellectual Property: Patents, Copyright, Trademark Allied Rights.* Sweet and Maxwell.
80 *Ibid.*

8 IJIPL 61-90 (2017)

APPROPRIATION ART: COPYRIGHT INFRINGEMENT OR FAIR USE?

Pankhuri Agarwal[*]

Abstract

The courts in the US have, in most cases, found appropriation artworks that only minimally alter the original works to be fair use and not copyright infringement, by expansively reading the scope of the fair use defense. Their main focus is on whether the secondary work transformed the original copyrighted work by adding new meaning, message or expression to the copyrighted work rather than whether there was a justified need to copy that work for a different purpose. In order to asses market harm to the copyrighted work it focuses on market likely to be developed rather than one that could potentially be developed and considers many extraneous factors like the amount of revenue earned, extent of marketing and the type of target audience to be relevant. This being the position of law, two appropriation artworks that were challenged as copyright infringement last year,

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one involving unauthorized copying of a copyrighted photograph taken from Instagram onto a canvas artwork and the other that of a copyrighted mural onto an apparel collection of a fashion house (now settled), would also be considered to be fair use. This paper argues that such unauthorized copying of entire of existing copyrighted artworks with minimal changes merely for making another artwork should not be considered fair use because it will reduce the incentives for creation of original artworks and thus the very purpose of copyright law of "promoting the progress of science and useful arts" for public benefit will be defeated.

I. INTRODUCTION

Creation of new work by using the elements of an existing artwork, popularly known as 'appropriation art', [1] has been challenged in the U.S. courts many a times as an infringement of copyright in those existing works, when done without the consent of the copyright owners of those works. The courts in most of these cases have found such artworks to be fair use and not copyright infringement by an expansive reading of the scope of the fair use defense. These victories of appropriation artists seem to have encouraged such art which has led to a flood of copyright-fair use litigation. Last year, two suits were filed challenging two

1 Liz Brown, '*Remixing Transformative Use: A Threepart Proposal For Reform*', 4(1) JOURNAL OF INTELLECTUAL PROPERTY AND ENTERTAINMENT LAW (2014).

works of appropriation art as copyright infringement. One of them involves unauthorized copying of a photograph taken from Instagram onto a canvas artwork and the other that of a mural onto an apparel collection of a fashion house. It is these two cases that form the subject matter of this research paper. Part I of the paper critically examines the development of the law of fair use in the U.S., especially that in respect of appropriation art. Part II analyses, in light of the current law, whether the unauthorized use in these two cases *is* considered fair use. Finally, Part III discusses if such use *should be* considered fair use and if any reform is required in the current law in light of the purpose of the copyright law to encourage creation of works for public benefit.

II. CURRENT U.S. LAW ON FAIR USE

Under Section 107 of the U.S. Copyright Act, 1976, fair use is a defense to a claim of copyright infringement.[2] 'Fair use' is not defined in the Act as such but an illustrative list of purposes is provided, the use for which could be considered fair use. These purposes are criticism, comment, news reporting, teaching, scholarship, or research. In addition, four factors are listed that must be considered in the fair use analysis, but without any further guidance on the weight to be accorded to each factor.[3] These factors are (a) purpose and character of use, including whether such use is of a commercial nature or is for nonprofit educational

2 17 U.S.C § 107 (2012).
3 Brown, *supra* note 1.

purposes, (b) nature of the copyrighted work, (c) the amount and substantiality of the portion used in relation to the copyrighted work as a whole and (d) the effect of the use upon the market for or value of the copyrighted work.

The U.S. Supreme Court's decision in *Campbell* v. *Acuff-Rose Music* ("*Campbell*")[4], the latest of the three Supreme Court decisions that have engaged in fair use analysis till date, clarified that commercial use is not presumed to be unfair and added a sub-factor of transformation to the first factor under the influence of a law review article[5]. The test for transformation was stated to be whether the new work "adds something new, with a further purpose or different character, altering the first with a new expression, meaning, or message". Although this test was applied in this case to hold a parody to be fair use, its broad wording has led the courts to indulge in subjective interpretation of the meaning of artworks and find many of them that minimally alter the original also to be fair use.[6]

One of the first appropriation art cases to apply *Campell* was *Blanch* v. *Koons*[7] ("*Blanch*"). The Second Circuit held that Koon's use of Blanch's photograph in his work was transformative because it

4 510 U.S. 569 (1994).

5 Pierre N. Leval, '*Toward a Fair Use Standard*', 103 HARV. L. REV. 1105 (1990).

6 John Carl Zwisler, '*(Mis)appropriation Art: Transformation and Attribution in the Fair Use Doctrine*', 15 CHI.-KENT J. INTELL. PROP. (forthcoming 2015), available at: https://c.ymcdn.com/sites/www.bpla.org/resource/resmgr/Writing_Competition/Copyright_Paper_BPLA.pdf (last viewed on April 22, 2017).

7 467 F. 3d 244, 248 (2nd Cir. 2006).

was used "as a fodder for his commentary on the social and aesthetic consequences of mass media", even though it was neither parody nor did it comment upon the latter's work. This was in stark contrast to the earlier decision in *Roger* v. *Koons*[8] *(*"Rogers"*)* where Koons' conversion of a photograph into a sculpture was not considered to be fair use even if it was a "satirical critique of our materialistic society" as it was neither a parody of, nor did it comment upon, the photograph as such.[9] The second prong of the first factor i.e. commercial nature of Koon's use and the second factor i.e. nature of the copyrighted work (even though acknowledged to be creative) were found insignificant since the work was transformative. The third factor was found to weigh in favour of Koons as the copying was considered reasonable in relation to the purpose of "convey[ing] the 'fact' of the photograph to the viewers". The court failed to consider the need for attribution without which it would be difficult for the viewers to understand the 'fact' of the photograph, something that *Rogers* had emphasized upon.[10] The fourth factor of market harm was also found in Koons' favour in view of the Blanch's acknowledgement that she had neither published nor licensed that photograph and it did not affect her career and thus the use was concluded to be fair.

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8 751 F. Supp. 474 (S.D.N.Y. 1990).

9 Kim J. Landsman, '*Does Cariou v. Prince Represent the Apogee or Burn-Out of Transformativeness in Fair Use Jurisprudence? A Plea for a Neo-Traditional Approach*', 24 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 321 (2014).

10 *Ibid.*

In *Cariou* v. *Prince*[11] ("Cariou"), the court further expanded the scope of transformative use by holding that the copying by Richard Prince ("Prince") of Cariou's photographs with a few changes in his works constituted transformative use despite Prince's deposition that that he was not "trying to create anything with a new meaning or a new message". The court stated that for a work to be transformative it does not necessarily have to comment on the original or on the popular culture (as was found to be the case in *Blanch*) and must only "reasonably be perceived" to convey "new expression, meaning or message". The fact that Prince's works also served an artistic purpose like that of Cariou's photographs was not considered by the court.[12] Just as in *Blanch*, the commercial nature of Prince's works and the second factor were considered insignificant in light of the transformative nature of his works. The copying of entire works was *assumed* to be justified to conjure up the original to achieve the transformative purpose.[13] For the fourth factor to weigh against a fair use finding, market *usurpation* by the secondary work was said to be required. Prince's works were found to not usurp the market for Cariou's works because the latter were not sold for significant sums or actively marketed and did not have a target audience of rich and famous people as Prince's works did. Accordingly, a finding of fair use was made. The increased emphasis on transformation

11 714 F.3d 694, 698-699 (2nd Cir. 2013).

12 '*Copyright Law - Fair Use - Second Circuit Holds That Appropriation Artwork Need Not Comment On The Original To Be Transformative. - Cariou v. Prince', 714 F.3d 694 (2d Cir. 2013),* 127 HARV. L. REV. 1228 (2014).

13 Landsman, *supra* note 9.

undermined the importance of other statutory fair use factors, allowed subjective interpretation of the meaning of artworks leading to uncertainty and created tension with the right of the copyright right owner of original works to prepare derivative works.[14] The audience based approach to assessment of market harm ran the risk of allowing famous artists to unduly profit from the works of younger artists.[15]

A similar expansive approach to fair use was taken by Ninth Circuit in S*eltzer* v. *Green Day*[16] ("*Seltzer*") in 2013, in spite of it acknowledging that transformative use was "highly contentious". A music band Green Day's use of Seltzer's street art work 'Scream Icon' with mere addition of a red cross on it for the backdrop for their music concert was considered to be transformative. The four factor analysis undertaken in *Seltzer* will be discussed in Part II.B.

The Seventh Circuit, however, took an entirely different approach to fair use in 2014 in *Kieintz* v. *Sconnie Nation*[17] ("*Sconnie*") where the copying at issue was that of a photograph of a former mayor taken by Kieintz (a photographer) on t-shirts without consent for mocking the Mayor. Kieintz promised to license his subjects' photographs for 'dignified use' only. Although the court found the use to be fair, like many scholars it laudably showed skepticism

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14 Brown, *supra* note 1.

15 Andrew Gildent & Timothy Greenett, '*Fair Use for the Rich and Fabulous?',* 80 U. CHI. L. REV. DIALOGUE 88 2013.

16 725 F. 3d 1170 (9th Cir. 2013).

17 766 F. Supp. 3d 756 (7th Cir. 2014).

towards *Cariou*'s transformative use approach for the reason that it may extinguish the right to make derivative works under Section 106. Thus, it rightly focused on the statutory factors and examples. It also hinted that even harm to long-range commercial opportunities despite no harm to the value of the particular work could favour the plaintiff. However, the court failed to justify why the first factor (i.e. purpose and character of use) was said to do not much in this case even though it critically emphasized that the purpose of the use was political commentary for profit and not to comment on Kienitz photograph, thereby hinting that it could be achieved by "non-copyrighted alternatives" (i.e. by using works that are in the public domain or any other means that do not involve use of a copyrighted work).

Therefore, as illustrated above, the law on fair use is not uniform throughout the circuits and thus the time is ripe for the Supreme Court to clarify the scope of fair use once again.[18] Until then, in the Second and the Ninth Circuit, the expansive reading of the fair use defense in *Cariou* and *Seltzer* and domination of transformative use over other factors in the fair use analysis is here to stay.[19]

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18 Zwisler, *supra* note 6.

19 *See* Brown, *supra* note 1.

III. ARE THEY CONSIDERED FAIR USE UNDER THE CURRENT U.S. LAW?

This paper proceeds with the analysis of whether the use by Prince of certain photographs posted on Instagram in his works and the use by Moschino, a high fashion brand and its designer, Jeremy Scott ("*Scott*") of a mural created by Rime in one of its clothing collection would be considered fair use under the current U.S. law as detailed above, on the assumption that it would otherwise amount to copyright infringement.

A. Is Prince's Use of Photographs Posted on Instagram in his Works Fair Use?

1. Facts

Although Prince succeeded against Cariou in the copyright infringement suit at the Second Circuit, another suit was filed against him on December 30, 2015, in the U.S. District Court of Southern District of New York, for infringement of Donald Graham's ("*Graham*") federally registered copyright in a photograph, yet again featuring a Rastafarian.[20] However, this case is peculiar because, unlike in the above discussed cases, this photograph has allegedly been copied by Prince almost in its entirety without any addition, deletion or changes in the form of it as such. The only visible additions were those made around the

[20] Donald Graham v. Richard Prince, et al, Complaint - Jury Trial Demanded, , 2015 WL 9875187 (S.D.N.Y.) (Trial Pleading).

photograph. [21] Prince is alleged to have accessed many photographs posted on a social media website Instagram including Graham's, posted a line of text below them from his account, taken "screen saves" of the post and printed them in a much larger size on the canvas, without the consent of the copyright owners of those photographs.[22] He then, in 2014, caused these works to be displayed and sold at an exhibition "New Portraits" at a Gagosian art gallery and later at other exhibitions.[23] The only difference between the photographs and Prince's work is their framing with "elements of the Instagram graphic user interface" apart from minor cropping and resizing.[24] Prince, relying upon his victory in *Cariou*, has again argued the defense of fair use in his reply to the suit filed by Graham in December 2015.[25]

2. Analysis

It is to be noted that since the present suit has been filed before a New York district court, it is bound to consider the scope of fair use as expanded by the Second Circuit in *Cariou*. The decision in *Authors Guild, Inc.* v. *Google*[26] ("Google Books") being the most recent decision of the Second Circuit on fair use is also likely to play a role in the court's fair use analysis in the present case.

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21 *See ibid.*
22 *Supra* note 20.
23 *Supra* note 20.
24 *Supra* note 20.
25 '*Richard Prince Fights Latest Copyright Infringement Suit*', THE FASHION LAW, Feb. 29, 2016, available at: http://www.thefashionlaw.com/home/richard-prince-fights-latest-copyright-infringement-lawsuit (last viewed on April 22, 2017).
26 804 F.3d 202 (2d Cir. 2015).

In order to determine whether the use made by Prince of Graham's and other photographs would be considered fair use under the current law in U.S., each of the four fair use factors will be considered one by one below.[27]

i. *First factor*

Graham in his complaint referred to Prince's work as an unauthorised derivative work based upon his photograph. He may argue that the transformation made by Prince is of the kind that only he has the exclusive right to make under Section 106(2) and not of the kind that favours a fair use finding. In *Google Books* a similar argument was rejected by holding that "*derivative works generally involve transformations in the nature of changes of form"*. One of the examples of a derivate work given was that of a reproduction of a painting in form of a poster which is similar to reproduction of a photograph in form of a canvas print as made in the present case; however, it cannot be said if such change in the nature of form when made along with addition of other elements would still be considered to constitute derivate work. In *Cariou*, the court did not consider Prince's works on canvas incorporating Cariou's photographs to be derivative works because they did not merely present same material in a different manner but added something new. Thus, in the present case also the court is likely to not

27 *See generally* Zwisler, *supra* note 6 (analyzing if use in Davidocivi case would have been held to be fair use if it were to be brought before the Second Circuit by applying *Cariou* to its facts).

consider Prince's works to be derivative having added the frame of Instagram's interface to the photographs posted and to proceed with the transformative use analysis.

As per *Cariou*, a new work is transformative if it "alter[s] the original with new expression, meaning, or message". Some have argued that the court is unlikely to find Prince's work transformative in the present case because Graham's photograph has been altered insignificantly as compared to the ones considered to be fair use in *Cariou*.[28] Only a frame and certain comments like "*Canal Zinian da lam jam*" have been added which, Prince himself seems to accept on his website, don't mean anything by saying that "*the language I started using to make comments…what's it mean? I don't know. Does it have to mean anything at all?*".[29] However, as in *Cariou*, the court may not rely upon what Prince says about his work and instead determine if it can

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28 Nicholas M. O'Donnell, '*Here We Go Again? Richard Prince Sued By Photographer Over Images of Rastafarian in Instagram Show*', Jan. 4 2016, Sullivan & Worcester LLP, ART LAW REPORT, available at: http://www.lexology.com/library/detail.aspx?g=177bae6e-3445-463f-8ccb-0c13ccabe6ac (last viewed on April 22, 2017); Kim Farbota, '*Photo Copyright: Oscar Wilde, Richard Prince, and Your Instagram Content*', Huffpost ARTS & CULTURE, Mar. 16, 2016, available at: http://www.huffingtonpost.com/kim-farbota/photo-copyright-oscar-wil_b_9463262.html (last viewed on April 22, 2017); Marie Andree Weiss, '*Only Thing That Counts is… Fair Use?*', THE 1709 BLOG, Jan. 6, 2016, available at: http://the1709blog.blogspot.sg/2016/01/only-thing-that-counts-is-fair-use.html (last viewed on April 22, 2017); '*Will Prince reign supreme once again over US copyright law?*', ART LAW AND MORE, BOODLE HATFIELD LLP, Jan. 5, 2016, available at: http://artlawandmore.com/2016/01/05/will-prince-reign-supreme-once-again-over-us-copyright-law / ("*Will Prince Reign*") (last viewed on April 22, 2017); Laura Gilbert, '*LA Photographer Takes on Richard Prince in New Lawsuit*,' THE ART NEWSPAPER, Jan. 4, 2016, available at: http://theartnewspaper.com/news/news/la-photographer-takes-on-richard-prince-in-new-lawsuit/ (last viewed on April 22, 2017).

29 Richard Prince, '*New Portraits*', Birdtalk, Nov. 18, 2014, available at: http://www.richardprince.com/contact/ (last viewed on April 22, 2017).

"reasonably be perceived" to convey new meaning, message or expression. Although the comments posted by Prince may not be considered sufficient to hold that the purpose of Prince's works was to comment upon the photographs posted, the court could perceive the addition of the frame and comments to give his works a new meaning based on the use of social media, as has been argued by Prince's attorney,[30] and thus find Prince's work transformative. [31] The use of photographs by Prince is undoubtedly commercial given he caused his works to be sold for thousands of dollars each.[32] However, this fact, as held in *Cariou* and *Google Books*, would not tilt the first factor against fair use once the work is found to be transformative. Therefore, the first factor is likely to be found by the court to weigh in favour of Prince.

ii. *Second factor*

Even though this factor would slightly weigh in favour of fair use as the photographs were published but are considered creative works, it is not likely to be found to be of limited usefulness due to the transformative nature of Prince's works, just as not found in *Cariou* and *Google Books*.

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30 *Supra* note 25.

31 *See* Anna Grade Schuler, *'Richard Prince and Insta-Appropriation: Reinterpreting the Fair Use Factors for the Digital Age'*, FORDHAM LAW REVIEW (forthcoming), Jan. 21, 2016, available at: http://ssrn.com/abstract=2719736 (last viewed on April 22, 2017) ("*Under the current test, his trivial transformation might pass the fair use standard. His use is arguably for a different purpose than what the original posters conceived when posting their photos to Instagram, which has been enough to constitute fair use in other cases*").

32 *Ibid.*

iii. *Third factor*

Similarly, if Prince's use is found transformative, this factor is also unlikely to be found significant even though the photographs posted were copied in entirety with only minor cropping and resizing. This is because such copying would be considered, as per *Cariou*, allowed to "*conjure up at least enough of the original*" without further explanation and as per *Google Books*, reasonably appropriate to show a full post on Instagram and thereby express the meaning based on use of social media.

iv. *Fourth factor*

Analysis of this factor in *Cariou* focused upon whether the secondary work usurps the market of the copyrighted work. Given the emphasis laid by the court in *Cariou* on the difference in target audience of the two works, the extent to which the copyrighted work has been marketed, the number of copies sold and the amount earned from it, this factor's analysis is likely to differ for each photograph posted. Graham's acceptance in his complaint that he has never licensed the photograph for a commercial purpose and lack of mention of anything to suggest that he has or would develop any secondary use of it, can be taken by the court to infer that there is no potential secondary market for his work. That would leave the court to determine the effect of Prince's work on only the primary market of Graham's photograph. Some have argued that in the present case it may be

difficult to find no such significant effect because unlike Cariou's work, Graham's work is "more visible" and has a market "more similar to Prince's".[33] Since Graham's work, as per his complaint, appeared as part of an award winning series in a magazine, was displayed at his former studio, is sold through a high-profile museum in Paris in addition to his own studio and three of its digital productions are available on his websites, it could be considered to have been sufficiently marketed. The target audience of his work being fine art collectors, buying his work through his studio and a high-profile museum, could also be considered similar to that of Prince's who caused his work to be sold by another high-profile art gallery. Although Graham has not made any mention of the number of prints of his photographs sold, the amount earned through its sale or potential losses, in light of above reasons it could be said that his [photograph] would not be purchased as a result of market space taken up by Prince, more than half of whose work was an exact copy of Graham's photograph except minor cropping from the top and bottom. The need for buying Graham's photograph could well be satisfied by buying Prince's work and thus it is also difficult to say that Prince's work would result in only insignificant "*some loss of sales*", as was found to be the case with the snippet view function in *Google Books* where in few instances "*a searcher's need for access to a text would be satisfied by the snippet view*". Also, the need to purchase

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33 O'Donnell, *supra* note 28; Weiss, *supra* note 28; Gilbert, *supra* note 28; *Will Prince Reign*, *supra* note 28.

Graham's work would be eliminated by copying of expression protected by copyright and not of unprotected elements as was the case in *Google Books* where the need for the book could generally be satisfied only by revelation of historical facts in the snippet. Therefore, at least in the case of copying of Graham's photograph, this factor is likely to weigh against a finding of fair use. However, it may not be so in case of other photographs posted whose copyright owners are not professional artists or not as well known as Graham. In such cases the court could find Prince's works to not usurp the market for the photographs posted due to dissimilarity in target audience and insufficient marketing of the photographs.

It is yet to be seen how the first and the fourth factor, that have been found to be the most important in determination of fair use, would be balanced by the courts when one weighs in favour of fair use and another against it. But given the Second Circuit considers the first factor "[t]he heart of a fair use inquiry", it would likely assign more weight to it than the fourth factor of market harm.[34] Therefore, upon weighing all the four factors, Prince's use of Instagram photographs, including that of Graham, in his canvas works would be considered fair use under the current U.S. law.

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34 Zwisler, *supra* note 6.

B. Is Moschino's Use of Rime's Mural in its Clothing Collection Fair Use?

1. Facts

1n 2012, a street artist Rime had painted a mural 'Vandal Eyes' to cover the side of a building which was allegedly copied along with Rime's signature by Scott onto the clothes for Moschino's 2015 fall collection.[35] Rime's 'Vandal Eyes' featured on a gown worn by supermodel Gigi Hadid at Moschino's runway show and later on a gown worn by Katy Perry and a jacket worn by Scott himself at the Met Gala event. Scott had added some of his own graphic design also over his artwork including the brand name 'Moschino'. On August 5, 2015 Rime filed a suit against Moschino and Scott (hereinafter, together referred to as "Moschino") in the U.S. District Court for the Central District of California for copyright infringement amongst other claims for copying his artwork onto Moschino clothing without his consent.[36] The district court rejected the defendants' motion to dismiss the claims made by the plaintiff and allowed the case to proceed.[37] From a declaration

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35 Joseph Tierney v. Moschino S.P.A , Jeremy Scott, et al, Complaint for Damages and Injunctive Relief for Copyright Infringement, Violation of the Lanham Act, Violation of the Right of Publicity, Unfair Competition, and Negligence, 2015 WL 4638323 (C.D.Cal.) (Trial Pleading) ("*Rime's Complaint*").

36 *Ibid.*

37 Nicholas O'Donnell, '*Rime Graffiti Case Against Moschino Survives Dismissal*', Art Law Report, Sullivan & Worcester, Feb. 16, 2016, available at: Http://Blog.Sandw.Com/Artlawreport/Rime-Graffiti-Case-Against-Moschino-Survives-Dismissal?Utm_Source=Mondaq&Utm_Medium=Syndication&Utm_Campaign=View-Original (Last Viewed On April 22, 2017); '*Street Artists Take To The Courts After Kiesza And Katy Perry Flaunt Their Work*', The Guardian, Jan. 15,

filed as a response to the suit it appeared likely that Moschino would assert the fair use defense.[38] Unfortunately, the parties settled the suit in July 2016.[39]

2. Analysis

It is to be noted that the present suit had been filed in a district court in California and thus *Seltzer* being the most recent decisions of the Ninth Circuit decisions on appropriation art and fair use would have been heavily relied upon. Another reason is that its facts are similar to that of the present case, both involving copying of a work of street art, onto a different medium, arguably to convey a new message, expression or meaning and not alleged to

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2016, Http://Www.Theguardian.Com /Music/2016/Jan/15/Kiesza-Katy-Perry-Street-Artists-Courts-Graffiti-Jamie-Hef-Rime (Last Viewed On April 22, 2017).

38 Nicole Martinez, '*Street Artist Sues Moschino For Flagrant Appropriation Of His Work',* Art Law Journal, Nov. 13, 2015, Available At: Http://Artlawjournal.Com/Street-Artist-Copyright-Street-Art/ (Last Viewed On April 22, 2017); Rosemary Feitelberg, '*Jeremy Scott Responds To Rime's Copyright Suit Over Katy Perry Dress'*, WWD, Oct. 30, 2015, Available At: Http://Wwd.Com/Business-News/Legal/Jeremy-Scott-Fires-Back-Against-Copyright-Suit-10271176/ (Last Viewed On April 22, 2017). *See Also* Ross Waldram, '*Did Moschino 'Vandal Eyes' Rime's Copyright'*, GSC Solicitors LLP, Aug. 7, 2015, Available At: Http://Insights.Gscsolicitors.Com/Post/102cw4p/Did-Moschino-Vandal-Eyes-Rimes-Copyright (Last Viewed On April 22, 2017); Steven Greenwood, '*Moschino "Vandal-Eye(Es)" Copyright Of Graffiti Artist Rime'*, Mcdaniel & Co., Available At: Http://Mcdanielslaw.Com/Moschino-Vandal-Eyees-Copyright-Of-Graffiti-Artist-Rime/ (Last Viewed On April 22, 2017); Jacob Gershman, '*Graffiti Artist Claims Katy Perry Dress Ripped Off His Work',* The Wall Street Journal, Aug. 6, 2015, Available At: Http://Blogs.Wsj.Com/Law/2015/08/06/Graffiti-Artist-Claims-Katy-Perry-Dress-Ripped-Off-His-Work/ (Last Viewed On April 22, 2017) (All Mentioning That A Fair Use Argument May Potentially Be Made By Moschino).

39 '*Jeremy Scott, Moschino Settle Graffiti Copying Lawsuit*', THE FASHION LAW, July 4, 2016, available at: http://www.thefashionlaw.com/home/jeremy-scott-moschino-settle-graffiti-copying-lawsuit (last viewed on April 22, 2017).

have caused harm to the potential market or value of the work as such.

In order to evaluate if the use made by Moschino of Rime's work 'Vandal Eyes' on its clothing collection would have constituted fair use under the current law in U.S. had the suit not been settled, each of the four fair use factors will be considered one by one below.[40]

i. *First factor*

In *Seltzer*, the court, relying on *Campbell*, held that a work is transformative "*as long as new expressive content or message is apparent*" even where only "*few physical changes*" have been made to the original work and the work does not "comment on the original". Further, it didn't find the commercial nature of Scream Icon useful after finding it to be transformative. Therefore, the fact that Moschino's apparel did not comment on or criticize Vandal Eyes, that there were only a few physical changes made to it and that the copying was for a commercial purpose would not have had much consequence on this factor's analysis. Thus, the only determination to be made by the court would have been whether Moschino's clothing featuring Vandal Eyes has "new expressive content or message" so as to render the work transformative. Although some viewed Scott's work to be not making any

40 *See generally* Zwisler, *supra* note 6 (analyzing if use in Davidocivi case would have been held to be fair use if it were to be brought before the Ninth Circuit by applying *Seltzer* to its facts).

statement on the society,[41] Scott appears to have made the argument that the mural was used in Moschino's clothing to provide a social commentary "on the way in which society objectifies women by literally imposing cultural symbols and meaning upon them".[42] The court, like the *Seltzer* court, was likely to have heavily relied on such deposition if made by Moschino and consider the work to have a new expressive content or message and thus transformative. The fact that some of Moschino's own graphic design was also added could have been used, by relying on *Cariou*, to reject an argument, had it been raised, that Moschino's clothing copying Rime's mural were its derivative works involving a change in form of the work from wall to cloth. Therefore, the first factor was likely to be weighed in favour of a fair use finding.

ii. *Second factor*

The way Scream Icon was acknowledged as creative in *Seltzer*, Vandal Eyes, not being factual in nature, would also have been acknowledged as creative by the court. However, as it had already been published the way Scream Icon had been, the court, like the

41 '*Graffiti Is Art Worth Suing Over*', THE LEGAL ARTIST, Aug. 10, 2015, available at: http://www.thelegalartist.com/blog/graffiti-is-art-worth-suing-over (last vied on April 22, 2017).

42 '*Jeremy Scott Responds to Rime's Copyright Suit Over Katy Perry Dress*', WWD, Oct. 30, 2015, available at: http://wwd.com/business-news/legal/jeremy-scott-fires-back-against-copyright-suit-10271176/ (last viewed on April 22, 2017) (mentioning that Scott has said that he "*used the medium of graffiti, and the way in which street artists impose cultural symbols and meaning upon the vernacular landscape, to create a metaphor of a sophisticated woman literally tagged with graffiti, much like any light pole, brick wall or mail box on the street corner.*").

Seltzer court, was likely to hold this factor to weigh only slightly in favour of Rime.

iii. *Third factor*

Even though Vandal Eyes seemed to have been copied both qualitatively and quantitatively, this factor was also likely to weigh in favour of a fair use finding as it did in *Seltzer*. Even though Scream Icon was entirely copied, the copying was considered necessary for conveying "new expression, meaning or message" noting that Scream Icon was not "meaningfully divisible" unlike a television show or book manuscript and the copying of the entire work. Similarly, Vandal Eyes being artwork like Scream Icon was unlikely to be considered meaningfully divisible and would have be found necessary for conveying the new message without further evaluation whether the purpose could have been achieved by lesser or even no copying.

iv. *Fourth factor*

This factor was also likely to have been found by the court, like the *Seltzer* court, to weigh in favour of a fair use finding. No harm would have been be found to either primary or derivative market for Vandal Eyes because, it being street art like Scream Icon, it would have been considered to serve a different market function than Moschino's clothing featuring it. Further, Rime had mentioned in his complaint that he does not make his art available

in retail stores and he, like his target audience, "*generally eschews connections to commercial consumerism*", thereby showing that the target audience for his artworks is very different from that of Moschino's apparel collection and that he is unlikely to license the work to commercial brands including any apparel brand.[43] This could have been considered by the court to weigh heavily against a finding of market harm especially in light of *Cariou* in which the difference in target audience, the lack of aggressive marketing and insignificant earning from the work was taken to show that market of Cariou's work was not harmed by Prince's use of it. Even in *Seltzer*, the fact that Scream Icon was licensed for use in a music video was not found sufficient to infer harm on potential market in absence of more information like the revenue earned from the license. Rime in his complaint had not argued harm to market or value of Vandal Eyes but only that to his reputation and career as a result of perceived association between him and luxury brands like Moschino.[44] This argument is similar to the one the Seventh Circuit, in *Sconnie*, said Kienitz failed to make and hinted it that could have helped his case. However, since *Sconnie* is not binding on a California district court and also did not elaborate upon the weightage such an argument could be given in the fair use analysis, it is unlikely that reputational and career harm would have tilted the fourth factor in favour of Rime in absence of a finding of harm to potential market and value of Vandal Eyes.

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43 *Rime's Complaint*, *supra* note 35.
44 *Ibid.*

Therefore, since all the four factors were likely to weigh in favour of a finding of fair use, Moschino's use of Rime's mural in its clothing collection would have not been considered fair use under the current U.S. law.

IV. SHOULD THEY BE CONSIDERED FAIR USE?

Although Prince's works could be and Rime's works could have been held to be fair use under the current law by the courts in the Second and the Ninth Circuit, they should not be considered as fair use because such a finding will stifle the very creativity that the copyright law was designed to foster. Many would argue that a finding of fair use in such cases would encourage new artworks based on existing ones. However, it needs to be noted that such a finding may at the same time reduce the incentive for creation of original creative works. For some like Graham the incentive may be lost by harm to the potential market of the work in question, for others like Rime and Kienitz it may be lost by harm to reputation and market for future works or long-range commercial opportunities by perceived association between them and the allegedly infringing work and for some it may be lost by mere lack of attribution and credit to the potentially infringing artist. In light of loss of such incentives to creation of new works being caused by the expansion of the scope of fair use defense, there is an urgent need for the courts to take a relook at the factors to be considered for determination of fair use.

The fair use analysis in each case must examine all the four statutory factors one by one and then weigh them together keeping in mind the underlying purpose of the copyright law. Under the first factor analysis of whether the purpose and the character of use the copyrighted work weighs in favour of fair use, the courts must focus, not upon whether the use is transformative due to the problems it has led to, but upon whether there was a justified need for copying of that particular work.[45] This evaluation must be guided by the examples of fair use found in the preamble of Section 107.[46] As stated in *Sconnie*, using a copyrighted work for a purpose which could be served by many "non-copyrighted alternatives" is not the kind of uses that the fair-use privilege is designed to further. Its goal, instead, is to "facilitate a class of uses that would not be possible if users always had to negotiate with copyright proprietors".[47] The re-shift of the focus of the first factor analysis from transformative nature of the use to the purpose and character of use will obviate the need for the judges to indulge in subjective interpretation of the meaning, message and expression of artworks leading to massive confusion and uncertainty in the law.[48] The alleged purpose and character of both Prince's and Moschino's works was artistic like that of Graham's and Rime's. The same purpose could have been achieved by some

45 Daniel J. Brooks, '*Rectifying Fair Use After Cariou V. Prince: Reviving The Forgotten Statutory Text And Requiring That Unauthorized Copying Be Justified, Rather Than Merely "Transformative"*', 15(1) CHICAGO-KENT JOURNAL OF INTELLECTUAL PROPERTY (2016).

46 *Ibid*; Zwisler, *supra* note 6.

47 Brooks, *supra* note 45.

48 Brooks, *supra* note 45*;* Zwisler, *supra* note 6.

other photograph or graffiti already in the public domain or licensed as it was not based on that particular photograph or graffiti. Also, although commercial use must not be presumed unfair, but statutory mention of it as an element of the first factor must not be ignored.[49] While commercial use, especially in cases of direct profit making, must weigh against a finding of fair use, a non-profit personal, educational or similar use in its favour.[50] Therefore, commercial use of Graham's and Rime's works for direct profit making and for an unjustified purpose should be considered to weigh the first factor in favour of fair use.

The second factor and the third factor must not be considered insignificant merely because the purpose of the secondary work is found to be transformative. The second factor i.e. whether the copyrighted work is factual or creative by itself is not very useful in the fair use analysis because, as noted in *Google Books*, "authors of factual works, like authors of fiction, should be entitled to copyright protection of their protected expression". Thus, in my opinion, the second factor must be considered together with the third factor i.e. the quantity and quality of the copyrighted work copied, to examine if the copying of the protectable elements of the copyrighted work was necessary to achieve the purpose of the secondary work. Substantial copying or even reproduction of an entire work may be considered necessary for achieving the

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49 Brooks*, supra note 45*, Landsman, *supra* note 9.

50 Brooks, *supra* note 45.

purpose of copying. For example, in *Kelly v. Arriba Soft Corp.*[51], reproduction of entire images in form of low resolution thumbnails was considered necessary to facilitate the internet search.[52] If more than necessary is copied this factor must weigh against fair use.[53] Prince and Moschino copied the Instagram photos and Rime's mural almost in entirety unlike in *Sconnie*'s case where it was held that so much from the original photograph was removed that only the unprotected element of outline of the face was remaining apart from the hint of smile. Such extensive copying was not necessary to achieve the alleged purpose of Prince's and Moschino's works because, as discussed above under the first factor analysis, their purpose had nothing to do with the particular Instagram photos and the mural copied. Therefore, the second and third factors should also weigh against a finding of fair use.

The analysis by the courts under the fourth factor i.e. effect of the copying on the potential market or value of the copyrighted work, also requires a major overhaul. For determination of harm to the potential market of the copyrighted work, the factors like number of its copies sold or licensed, revenues earned from it, extent of its marketing, evidence of plans for its further commercialization and the status of its target audience must not be considered because they may amount to "penalizing the unsuccessful or those just

51 336 F.3d 811 (9th Cir. 2003).
52 *Id.*
53 Landsman, *supra* note 9.

starting out in their field"[54].[55] The focus, as stated in *Google Books*, must be on whether the secondary work by itself can serve as a substitute for the copyrighted work or its potential derivatives or, in other words, has the capacity to satisfy the need for them. Prince's canvas works that incorporated the Instagram photos almost entirely is likely to satisfy the need for those photographs irrespective of the difference in medium and thus act as a substitute. Moschino's clothing that incorporated Rime's mural with minimal changes is likely to satisfy the need, though not for the mural itself, but for clothing on which the copy of the mural if is placed or licensed to be placed by Rime. Reproduction of the mural on clothes, involving only a change in form, would be a derivate of the mural.[56] Thus, Prince's and Moschino's work must be considered substitutes for Instagram photos and potential derivate works of Rime's mural and thus to cause harm to their potential market.

The market harm analysis must not be limited to that of market of the copyrighted work in question. As suggested in *Sconnie*, the effect of the secondary work on the reputation and long range commercial opportunities of the copyrighted work owner must also be taken into account in certain cases whether as a separate factor or as part of the fourth factor itself. These cases should not be those where the market for the work or future works is even

54 Landsman, *supra* note 9.
55 *See generally*, Landsman, *supra* note 9.
56 *See Google Books*, *supra* note 26.

destroyed as a result of criticism of or comment on the work but in cases like that of *Sconnie* and Rime where the harm is likely to be caused by the perceived association of secondary work with the copyrighted work owner. Also, in certain cases the positive effect of the secondary work on the demand of the original must be taken into account in favour of use.[57] However, this is limited to cases like that of *Google Books* where the secondary work acknowledges the existence of the original work and does not make the entire work available to the public. Such an argument therefore should not be accepted if made in Moschino's case where, though attribution was arguably made by copying Rime's signature as well, the entire work was copied. Similarly an argument if made that in some of Prince's screen saves, where the photographs copied were posted from the accounts of the copyright owners themselves (unlike in Graham's case), attribution was arguably made must be rejected. Therefore, in light of the above discussion, the fourth factor like the other three factors should also not weigh in favour of Prince and Moschino and their use should not be considered fair use.

If these cases come up before the courts in India, a finding of copyright infringement is likely to be made. The law relating to fair use of copyrighted works is different in India than that in the US. Section 52 of the Indian Copyright Act, 1957 provides an exhaustive list of acts that do not amount to copyright

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57 Zwisler, *supra* note 6.

infringement. This is unlike Section 107 of the U.S. Copyright Act, 1976 that provides only an illustrative list of purposes, the use for which could be considered fair use and enumerates four factors that are to be considered for determining whether an act amounts to fair use or not. Thus, under the Indian law, an appropriation artwork would not amount to copyright infringement only if it is covered by any of the acts exempted under Section 52. For instance, in *Civic Chandran* v. *Ammini Amma*[58], the Kerala High Court held that the defendant's counter-drama (that substantially reproduced the plaintiff's drama that it was based upon) fell within the purview of 'criticism' under Section 52(1)(a) as its main purpose was to criticize the drama and thus did not constitute copyright infringement. However, appropriation artworks such as those by Prince and Rime, which reproduce the underlying copyrighted works almost in entirety, merely for making new artworks for commercial purposes, are unlikely to fall within the ambit of any of such exempted acts. Even assuming that works such as that by Rime are meant to comment upon a practice in the society, they will not be covered under Section 52(1)(a) as it exempts fair dealing with a work for the purpose of criticism or review of only that work or of any other 'work'.

58 1996 PTR 142 (Ker).

V. CONCLUSION

The current law on fair use in the US, as propounded by the Second and Ninth Circuit, focuses on whether the secondary work transformed the original work by adding new meaning, message or expression to the copyrighted work rather than whether there was a justified need to copy that work for a different purpose. It generally assumes that the extent to which the work was copied was necessary to achieve the purpose of copying if the work is transformative rather than analyzing if the same could be achieved by lesser or no copying. To asses market harm to copyrighted work it focuses on market likely to be developed rather than one that could potentially be developed and considers many extraneous factors like the amount of revenue earned, extent of marketing and the type of target audience to be relevant. Therefore, under such law, it is not difficult to consider appropriation artworks like that of Prince and Moschino to be fair use. However, in my opinion, such unauthorized copying of entire of existing artworks with minimal changes merely for making another artwork should not be considered fair use because it will reduce the incentives for creation of original artworks and thus the very purpose of copyright law of "promoting the progress of science and useful arts" for public benefit will be defeated.

8 IJIPL 91-116 (2017)

STANDARD ESSENTIAL PATENTS, INJUNCTIVE RELIEF AND INDIA

Saumay Kapoor and Nanki Chopra[*]

Abstract

Standard Essential Patents are patent that are essential to a set industry standard to such an extent that the use of that standard requires infringement of the patent. In the contemporary world, legal issues regarding the enforcement of rights in case of infringements of such patents are arising worldwide because of increasing competition in technological markets. A product is required to comply with the standard to be commercially viable and consumer-friendly as it provides interoperability. This creates a bar on the patentee from exploiting his invention and requires him to grant licenses to every manufacturer on Fair, Reasonable and Non-discriminatory (FRAND) terms. With an increasing penetration of standardized technology in all sectors, a suitable policy framework is required to define the rights of a patentee who holds an SEP. Injunction as a right gives the patentee leverage and a dominant position that can lead to exorbitant royalties, in turn shifting the burden to the end consumer.

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While leading economies all over the world have started rejecting injunction as a remedy for infringement, the anti-trust agency and judiciary in India are still in conflict over this question. The researchers have aimed at highlighting the regime around the world with special focus on India and have offered a viewpoint that reconciles non-grant of injunction with Competition Law and Contract Law in the country. In consonance with the principles of equity, justice and good conscience in the Indian legal system, the researcher has provided legal backing that will create a bar on a patentee from abusing his right by seeking injunctions when he himself is guilty of non-grant of license.

I. INTRODUCTION

Patent means a patent for any invention granted under Patents Act, 1970.[1] The expression "patent" connotes a right granted to anyone who invents or discovers a new useful process, product, article or machine of manufacture, or composition of matter, or any new and useful improvement of any of those. It is not an affirmative right to practice or use the invention; it is a right to exclude others from making, using, importing, or selling patent inventions, during its term.[2] It is a property right granted by the

1 Patents Act,1970 § 2(1)(m)
2 Law Relating to Intellectual Property Rights, *Second Edition, V.K Ahuja*

State in return for a promise to reveal the details of the invention to the public[3].

Rights of a patentee, like other Intellectual Property Rights, are inherently, by virtue of their nature, negative rights that oblige inaction, such inaction generally being the bar on commercial exploitation of the patented product by anyone other than the patentee. This position has been cemented by a rejection of the concept of Patent Linkage in modern IP jurisprudence. As held in *Bayer Corporation v. Union of India*[4], the Patent Act does not confer a right to market the product. Where the patent is granted for a product, the patentee has the right to prevent an unauthorized person from manufacturing, using, selling or offering to sell the product. In case the subject matter is a process, the patentee can prevent any third party from using that process or/and from selling the product directly obtained from that process. While the Patents Act gives a patentee the exclusive right to enjoy his invention, he cannot be allowed to use his patent as a tool to cripple his rivals by seeking for injunctions without proper proof of infringement.[5]

Around the world, injunction as a remedy for infringement of patent has been widely recognized as equitable and fair. This puts the law of intellectual property at loggerheads with the

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3 F. Hoffmann-la Roche Ltd. And Another v. Cipla Limited, 2008 (37) PTC 71 (Del.).
4 Bayer Corporation & Anr. v. Union of India,
5 FDC Limited & Others v. Sanjeev Khandelwal & Others, 2007(35) PTC 436 (Mad.)

jurisprudence of a competitive economic regime. A patent essentially grants a person a monopoly right over his invention. This implies a monopolistic arrangement which is paradoxical to the regime of anti-trust laws. However, at one point, these two parallel jurisprudential policies are made to intersect, and that is the sphere of 'Standard Essential Patents'.

II. BACKGROUND

The recent friction in the smartphone industry over patents has brought to notice the concept of Standard Essential Patents (SEPs). These patent essentials set out a specific industry standard and have to be checked while complying with electronic devices such as mobile phones, therefore the manufacturers have to constantly keep a check on whether the devices are covered by SEPs.[6] Standard Essential Patents, hereinafter referred to as SEPs, are patents that are essential to a set industry standard to such an extent that the use of that standard requires infringement of the patent. Standard-setting Organizations select specific technical standards which are to be used by products in that industry whose participants constituted the SSO. Any patent that relates to the implementation of the technical standard is an SEP. The holders of such patents are required to disclose these patent rights and

[6] Dipak Rao and Nishi Shabana *Standard Essential Patents* SINGHANIA & PARTNERS: (Oct 11, 2016, 9:57 PM), http://www.singhania.in/wp-content/uploads/2016/04/Standard-Essential-Patents.pdf

license them to others on terms that are commonly known as FRAND.

One important aspect in standard setting is patents that are not crucial are included into the standard and become standard-essential patents (SEPs). To avoid monopolization the patent owners covered by the standard are required by the standard-setting organizations to give a free way to grant license on appropriate terms.[7]

III. STANDARD

The term "Standard" is defined as a *"document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context"*[8].

Standard can be broadly classified into two: A *de facto* standard that is applied when a certain technology is widely accepted by the public by strategical methods used by the market players to gain a dominant position in the market even when a formal standard setting body has not been adopted. The *de jure* standards on the other hand are standards set by Standard-Setting Organizations (SSOs) that are responsible for developing, setting and

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7 Josh Lerner, Jean Tirole *Standard Essential Patents* THE NATIONAL BUREAU OF ECONOMIC RESEARCH: (Oct 11,2016, 10:00 PM), http://www.nber.org/papers/w19664

8 Standard and patents document scp/13/2 http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.pdf

maintaining standards.[9]

Standard today, plays a key role in providing better quality products resulting in a large number of choices for the consumers that helps in keeping healthy competition and the prices low. The goal of standardization is to gain interoperability of products manufactured by various companies. It helps in promotion of innovative products and services with an aim to enhance the confidence of users eventually leading to creation of a large scale market. Therefore, it is one of the best mediums for new products to enter the market. It helps gain a perfect balance between collaboration and competition.

A. Standard Setting Organization

Standard Setting Organizations are entities having primary focus in activities such as interpreting, amending, producing and coordinating different kinds of standards applicable to a large number of users beyond the nexus of Standard Developing organizations.[10] To keep a check on patent owners who require payment of more than reasonable royalties, also known as "*patent holdup*", SSO's usually adopt Intellectual Property Right policies for patent owners to unveil their patents and accordingly leave it to the disposal of SSO to select from the standards they set. The

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9 Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India *Discussion paper on Standard Essential Patents and their availability on FRAND terms* (1st March 2016)

10 *Standard Setting Organizations* US LEGAL DEFINITIONS: Oct 12, 2016 2:30 PM), http://definitions.uslegal.com/s/standard-setting-organization-sso/

cost of accessing the IP to implement that standard is also important information for SSOs to choose a standard base.[11] As mentioned earlier SSOs have certain guidelines regarding hold-up issues and therefore, have set certain rules regarding their disclosure on patent applications, licensing, mostly of license essential patents on Fair, Reasonable and Non discriminatory or Reasonable and Non Discriminatory terms. Even though these rules have been set up as a bench mark for legal disputes, they still do not completely follow these rules. Standard hold-up is a public as well as a private concern. If the royalties charged are high then the consumers are directly affected, therefore they can be seen as a public concern. On the other hand all the manufacturers of standard compliant equipment do not want to bear the burden of paying double to the patent holders nor do they want these patent holders to shun a better technology than the existing one just because it is patented and set unreasonable demands in case of negotiation.[12]

B. Standard Essential Patents

Standard essential patents play the most crucial role in setting up specific industry standard. Standards given by Standard Setting

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11 Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India *Discussion paper on Standard Essential Patents and their availability on FRAND terms* (1st March 2016)

12 Joseph Farrell John Hayes Carl Shapiro Theresa Sullivan *Standard Setting, Patents and Hold up* HEIN ONLINE: (Oct, 12, 2016 3:00 PM) http://heinonline.org/HOL/LandingPage?handle=hein.journals/antil74&div=22&id=&page=

Organization leads to an established ground where the market players must be in conformity with the essential features set out by these standards. If the device is in conformity with the set standard then it is allowed to disclose to the public that the product is in compliance with the standards.[13] A global war of sort is playing out before courts and competition regulators on the issue of standard essential patents. These patents are essential to implement a specific industry standard. Once these patents become industry standard, it becomes impossible for manufacturers to make gadgets such as smartphones and tablets without using that patented technology. This gives immense power to the owners of such patents to restrain manufacturers from using the technology if their terms are not agreed to. The reason standard essential patents developed was the need to strike a balance between the patent holders who basically have a monopoly to be exercised on the technology they have developed and the licensees who are utilizing that technology are bound to pay royalties on it but the amount of royalties to be given is still unsettled.

C. Fair, Reasonable and Non Discriminatory (FRAND)

FRAND is an acronym for Fair, Reasonable and Non-Discriminatory and it refers to the terms on which the patent

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[13] Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India *Discussion paper on Standard Essential Patents and their availability on FRAND terms* (1st March 2016)

should be licensed. To face the issue regarding patent hold up certain IPR guidelines were established that required owners to have transparency pertaining all patents and, subsequently, compulsorily commit to licensing their Standard Essential Patents on FRAND.[14] In this process the SSOs take a commitment from the patent owners to sustain moderation in their royalty claims in a fair and non-discriminatory manner. This gives the manufacturers confidence that the patent owners will not restrict them in any manner by imposing unfair terms. Therefore, FRAND makes it a compulsion for patent holders to grant license to the smaller sharks in the market in a negotiable, fair and reasonable manner.[15] Laying down guidelines as per FRAND usually attracts others to adopt their patented technology as these commitments are made voluntarily by participants in standard developing activities.[16] It is debatable to state whether FRANDs commitments with the past record have proven to be effective in restraining the market powers from monopolization and creating an effective balance between the patent holders and the licensee through standardization or not as the enforceability of these commitments are questioned in light of how the terms "*fair"* and

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14 Jorge L. Contreras *A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust through a historical line:* (Oct, 12, 2016 5:20 PM), http://poseidon01.ssrn.com/delivery

15 Jorge L. Contreras, *A Market Reliance Theory for FRAND Commitments and Other Patent Pledges*, UTAH L. REV (forthcoming 2015) [hereinafter *Market Reliance*], papers.ssrn.com/sol3/papers.cfm?abstract_ id=252594

16 Jay Dratler *License of Intellectual Property* (2006 update); Christopher R. Leslie *Anti Trust Law and Intellectual Rights* (2011) at p. 574-75

"reasonable" are interpreted which have in certain cases been disputed.

D. Disputes

There is a fundamental belief that SEPs, being made available to everyone, are an infringement on the inherent exclusionary right of the inventor. This stifles innovation as the patent owner is not allowed to assert his rights. Some believe that just because the patent owner has promised to license such patent on FRAND terms, he has waived his right to seek an injunction against a company implementing the standard, but failing to reach an agreement over the license with the SEP holder. If injunctive relief is provided, the potential negative effects on competition, and hence, the consumers, will be immense. An SSO does not essentially impose a condition that bars injunctive relief, but if such a condition is imposed, it will discourage innovators from contributing their invention to the standard.

IV. THE INTERNATIONAL PERSPECTIVE

A. United States of America

In the United States of America, infringement actions are under the jurisdiction of the Federal District Court. Prior to the landmark *eBay Inc. v. Merc Exchange* case[17], granting injunctions was a mandatory rule for the Federal District Court as imposed by the

[17] eBay Inc. v. Merc Exchange, LLC, 547 US 388 (2006)

Federal Circuit Court. However, this pigeon-hole idea was rejected by the Supreme Court that issued guidelines stating that there was no fixed rule for granting injunctions in case of infringement. Instead of following a rule strictly, the court came up with a 4-point test to determine whether injunctive relief can be provided or not –

1. *that it has suffered an irreparable injury;*

2. *that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;*

3. *that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and*

4. *that the public interest would not be disserved by a permanent injunction.*

The plaintiff has to prove that the above four factors are applicable to his case to be eligible for getting an injunction on equitable grounds. This shift in jurisprudence from a mandatory rule to a discretionary power based on equitable concerns has made it more difficult for the holder of a Standard Essential Patent to seek injunction in case his patent has been infringed upon.

In *Apple v. Motorola*[18], it was found that if the licensee agrees to pay a royalty that meets the FRAND requirements and the patentee has agreed to provide a license on the basis of FRAND terms, it would not be permitted to grant an injunction as both the parties are willing to honor the license agreement, which, unfortunately, may not have been negotiated successfully. As Motorola agreed that the royalty was adequate compensation for use of the patent, the licensee's willingness to pay such compensation will create a bar on the patentee from seeking injunctive relief. Since showing a monetary damage that cannot be adequately covered by compensation has become the norm for seeking injunction, injunctive relief for SEPs in USA has virtually become impossible since the commitment to grant a license on *reasonable* royalty makes the damages far lower and far more easily compensable than in other cases.

However, the Courts in the United States have clarified in *Microsoft v. Motorola*[19] that just the fact that the patentee has offered a license of FRAND terms does not create a bar on him from seeking injunctive relief. An injunction can be granted if, say, the infringing party refuses to accept a license on FRAND terms.[20]

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18 Apple, Inc. v. Motorola, Inc., No. 1:11-cv-08540 (N.D. Ill.)

19 Microsoft Corp. v. Motorola, Inc., No. 2:10-cv-01823-JLR (W.D. Wash. Nov. 29, 2012)

20 RealTek Semiconductor Corp. v. LSI Corp., No. C-12-03451-RMW (N.D. Cal. May 20, 2013)

B. Germany

German courts usually show no discretion in matters pertaining to granting of an injunction but there are always exceptions to the rule where they may set boundaries regarding the issuance on an injunction. It is notable that while German Courts have not been able to look for an exception in Patent Law, they have turned to the Competition Law regime in the country to create a bar on injunctive relief in certain cases as a claim to an injunction amounts to an abuse of a dominant market position of the patent holder. In a famous case in 2009[21], The German Federal Supreme Court (BGH) laid down conditions under which a defendant could avoid an injunction. The conditions are stated below and all these conditions should be cumulatively met-

1. An offer that the patentee must not reject.

2. A license seeking party that acts like a licensee.

The "Orange-Book" defence has been tested a number of times in German courts, but has prevailed only in a few cases. The Orange-Book requirements can also apply to cases where Standard Setting Organizations have set standards and there exists a FRAND commitment by the patentee.[22]

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21 Orange-Book-Standard (Az. KZR 39/06)

22 Michael Frohlic, *Availability of injunction relief for Standard Essential Patents* AIPPI SPECIAL COMMITTEE ON PATENTS AND STANDARDS (Q 222), Oct 13, 2016

The Court of Justice of the European Union (CJEU) delivered a landmark judgement in the case of *Huawei Technologies*[23], referred to it by the Regional Court of Dusseldorf, where an issue was raised regarding potential for enforcement action by holders of Standard Essential Patents (SEPs) to infringe EU competition rules against abuse of dominant position.[24] In this case, in April 2011, patent owner Huawei brought an action in German court against ZTE following failed negotiations. The parties had been in negotiations from November 2010 until March 2011. Huawei offered what it considered to be a FRAND license and ZTE responded with a cross license offer. No agreement was reached, though ZTE continued to sell LTE devices. In its lawsuit, Huawei sought both injunction and monetary relief. According to the judgement the issues raised in this case were regarding the indispensability of the patent and the fact that SEP status was only achieved in return for an irrevocable undertaking to license on FRAND terms. The court in this case stated that there is balance needed in maintaining free competition and regarding the issue on determining FRAND terms. The court's approach was that "*the irrevocable offer to grant licenses on FRAND terms cannot "negate the substance of [those] rights", but that "it does, none the less, justify the imposition on that proprietor of an obligation to comply with specific requirements when bringing actions against*

23 Huwei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH (C 170/13)

24 Maria Georgiou, *The EU Court of Justice Judgement in Huawei v ZTE-important confirmation of practical steps to be taken by Standard Essential Patent holders before seeking injunctions* NORTON ROSE FULBRIGHT (Oct 12, 2016 9:38 PM) , http://www.nortonrosefulbright.com/knowledge/publications/131306/the-eu-court-of-justice-judgment-in-huawei-v-zte-important-confirmation-of-practical-steps-to-be-taken-by-st

alleged infringers for a prohibitory injunction or for the recall of products" The judgement then focused on "those specific requirements" and gave certain guidelines on what steps the owner of the a FRAND encumbered patent should take before seeking injunctive relief. [25]

C. Japan

In the year of 2015, the Japan Fair Trade Commission issued anti trust guidelines for intellectual property on how it would be evaluated whether an SEP owner is abusing anti-trust laws by seeking injunctions. The JFTC contemplates a standard of per se liability for seeking an injunction against a firm that is "willing to take a license" on FRAND terms. The amendment's main focus is on refusing license or claim for injunction as such an act by a party may be an act of private monopolization therefore, an injunction against a party willing to take a license can be an unfair trade practice. [26]

The most popular case in Japan in light of patent infringement is *Samsung v. Apple*[27] In 2011, *Apple* brought a suit against *Samsung* on patent infringement where the patents at issue was related to the

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25 David Long, *European Union High Court gives guidance on seeking injunctive relief on FRAND-encumbered SEPs,* ESSENTIAL PATENT BLOG (Oct 12, 2016 10:20 PM), http://www.essentialpatentblog.com/2015/07/european-union-high-court-gives-guidance-on-seeking-injunctive-relief-on-frand-encumbered-seps-huawei-v-zte/

26 Lisa Kimmel, Crowell & Moring *Injunctive Relief for Infringement of FRAND- Assured Standard-Essential Patents: Japan and Canada Propose New Anti Trust Guidance* CPI ANTI TRUST CHRONICLE, OCT, 2015(1), Oct 13, 2016 11:20 PM at p 2.

27 Samsung Electronics Co., Ltd., et. al. v. Apple Japan, Inc., et. al., and Apple Inc. et. al. v. Samsung Japan Corp., et. al., Tokyo District Court, 28 February 2013, Cases nos Tokyo District Ct. 2011 (YO) 22027, 2011 (YO) 22098, and Case no. 2011 (WA) 38969

design of the iPhone. While *Apple* won the ruling in the United States, *Samsung* won the ruling in South Korea, Japan and U.K. The Tokyo District Court ruled that *Samsung* phones did not violate *Apple* patents on technology that synchronizes music between devices and services.[28] The court held that both parties who have entered into contract negotiations owe a duty to each other under the principle of good faith to provide the other party with important information and to negotiate in good faith towards the conclusion of license agreement.

D. United Kingdom

Courts in the United Kingdom have applied the *Shelfer* criteria to determine cases where an injunction can be withheld. This criteria was laid down in *Shelfer v. City of London Electric Lighting Co.*[29] and states that injunction will not be awarded only if the following four conditions are met-

- the injury to the claimant's legal rights must be small;
- and is one which capable of being estimated in money;
- and is one which can be adequately compensated by a small money payment;

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28 Tabuchi, Hiroko, and Wingfield, Nick, Tokyo Court Hands Win to Samsung Over Apple, *The New York Times*, nytimes.com, August 31, 2012. Oct 13, 2016

29 Shelfer v. City of London Electric Lighting Company (CA) [1895] 1 Ch 287

- and the case is one in which it would be oppressive to the defendant to grant an injunction.

In *Nokia v. IPCom*[30], the High Court of Justice observed the *Shelfer* criteria stating that Nokia wanted a license and IPCom was willing to grant a license, and only the terms needed to be agreed. In such a case, granting an injunction till the license conditions were determined would be highly detrimental to Nokia and it would against the principles of equity.

E. China

China has taken no-grant of injunction a step further by extending its antimonopoly laws overseas. In a case between Huawei and InterDigital, Huawei was awarded RMB 20 million in damages because InterDigital had breached Chinese competition laws by seeking an injunction against Huawei in US International Trade Commission and the District Court of Delaware while the parties were still negotiating the terms of the license. This was deemed to be a move to gain leverage and extort higher royalty rates out of Huawei than those paid by Apple and Samsung.[31]

30 Nokia Corp. v. IPCom GmbH & Co. KG, [2012] EWHC 1446 (Ch)

31 China IPR, *Huawei/InterDigital Appeal Affirms Shenzhen Lower Court on Standards Essential Patent*,
29 October 2013, http://chinaipr.com/2013/10/29/huaweiinterdigital-appeal-affirms-shenzhenlower-court-on-standards-essential-patent/

V. THE INDIAN PERSPECTIVE

The Intellectual Property regime in India went through a major overhaul after India joined the World Trade Organization (WTO) and the TRIPS Agreement (The Agreement on Trade-Related Aspects of Intellectual Property Rights). TRIPS set down the minimum standards regarding the grant of rights, enforcement in municipal laws and dispute settlement for those whose rights get infringed. Till date, it remains to be the most comprehensive multilateral agreement on intellectual property. [32] However, noticing the existence of weaker IPR regimes in developing countries, a transitional period of 5 years was provided to make the legal regime in the country compliant to the TRIPS agreement. This was later extended by another 5 years.

In pursuance of the same, various amendments were carried out in the Patents Act, 1970 to shift the focus to maintaining a balance between IP protection and public interest. With the same focus in mind, a considerable issue in contemporary IP paradigm is the question of Standard Essential Patents. The jurisprudence in India on Standard Essential Patents and the FRAND practice associated with it is still in its infancy.

Standard Setting Organizations like the Telecom Standards Development Society of India (TSDSI), Telecommunication

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[32] World Trade Organization, *Overview: The TRIPS Agreement,* WORLD TRADE ORGANIZATION (Oct. 11, 2016, 10:39 PM), https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm

Engineering Center (TEC), Bureau of Indian Standards (BIS), Global ICT Standardization Forum for India (GISFI), Development Organization for Telecommunications in India (DOSTI), etc. have emerged to formulate standards in various sectors. While TSDSI and DOSTI have their own IP policy catering to SEPs, BIS still relies on policies made by International Standards Organizations and leaves it to manufacturers to negotiate licenses for use of IP. TEC and GISFI have their IP policies strongly rooted in the ITU and ETSI, respectively.

However, the development of SEP Jurisprudence in India will depend on the judicial approach, understanding and condonation of IP policies of SSOs that impose FRAND terms on members.

A. At Loggerheads: Competition Commission of India & the Delhi High Court

In 2013, Micromax filed a complaint against Ericsson with the Competition Commission of India[33] stating that Ericsson was charging exorbitant royalty which amounted to an abuse of its dominant position as it is the sole licensor of 2G and 3G technology without which Wireless Telecommunication Standards cannot be met. In its preliminary order, the CCI held that Ericsson's royalty rates were in fact excessive and the fact of the matter that the licensees were forced to sign a Non-disclosure

[33] Micromax Informatics Ltd v. Telefonaktiebolaget Lm Ericsson, Case No. 50 Of 2013, Competition Comm'N Of India (12 November 2013)

Agreement might point to the fact that the royalty rate was discriminatory. The CCI used the FRAND reasoning to hold that the royalties demanded by Ericsson were prima facie against competition law and thus, investigation was ordered. At the same time, a similar case with the same questions was brought to the CCI by Intex against Ericsson and with the same findings, the CCI directed the Director General to combine the two cases and investigate the claims made against Ericsson by Micromax and Intex.

Ericsson appealed to the Delhi High Court and the HC issued a stay order against the CCI preventing it from making a final order and preparing a final report. An ex-parte interim injunction was issued against both Micromax and Intex. A similar result was seen when Best IT World approached the CCI against Ericsson in 2015[34]

While it has been observed that the High Court has recognized the concept of Standard Essential Patents and FRAND terms when it directed Micromax, Intex and Xiaomi to pay Ericsson using the net sale price of the downstream device as a royalty base, which has been praised for being in consonance with modern economic practice over the world, however, the High Court has failed to recognize and address the issues that arise when injunction is provided for infringement of an SEP.

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[34] Best It World (India) Private Ltd. v. Telefonaktiebolaget Lm Ericsson, Case No. 4 Of 2015, Competition Comm'N Of India (12 May 2015)

The Judiciary in India and the Competition Commission have been at loggerheads on this issue. Where the Competition Commission has recognized a sound practice of creating a balance between patent law and anti-trust law, the High Court has prevented the body from acting on the practice. Granting interim injunctions when a case is still being heard in Court and has not been adjudicated yet is detrimental to the prospective licensee as the average period of pendency of a case in India is very high. No amount of monetary compensation can cover for the loss of market and profits faced by the alleged infringer during that period of time. The balance of convenience in such a case in no way justifies the grant of an injunction.

While the Competition Commission of India can look beyond the law to determine whether a patentee is engaging in anti-competitive practices, the job of the Courts is to decide questions of law and not those of fact. While the Patent Act explicitly provides for grant of injunction in case of infringement, it is the job of the judiciary to decide the case on the basis of merits and give a judgement that is in consonance with the principles of equity, justice and good conscience. This calls for the Courts to look beyond Intellectual Property Law when the need arises to determine whether the patentee is entitled to an injunction or not.

B. Filling the Lacuna in Indian Jurisprudence

i) Competition Act, 2002

As contested by Micromax, the demands of Ericsson, if discriminatory and excessive, amount to an abuse of a dominant position. It is a well-established principle of law that the spheres of Competition Law and IP Law do not intersect. While Competition law prohibits creation of monopoly, intellectual property law is actually designed to grant an exclusive right that, in essence, creates a monopoly.

It can be argued that when a patentee has agreed to provide his patent in order to make it a part of an industry standard, he has essentially waived his monopoly right over it in exchange for a fair, reasonable and non-discriminatory royalty. The mass use of the patented invention and the royalty for that use makes up for the exclusionary right waived by the patentee. In such a case, application of Competition Laws cannot be excluded.

If a patentee holding an SEP refuses to grant a patent on fair, reasonable and non-discriminatory terms and uses the threat of injunction as leverage for charging exorbitant royalties, he has essentially abused his dominant position under Section 4(2)(a) by imposing an *unfair price in purchase or sale* i.e. royalty. If a license is denied to a producer on unreasonable grounds, it will amount to *denial of market access* as per Section 4(2)(c).

It was seen in the *Micromax v. Ericsson* case that Ericsson forced licensees to sign a Non-disclosure Agreement. If a license has been offered to everyone on FRAND terms, the need to keep the terms of the license secret does not arise. Such a condition will be a violation of Section 4(2)(d) as it imposes a *supplementary obligation* on the licensee as the obligation has no nexus with the subject of the license.

Such violations of the Act shall merit an inquiry by the Competition Commission under Section 19 of the Act. The common law doctrine of clean hands is applicable here as it discourages relief for anyone who himself is guilty of wrongful conduct. *"He who comes into equity must come with clean hands."* Any person who himself has abused his dominant position, violating anti-trust laws, should not be granted injunctive relief as he himself is guilty of acting in bad faith.

ii) The Indian Contract Act, 1872

The doctrine of promissory estoppel is a doctrine which is generally invoked in common law against the government. This doctrine implies that when a promise is made by the government that is not unlawful and not against public policy, the government cannot later refuse to fulfil that promise. This doctrine has been extended to the private sphere by the judiciary by enforcing promises without consideration acting on which the other party performed an act.

In *Kedar Nath Bhattacharji v. Gorie Mahomed*[35], the defendant had promised to pay Rs. 100 as a personal contribution for the construction of a town hall by signing his name in the subscription book. The construction of the town hall began on the faith of the subscription. The people subscribing were aware of the purpose of the use of the money. The act of the plaintiff to enter into a contract with a contractor for the construction of the town hall was done at the desire of the defendant and constituted consideration under Section 2 of the Indian Contract Act. Thus, there was a valid contract and he was held liable to pay the promised amount.

Following the judgement by the Calcutta High Court, the Madras High Court laid down the following principle in the case of *Perumal Mudaliar v Sendanatha Mudaliar*[36] –

> *"a promise to pay a subscription becomes enforceable as soon as any definite steps have been taken in furtherance of the object and on the faith of the promised subscription".*

In re: Hudson[37], the promise was to contribute a large sum of money to the congregational Union for the payment of Chapel debts. The promisor paid large instalment of his promised contribution and then died. The congregational Union then

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35 Kedarnath Bhattacharji v. Gorie Mahomed, ILR (1886) 14 Cal 64

36 Perumal Mudaliar v Sendanatha Mudaliar, AIR 1918 Mad 311

37 In re: Hudson, (2) 54 LJ. Ch. 811

sought to make the promisor's executors liable. The contention was that on the strength of the promise the Committee of the Union had incurred liabilities, and that this amounted to consideration. It was held that the claim was unsustainable in-as-much as the promisee had not undertaken any liability as part of the bargain with the promisor.

Justice Pearson in his judgment said, *"What is the consideration for the promise which was to make it a contract? There was no consideration at all. Mr. Cookson says that there really was a consideration, because the consideration was the risks and liabilities which the parties were to undertake who composed themselves into a Committee and became the distributors of the fund. In the first place there was no duty between themselves and Mr. Hudson (the promisor) which they undertook at that time—there was no binding obligation between themselves and Mr. Hudson".*

The above mentioned cases, if extended to Standard Essential Patents, can bind the patentee into honoring his FRAND commitments based on which the prospective licensee had started manufacturing products. The patentee made a general promise to grant a license to everyone willing to pay a reasonable royalty and based on that promise, the licensee started production. Later, refusal by the patentee to provide a license cannot be a ground for injunction as he must be estopped from refusing to provide a licence.

VI. CONCLUSION

In an emerging economy like India, Intellectual Property enforcement is critical to the growth of the nation as inability to protect their IP and enforce their rights discourages innovation and investment by foreign players. Countries like China, Japan and South Korea [38] have accepted FRAND-defences in SEP laws. While injunctive relief is and remains to be a legitimate remedy against patent infringement, the obligations flow from both sides in SEP cases and India remains to be the only major economy that has not accepted the obligation of the patentee to honour the FRAND commitment.

The notion of good faith is the basis of almost all laws in the Indian legal system and on that basis injunctive relief can be and must be denied. Injunctive relief in SEP is not only a violation of competition law, but also of the principle of good faith as the offer of a licensee to obtain a license relies on FRAND-terms accepted by the patentee. If bilateral negotiations have failed, what the Courts need to look at is being an uninterested party that brings the negotiations to a fruitful conclusion instead of issuing an injunction, which, while being lawful, is against the general public interest.

[38] Samsung Electronics Co., Ltd. v. Apple Korea Ltd, Seoul Central District Court, 24 August 2012, Case no. 2011 GaHap 39552

8 IJIPL 117-177 (2017)

ISSUES IN MONETISATION OF IPR IN LIFE SCIENCES

Swapna Sundar[*]

Abstract

Why is monetisation of IPR in life-science challenging? In my view, the source of the difficulty is that life-science researchers and research institutes too often leave the designing of the strategy for commercialisation to the end of product development. This means that, in the absence of a cogent strategy for product development and placement, the development of the product has been occurring organically towards certain goals which do not comprehend the requirements of a good commercialisation strategy.

The main pathways for commercialisation of IP in life sciences are

a. *Product development and marketing by the owner of the IP*

b. *Technology transfer to a licensee who then undertakes the product development and marketing*

c. *Funding for further research towards product development with an aim of technology transfer or product development and marketing by the IP owner*

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d. *Technology collaboration with an entity that is experienced in product development and marketing*

e. *Developing capacities through collaboration with different entities*

These routes to commercialisation fail when the Intellectual Property is not aligned with the goals of commercialisation. A successful commercialisation strategy for IP requires certain conditions and processes to be initiated at the earliest point, and in any case, at the appropriate time, during the entire product development pipeline. The necessary conditions for developing IP that is valuable commercially are:

a. *The organisation should be working on first-class commercial science. The institution and researcher should have the ability to align their competency in the science to the requirements of industry and market. They should be able to identify and build on its research expertise towards the cutting edge of global industrial science in the domain.*

b. *The research must have inter-disciplinary input. It is necessary that the researcher use and involve pervasive technologies, mapping and landscaping of IP across the globe and have requirement for highly developed data mapping techniques and software.*

c. *The research must follow the trend of the industry. For instance, it may be important that the team work on areas that leverage the uniqueness of individuals in the species that are the target of the research, or the potential beneficiaries from the research.*

d. *Branding of the researcher and the institution in the specific area of research are a distinct advantage.*

Crucial steps that build the strength of the Intellectual Property and also its industrial and commercial potential would enhance the opportunities for commercialisation and probabilities of successful commercialisation.

I. INTRODUCTION

A random keyword including terms such as "new findings in life sciences" throws up an interesting list of search results including the negative impact of shift work on health care of workers, the benefit of living in cities for women's health, the positive outcome of feeding declining populations of seabirds, the value of the different clocks in our brains in helping us to figure out our world and that the sex life of damsel flies proves that too much sex does not shortened lifespan.

All of these research results might impact our life in the coming decade. Take for instance the finding that there are different types of clocks in our brains. Dr. N. Ramakrishnan, Director, Nithra Institute of Sleep Sciences, says, "advances in the understanding of the clocks in our brain that regulate sleep and circadian rhythms can help us to develop treatments and interventions to help those suffering from sleep related disorders, as well as mental disorders in which time distortion is a significant factor, such as in schizophrenia and depression." Such input is useful in developing

patentable drugs and devices that can be used in preventive therapies and early detection.

The findings may be interesting to the non-scientific population reading the science and technology section of their newspaper, but will have little impact on their lives directly. However, at about the same time, there are commercial entities that are following the story. Commercial entities who have funded the research are watching the market response to the research, and commercial interest from players up the value chain; other commercial entities are studying the advantages of applying the research findings in their business. The researchers are also awaiting interest in their research from other researchers – commercial and institutional who can take their findings towards a product or therapy. They are also looking for bodies to fund their future research in the field, or to fund their entrepreneurial venture.

Research outcomes which are novel, inventive and useful are patentable. Mere discoveries, even of a seminal nature, that are input to product development are not patentable. The novel and inventive process that enabled the discovery or the novel and inventive technology that used the discovery towards a useful outcome are patentable subject matter. This means that discoveries and research results have to be protected through copyright protection or confidentiality agreements. While copyright may protect the work from unauthorised copying, lending, broadcasting or adaptation, it would not prevent another

researcher or institution from applying the research findings to product development, testing or validating the results or building on the research findings. In fact, publication is a mode by which the information contained in the document is widely disseminated to further scientific knowledge. The findings, packaged in a copyrighted journal article, along with confidential information regarding the research and any trade secrets are not, in themselves, commercially valuable unless they help create a commercial product or therapy.

Successful technology transfers are not common in India. In 2009, IIT-Bombay, one of India's top technical institutions, transferred about 28 solution reports for INR 72,02,355[1] to Intellectual Ventures. They had, at that time, about 200 patents which were not licensed. The deal was criticised because Intellectual Ventures is known as a Non-performing entity (patent troll) the vast majority of whose income comes from buying patents, aggregating these patents into portfolios spanning many disparate technologies and tying these patents together for license to other companies under the threat of litigation, or filing lawsuits for infringement of patents.

Despite the negative publicity regarding the deal, Devang Khakkar, director, IIT Bombay said "With this tie-up there's a clear incentive to invent." IIT Delhi Director Surendra Prasad

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1 Response to RTI application in No. AO/DR/PIO/2012 dated 11.05.2012

agrees: "Since this tie-up, we have a regular series of patent filing which is picking up now. Besides, arrangements like these would help us protect the IP to an extent.[2]" As per the Memorandum of Understanding between IIT and Intellectual Ventures, the latter would also bear the patenting costs associated with these inventions.

Prof. Ashok Misra, Chairman Intellectual Ventures India, formerly director of IIT Bombay and alumnus of IIT Kanpur said that his company takes a long-term view of technology and are searching for solutions that will be useful five or even ten years in the future. "Our goal is to find excellent collaborators to help us develop the best solutions for the global marketplace of the near future.[3]" The implication that may be drawn is that the technology solutions that Intellectual Ventures decided to license are in very early stages of research, perhaps not patentable subject matter, or in any case prior to patent filing.

This is borne out by the independent study carried out by the author of the patenting activity in IIT Madras mapped against the technology trend in the market in the same International Patent Classification.

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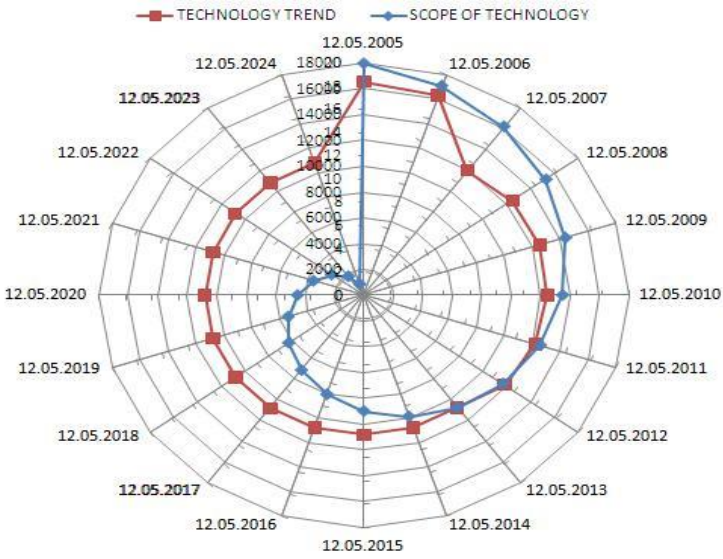
2 Kalpana Pathak & Shivani Shinde, *IITs to market patents with the help of investment firms,* Business Standard, June 8, 2009

3 *IIT-Bombay and Intellectual Ventures Sign Memorandum of Understanding*, INTELLECTUAL VENTURES (July 26,2017, 07:02 PM), http://www.intellectualventures.com/news/press-releases/iit-bombay-and-intellectual-ventures-sign-memorandum-of-understanding/

Top assignees

Sumitomo chemicals
Toyota
Hitachi
Asahi Chemicals
Matsushita
Nippon Catalytic



The study demonstrated that while IITs have been among the pioneers in the bioreactor technology they rarely persevered in the domain for more than three years. In the first three years of an emerging technology, product development is a very distant probability. However, as more entities enter the domain with their own research and patents, technology evolves towards products

and market-facing processes. An ideal strategy with intent to commercialise technologies, would require IIT-M to pursue a technology through its trend in evolution. This course can be pursued only if there is sufficient funding and demonstrable commercial interest, alongside long-term interest and commitment in the research team to pursue the direction of research. In the absence of these elements, it appears to be more useful to license out technology solutions.

In India, the inventor remains crucial to the licensing and commercialisation project even though his role in R&D is fulfilled. It also becomes important for the Indian inventor to create links and maintain networks over the entire distance from the lab to the market. In 2006, Aroumugame enrolled for a Ph.D. at the Botany Department of Madras University after working for a few years in a Bangalore-based biotech company. His was interested in plant-derived metabolites that would aid in management of the local necrosis following a snake bite. Through a professional acquaintance at his Bangalore-based company he reached out to a Chennai-based Biotech company that not only agreed to fund his research but also the patent filing and clinical trials, once the concept is proved. Aroumugame says that the collaboration came about through a personal network, but, he adds, "It would not have been possible if our research did not align with the company's strategy." This model of early linkage

between academic research and a biotech company is still rare in India.

Studies in the US have estimated the contribution of publicly funded research to the delivery of FDA approved therapies, both molecular and biological entities, to range from between 16% and 50%[4]. Translational opportunities from universities were pursued as spin-out companies, resulting during 1970-80s in the rise of the Biotech industry. Reliable statistics for India are not available, but it can be surmised that the routes available to researchers to create products and benefit commercially from their Intellectual Property are not very different from those available in the US and Europe.

a. The owner of the IP would undertake product development and marketing

b. Technology transfer to a licensee who then undertakes the product development and marketing

c. Funding for further research towards product development with an aim of technology transfer or product development and marketing by the IP owner

d. Technology collaboration with an entity that is experienced in product development and marketing

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4 Kneller R., *National origins of new drugs*, 23 NATURAL BIOTECHNOLOGY;:655–6. [2005 PubMed]; MAXWELL, R. ECKHARDT, DRUG DISCOVERY: A CASEBOOK AND ANALYSIS (Humana, Totowa; New Jersey: 1990)

e. Developing capacities through collaboration with different entities

The IMTECH case study below provides crucial insights into what inventors and inventor groups must do and practice to achieve commercial success. The Chandigarh based Institute of Microbial Technology (IMTECH), of Council of Scientific and Industrial Research (CSIR) was established in 1984 and has today developed a good IP commercialisation model.

In 1996, the organization developed and adopted its official IP management policy and became one of the earliest government entities in India to do so. The goal of the policy was to maximize the benefits to CSIR from its intellectual capital by stimulating higher levels of innovation through a judicious system of rewards, ensuring timely and effective legal protection for its IP and leveraging and forging strategic alliances for enhancing the value of its IP.

The market demand for thrombolytic agents (to dissolve blood clots) in India is more than INR 1 billion, out of which the demand for Streptokinase represents 80%, with the demand growing 25% annually. Streptokinase (SK) is used predominantly in low and middle-income countries. It is a protein that targets all clots in general. Although SK is effective, it exhibits several damaging side effects, including an increased risk of intravascular bleeding and haemorrhage. The alternative to SK is Tissue

plasminogen activator (TPA). TPA targets a specific clot and is thus more effective than SK, but it is ten times more expensive than SK

In 1992, IMTECH, under their Director, Dr. Girish Sahni, successfully developed a novel and effective blood clot dissolver and the associated production process. The new technology was extremely affordable and without the major side-effects such as haemorrhaging. While normal SK activates its properties almost immediately upon administration, the hybrid SK-based protein became active in a time delayed manner, becoming active only when it reached its target blood clot. Researchers also focused on a number of other goals for the hybrid drug. The drug exploited the latest trends in medical technology with a clear objective market orientation.

1. First, SK molecules were selectively modified so the new drug would retain the desirable properties of unmodified SK.

2. Second, different variants of the molecule would be developed to create more efficient dilution of blood clots with a reduced reaction from the immune system.

3. Third, the new drug would ensure the stable degradation of the blood clot thus making the drug stable.

4. Lastly, R&D also focused on developing a system for the production of the hybrid polypeptides (a chain of linked amino acids which form the building blocks of proteins), which includes DNA segments/polynucleotide blocks encoding the polypeptides, plasmids containing these genetic elements capable of their expression into protein, as well as micro-organisms transformed with these plasmids.

The drug is essentially a mutant SK-based protein molecule that remains inactive for 5 to 30 minutes after administration owing to a modified plasmin "activation switch" incorporated in it. Blood clots are rich in plasmins, a vital enzyme. Once the drug comes in contact with a blood clot rich in plasmins, the activation switch is turned on, and the molecule goes inside the blood clot and begins dissolving it. The more expensive TPA-based drugs target only a specific clot and activate in the vicinity of the clot.

In addition to the hybrid molecule, IMTECH invented a method for the selection and production of SK molecules that show increased stability, extended half-life (the time it takes a substance undergoing decay to decrease by half) and reduced immunogenicity (the ability of a particular substance to provoke an immune system response).

The results of the R&D were reported to IMTECH's IP cell, which drafted a report of the invention. This was sent to the IP

Management Division (IPMD) which performed a prior art search and decided to draft and submit national patent applications. After developing and sufficiently testing the invention relating to the hybrid SK up to 1998, that same year CSIR made national patent applications for the new SK hybrid molecule (Patent No. 159/DEL/2003), and its production process (Patent No. 3825/DEL/1998), which were granted along with divisional patents in 2005 and 2010, respectively.

In 1999, foreign patent applications were filed to protect the hybrid SK molecule in France, UK and the US. An international application was also made in 2009, for an improved process covering the mutants of SK and their covalently modified forms through the Patent Cooperation Treaty (PCT) system. Subsequent international patent applications were also made for the improved process in other countries that were not members of the PCT system.

The natural streptokinase product ("STPase") was commercially launched by Cadila Pharma Ltd. (Ahmedabad) in 2002. The comprehensive technology was successfully transferred to M/s Shasun Drugs and Chemicals Ltd., Chennai. Products "Lupiflo" and "Klotbuster" were launched in the Indian market in July 2009. Currently the product is being manufactured by about 10 companies. Meanwhile, the process for Protein-engineered, therapeutically improved "clot-specific" Streptokinase was licensed to a US firm, Nostrum Inc., New Jersey. Nostrum

Pharma is responsible for all costs related to further R&D, toxicological studies, clinical trials and further IP protection.

Nostrum Pharma was chosen because it had extensive experience in the formulation and commercialization of specialty pharmaceutical products and controlled-release, orally administered branded and generic drugs. Controlled-release drug delivery technology has significant improvements, perhaps the most important of which is patient friendly dosage amounts. This allows a reduction in the frequency of drug administration, thus making it easier for patients to keep up with their medicine. In addition, the company has the resources and expertise with which to undertake further R&D, clinical trials and testing, all of which are necessary for commercialization. Because IMTECH's goal is to commercialize the invention into an easily administrable drug with few side effects, Nostrum Pharma's expertise made it an attractive global licensee.

At the time, Dr Nirmal Mulye, President, Nostrum Pharmaceuticals, had said that this was an unprecedented example of a successful public-private partnership in India and thanked CSIR-IMTECH for being part of the project by providing the infrastructure for the biopharma manufacturing process development for CSSK. As of early 2012 Nostrum Pharma is undertaking detailed toxicological studies in primates and other animals. After this, Nostrum Pharma will seek approval from the Federal and Drug Administration (FDA) of the USA. Once these

steps are successfully completed, the company will be in a position to commercialize the technology worldwide. This author spoke to Dr. R. Soni, Scientist & Head, PTM of IMTECH, who highlighted some crucial areas where the inventor group assisted the tech-transfer process.

1. Supplementing superior infrastructure but low capacity: At the time that the Shasun signed the tech transfer agreement, they did not have the infrastructure to manufacture the product. The Director of IMTECH personally developed the facility and brought it to the required standard that was already available at IMTECH. However, IMTECH's capacity at the time was 10-50 litres which was barely sufficient to provide a lab-level confirmation and demonstration. Today they have the capacity to produce up to 500 litres.

2. 'Hand-in-glove' development: The Director and the scientists at IMTECH directly assisted in the development, though it was not seen as their responsibility. The scientists at IMTECH help in the following ways:

    a. Solving problems scientifically in a short time

    b. Participating in meetings for standards setting and regulatory approval alongside company officials

c. Modifying to comply with standards set by Controller of Drugs for India

d. Scaling up, removal of impurities and monitoring of batches

e. Process control

3. Upgrading of IMTECH development activities: Today the lab is preparing the batches for human studies being conducted by Nostrum. The competency derived by lab level work has provided the team with special competency to scale up production levels.

4. Understanding Business demands: Dr. Soni pointed out that as profit and returns in the shortest time are the core agenda for the businesses with which IMTECH is collaborating, the Licensee is given the freedom to provide business input, develop branding and retail outlets, areas where IMTECH lacks competency and business acumen.

5. Collaboration for commercialisation: The collaboration continues till commercialisation. The inventor's role does not end with the research but moves increasingly into the areas of development, regulatory studies and market implications.

IMTECH, being a governmental body, feared a few issues. IMTECH scientists were afraid that the licensee may not succeed on its own leading to failure of the product development process. This would result in a good product not reaching the market; or that companies may not behave ethically with IMTECH despite agreements and MOUs. The loss of time in processes that benefit the company but are not critical to the work of IMTECH proved costly to IMTECH. IMTECH has been forced hired scientific consultants to help save time and improve efficiency. On the positive side, the low cost of the drug increased access to the life-saving drug. While imported versions cost about Rs. 4000/vial, the Shasun version costs about Rs.1200/vial in the market and costs Shasun about Rs.200-300 to produce. The technology was exclusively and globally licensed to Nostrum Pharma for US $5 million, plus additional royalties which will be determined once the technology has been commercialized. The successful collaboration with Nostrum Pharma ensured further investment in R&D on fourth generation clot dissolving medication. In addition, the royalty and licensing payments also allowed CSIR to construct additional bio-incubator facilities to be used in the development of these technologies.

Nostrum Pharma was the worldwide licensee of this technology and any improvements. IMTECH's 2009 improvements to the technology were, in 2010, exclusively licensed the patent to Nostrum Pharma for approximately US $150 million, inclusive of

upfront compensation, milestone payments, expected royalties subject to successful completion of clinical trials at various phases, fees to obtain regulatory approvals before the product goes to the market, and accrual of royalties on commercialization.

Although the example of IMTECH is encouraging, it is more an exception than the rule. In general, Indian universities are known for basic research providing scientific insights and academic breakthroughs; they have as yet been unable to find a reliable route to turn these into tangible products, while providing a return on investment to the inventor and the sponsor. In the next part we will see how strategic intent in generation of commercially valuable IP can help close this gap.

II. STRATEGIC INTENT IN RESEARCH

It is the author's understanding that only starting with a 'strategic intent' improves the probability of commercialisation. Without strategic intent and direction, commercialisation is an accident. Commercialisation or monetisation can also not be planned or predicted. Commercialisation is achieved based on series of strategic decisions and short-term plans with a stable long-term goal in mind. Strategic intent is not mere ambition, or wishful thinking. Strategic intent is having faith in the science; and in the ability of the researcher and the organisation to achieve commercialisation. The owner of the Intellectual Property must be

imbued with enthusiasm, and the responsibility for the achievement of the apparently impossible goal.

On July 2nd, 2015, Biogen, a company that develops, markets and manufactures therapies for people living with serious neurological, autoimmune and hematologic disorders, forged a deal with AGTC to develop gene-based therapies for a range of eye diseases, marking the company's entry into ophthalmology. [5] Applied Genetic Technologies Corporation – AGTC - uses gene therapy to develop long-lasting treatments for patients with genetic disorders. Gene therapy replaces broken genes with normal functional genes, allowing a patient's own body to produce proteins to treat their illness. A single treatment provides long-lasting treatment leading to a better quality of life for patients. The innovative delivery method AGTC uses is the non-toxic adeno-associated virus (AAV), a safe virus that delivers healthy copies of the gene, replacing defective copies.

The strategies of both companies are so clearly in alignment that one wonders if they did not both begin their journey with an aligned strategic intent. Both share a commitment to research and aim to revolutionalise therapies and address unmet medical needs with novel breakthroughs. Their approach to R&D is focussed and closely aligned to their business strategy. Also, as part of their

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5 BIOGEN ENTERS EYE-TREATMENT ARENA WITH AGTC DEAL, REUTERS, http://www.reuters.com/article/2015/07/02/us-biogen-agtc-idUSKCN0PC1KR20150702

deal, Biogen has a license to use AGTC's proprietary technology platform to make AAV vectors for up to six genes, three of which are in AGTC's discretion, in exchange for payment of milestones and royalties.

Strategic partnerships and acquisitions have enabled growing profitability and competitive advantage for Biogen in the field of Multiple Sclerosis. *Rituxan*, and the novel antibody *Gazyva* allow for extended oncology revenue growth. Other strong products include *Tecfidera, Avonex* and *Tysabri*, and newly approved haemophilia therapies *Eloctate* and *Alprolix* with partner SOBI. The company also teamed up with two Italian entities—the non-profit organization Fondazione Telethon and the research institution Ospedale San Raffaele—to develop gene therapies that treat the underlying causes of haemophilia A and B. Another focus area of the company is its experimental Alzheimer's drug, aducanumab. The company intends to remain focused on developing drugs for some of the hardest-to-treat diseases.

AGTC on the other hand has pursued complimentary evolution. AGTC has a portfolio of gene therapies to treat orphan eye diseases. AGTC has a patented process by which AAV as gene-delivery vectors can be produced at commercial scale. While keeping track of their commercialisation agenda, the company focusses on unmet needs too. In July 2014, the company appointed Matthew Feinsod, MD, to the position of Product Development Officer. Dr. Feinsod is not only a serial

entrepreneur but also brings a practitioner's perspective to the development of novel therapies for unmet needs in eye diseases. In January 2015 AGTC announced the appointment of Stephen W. Potter as its Vice President and Chief Business Officer. Prior to his appointment, he was part of the senior leadership of Osiris Therapeutics that achieved approval of the first-ever stem cell drug therapy. By bringing in people with strength and expertise in product development and commercialization, the company enables success in partnering and other strategic initiatives.

Both companies independently and powerfully believe in their capability to develop therapies and treatments in areas where others have failed. The driving 'sense of direction' is to enhance the span of life or quality of living of those who suffer from disorders and diseases which do not yet have optimal treatments or therapies. The employees of both companies share the 'sense of discovery' and are proud to work in multi-disciplinary laboratories, benefiting from insights, and believe passionately and actively in a worthy 'destiny'. The strategic intent that was 'all out of proportion to the resources and their capabilities' of each company brought the two companies together to create a compelling destiny for the future. Their goal is to leverage this technology to develop a new class of therapeutics against different types of genetic disorders.

I see the 'strategic intent' of providing revolutionary therapies for unmet needs as driving the merger of their strengths. Not every

owner of valuable Intellectual Property can expect to commercialise the technology. Only a fraction of new molecules and therapies reach the market, and only a small proportion of these become blockbusters. In Gene therapy, the statistics are even more discouraging. The field of gene therapy has matured steadily since the 1980s, with the congruent accumulation of more than 35 000 papers, 16 000 US patents, 1800 clinical trials and more than $4.3 billion in capital investment in gene therapy companies. While some cell therapies have been approved by the FDA for marketing, no gene therapies or products have received approval. Despite the uncertain scenario, the two companies have come together, investing their passion and strengths in Gene therapy. It is only in the last decade that gene therapy has made a comeback, with 11 different companies raising at least $618 million from venture capitalists and the public markets.

Mikael Dolsten, President – Worldwide Research and Development of Pfizer says,[6] "We have also learned that it takes more than just great science to deliver meaningful new therapies… We have better integrated science and business, which meant transforming our approach to be more collaborative, more focused, and, we believe, more powerful for patients. Ultimately, we've worked to design an engine that can deliver patients a sustainable flow of important new medicines and vaccines, year

6 INNOVATING TO BRING IMPORTANT NEW THERAPIES TO PATIENTS, Pfizer.com, (July 26, 2017; 08:25 PM) https://www.pfizer.com/research/science_and_technology/rd_vision

after year." AGTC refers to its Management team as 'Industry Experts Committed to Cures'. By tying research and development to business imperatives, these companies seek to realise commercialisation on repeatedly on increasingly predictable basis.

A. Commercial science

While great science by itself cannot guarantee commercialisation, it is nevertheless essential that the science behind the technology be of world-class commercial standards. This means that the institution must try to adhere to the requirements placed on commercial entities as opposed to hypothesis-driven academic science. If the research entity is also a commercial organisation, it may already be following many of the activities in compliance with industry standards. If the research institution is an academic one, the research team should be able to adjust its processes to comply with at least some of the key requirements for good commercial science.

For instance, the design of the experiment should take into consideration speed and precision. Industry timelines are generally based on four quarters per annum, with new products expected every quarter or two. Fruitless pursuits should be identified at the earliest and terminated. The research must follow protocols strictly. At an early point in the research, rules regarding confidentiality, use of third-party or proprietary IP, and government regulations must be incorporated. Good Laboratory

Practices should be complied with. Experimental data must follow prescribed guidelines in industry. Laboratory documents which are admissible as evidence in Law must follow the prescribed documentation principles. Contributions of different members of team or external members should be carefully noted, so that the possibility of dispute at the time of commercialisation is minimised. Institutions that have worked with sponsored research projects are familiar with some or most of these requirements. Nevertheless, traditional science methodology accuracy, honesty and diligence in carrying out the project remain essential.

B. Ability and alignment

The institution and researcher should have the ability to align their competency in the science to the requirements of industry and market. They should be able to identify and build on its research expertise towards the cutting edge of global industrial science in the domain.

The team should also be able to identify commercial potential in the project. Where the commercial potential is distant, or the technology platform is ahead of the industry's ability to use it profitably, the institutions should make a determination to release the knowledge in the public domain, since maintaining and monitoring a patent with no-returns is expensive.

To operationalise the Strategic Intent, every researcher must be allowed creative freedom. The research must benefit from inter-disciplinary input. It is necessary that the researcher use and involve pervasive technologies, mapping and landscaping of IP across the globe and have requirement for highly developed data mapping techniques and software.

In addition to traditional practices in commercialising such as identifying market size, and product champion, key focal points for customizing a licensing approach for each entity include understanding:

- the product benefits relative to existing products
- the expected customers
- market channels
- potential sales and margins
- additional aspects of the proposed or existing business

It is important to know what the technology would help the commercial partner to achieve. Lessons from the social media acquisition of WhatsApp by Facebook can be applied in other areas. WhatsApp was using up previously 'Facebook' time of target Facebook customers. By acquiring WhatsApp, Facebook has also reclaimed the time that people spend on WhatsApp.

Facebook has also regained users who moved to the messaging app that provided the ability to share photos and videos. The WhatsApp acquisition has saved Facebook from becoming a peripheral social media platform.

Commercial entities often transfer technology free of cost to certain communities to encourage standards setting in favour of their platform. IBM, in 2004 released half a million lines of its software code, valued at $85 million, to the Apache Software foundation, an open source software group. The move was calculated to encourage software developers to write applications in the Java programming language. The company is one of the leading supporters of the Java technology, which was originally developed by Sun Microsystems and IBM's software platform known as WebSphere runs and manages Java applications. This platform competes with Microsoft's software platform for handling the competing C# applications, called dot Net.

A research group or a developer group that is aware of the ecosystem that a larger commercial entity prefers can make a decision regarding language and platform. Similar ecosystems are created in different domains. The research group should find ways to align with the stronger party's market interests and commercial targets. The research group should also learn and understand licensing terms and conditions, including financial terms. These may include different models of licensing, and performance duty.

The research entity should be able to assess whether the commercial partner is capable of developing the product.

C. Trend analysis

The research must follow the trend of the industry. Trend in the sector may also be leveraging trends in allied sectors such as computing. Gartner, for instance, predicts that 'Mesh' referring to the dynamic connection of people, processes, things and services supporting intelligent digital ecosystems would evolve to fundamental change and support platforms. Solutions would ultimately support multiple users in multiple roles using multiple devices and communicating over multiple networks. This ecosystem would provide an unprecedented level of cooperation among different types of researchers.

Yet another area that researchers should watch, is government support. Even big companies take into consideration what areas of research and development the government would support before they spend a lot on the development. Companies like AGTC target orphan diseases, because competition in the area is less, and because the government supports development of therapies in 'orphan' medical domains. Keeping track of government grants and the trend in funding in different countries would prove beneficial when looking for start-ups and spin-offs. Research groups should align with these trends to remain attractive to a larger commercial opportunity.

D. Discovery review

Through decades of business activity, commercially successful life-sciences companies have clearly identified discovery review processes and controls. When research organisations set out to deliver on their strategic intent, the organisation should learn to align with the industry best practices in product development.

Wyeth's pre-merger Research Discovery Board team was recognised as the "Management Team of the Year" by Scrip in 2005 for effectively communicating a unified vision, demonstrating leadership amidst difficult times, and, in some cases, embracing an inter-disciplinary approach. The team managed a high productivity rate of 12 compounds per year into development. Since 2005, several large pharmaceutical companies have restructured their R&D departments to create smaller focussed units that take responsibility for the business outcome of their research. GlaxoSmithKline chief executive Andrew Witty in 2008 said, 'We're trying to drive a more ruthless, well-informed and objective approach to capital allocation decisions in discovery.'

The two structural entities are recognisable in most successful pharmaceutical companies. These can be instituted in research institutions with appropriate modifications:

a. Discovery Review team is responsible for the late discovery pipeline. It is a cross-functional team that provides candid assessment and makes funding decisions for the research projects. The team brings diverse perspectives on the merits of each project. The board may consist of Executives and representatives of the business development department, public health officials, and heads of drug discovery and product development. The discovery review board has the ability and the authority to halt projects because they don't get as far as originally planned, or the scientific problem turns out to be different than originally expected. This ensures that good money is not spent over bad.

b. Centres of Excellence, by whatever name they are called are multidisciplinary teams of scientists focusing on a therapeutic area, a disease pathway, or some aspect of basic biology. Some companies, like Glaxosmithkline, offer their Centres of Excellence wide freedom to operate like a biotech company; and the company provides funds much like a venture capitalist. This motivates scientists to become more ambitious and entrepreneurial. The Centres of excellence have to convince the Discovery review boards or Investment boards, that their ideas should be funded.

Pharmaceutical companies have always been dependent on blockbusters. A decade ago, a strategy that depended on blockbusters would have been seen as unviable. However, the complete sequencing of the human genome 15 years ago has

triggered a second blockbuster wave. Targeted treatments that overcome the issues in the drugs of the 1990s are proving highly successful, for instance, Sanofi's *Praluent* and Amgen's *Repatha*. Both drugs are aimed at people who do not respond to the popular cholesterol busters, the statins. Nevertheless, companies cannot bank on blockbusters alone and have created a more reliable and predictable pipeline for smaller-selling drugs, but for which there is a dedicated target consumer.

The research organisation must learn, at every level, to adapt to the evolving shapes of commercial entities who might be interested in their research. Instead of creating competing competencies and expertise, they must work towards creating complementary output. Further, the researcher and the research institution must develop a competitor focus through widespread use of competitive intelligence. At every level, the institution should be able to benchmark its performance against its most worthy competitors. The commercial entity who is interested in licensing the technology is often attracted to several possible technological solutions. In order to convince the potential licensee of the advisability of licensing one technology over another, the institution should be in a position to provide a convincing comparative analysis on the basis of both science and business.

VI. E. Operationalising the strategic intent

Integrating a strategic intent in the institution requires a team that is able to perceive and create the competitive advantages of the future. The team should ideally consist of a few scientists who have expertise in their domain supported by work experience in discovery review as well as strategy for development. Having created a diverse scientific body, and having stabilised the strategic intent of the research operation, the team should be allowed to exercise discretion and creativity.

Institutions engaged in conventional research and conventional drug discovery may have to radically alter their orientation from asking 'what they do' to 'why they do it' and deciding on the process based on the intent to commercialise.

Research in the life sciences domain is highly iterative with discrete stages beginning with exploratory biology and biochemistry based on data, to identify molecular targets. The goal of the process is to prioritize molecules with the best chance for success. Compounds are analysed for their desired effect on specific enzymes, or for activity against a parasite; they are essayed for activity against the target, or for other desired activities such as ability to penetrate the blood-brain barrier. Tests that monitor the compounds' pharmacokinetic properties are also initiated at this stage.

Lead compounds are optimised to enhance desired properties and therapeutic efficacy, while eliminating overt toxicity. Compounds may also be designed using computer modelling of predicted chemical characteristics. The design of the drug may also rely on x-ray crystal structures of lead compounds bound in the active sites of proteins. The next step is to optimise the preparation of the target molecules. When the drug is considered fit for testing in humans, it is defined as a drug candidate. Information from every drug discovery cycle is fed back into the design of new compounds.

The process is lengthy and complicated. The regulatory process for the marketing of a new drug or therapy is also stringent and expensive. In all it takes about 10 years and US $800 million to develop one new drug. Then again, fewer than one or two compounds per ten thousand tested actually make it to the market and are approved for market use.

A commercial entity therefore invests money, time and human resources in only those projects which are geared towards return on investment. The commercial entity undertakes rigorous review of every molecule or therapy to find any obstacles to monetisation, including legal or regulatory barriers. In the process, they also identify advantages in the process that may be useful to the long-term strategy of the company. When licensing-in technologies or partnering with research organisations to take

inventions to market, commercial entities study different aspects at the intersection of the law, the lab and the market.

F. Patentability and value beyond patents

In the process of drug discovery, experienced researchers often start with Patent analysis before initiating the R&D project. The patent system is an up-to-date, easily searchable and retrievable source of information on applied technology. Patent documents contain detailed technical information and the state-of-the-art in the industry. By undertaking a thorough search of the patent database, the researcher can avoid duplication of R&D efforts. Patent data enables the researcher to identify the focus areas, strategies and networks of competitors and potential collaborators. Patent databases also provide crucial information on freedom to operate. Researchers must be aware of the technologies that they are using and ensure that they are licensed for such use.

Every country has its own law governing the duration of exclusivity provided to owners of intellectual property, and the reason for providing such exclusivity. The Indian patent regime is geared towards providing the benefit of emerging technologies to those in need and to enable the growth of science. National IP legislation endeavour to balance the rights of the individual owners of intellectual property, their corporate sponsors and the rights of the public to access the fruits of the research and IP at

reasonable cost and with relative ease. IP laws, therefore, have provisions enabling the government to restrict the exclusive rights of the owner, where the larger public interest demands it.

National Intellectual property laws govern

- basic requirements for the protection of intellectual property within the country;
- manner in which the intellectual property rights of owners of IP may be exercised;
- list of activities which may be treated as violating these rights (called "infringement"), and
- remedies in the event of infringement;
- Penalties for infringement of IP rights.
- Rights of the Central Government in respect of protected IP, and how these may be exercised by the Central Government

In India, an invention to be patentable must be novel, have industrial applicability and involve a 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. Other countries have different standards for patentability.

The decision to patent the outcome, should it be patentable, ought to form part of the overall research and commercialisation strategy. Prior to initiation of the research activity, the strategy and design team should identify the prior art, the state of the art and the gap in the technology growth that can be exploited by the research activity. The patenting process must be initiated at the appropriate point in the research to ensure that all aspects of the invention are captured and protected.

Commercial entities are interested in patentable inventions because patentability of the invention can provide monopoly and competitive advantage for a period long enough to ensure return on the investment. Companies are also interested in areas of research where competitors, especially generic companies do not have capabilities. This would mean that generic competition would not enter the market immediately on expiry of the patent, enabling the patent holder to exploit the market for a longer duration.

In 2009, Pfizer acquired Wyeth in a cash-and-stock transaction for a total value of approximately US$68 billion.[7] In 2008, Bernard J. Poussot, then the chief of Wyeth's pharmaceuticals business, decided to reduce Wyeth's reliance on small-molecule drugs, by steering the company towards biologics — drugs that are derived

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7 By NATASHA SINGER Published: January 26, 2009, In Wyeth, Pfizer Sees a Drug Pipeline
http://www.nytimes.com/2009/01/27/business/27wyeth.html?_r=0

not from small chemical molecules but from living cells and are often given by injection or infusion. This strategic direction was chosen because generic companies are well prepared to enter the market with their cheaper versions of small-molecule pills when patents on them expire.

In contrast, biologics, whose molecules can be 100 to 1,000 times as large as those of traditional drugs, are difficult and expensive to replicate by traditional generic companies who lack biologic expertise. Further, because there is no established regulatory pathway for approval of generic versions of biologics, the monopoly in the market over the molecule would continue beyond the patent period.

"We became very attractive to a company like Pfizer, because you cannot be the No. 1 pharmaceutical company in the world and have not yet started in biotech," Mr. Poussot said in an interview soon after the acquisition by Pfizer. Had Pfizer chosen to enter the biologics market on their own, they would have had to spend not less than $1 billion and at least five years for the plant alone. For Pfizer, buying Wyeth, a company that has built up a sizable business in large molecules, along with a diverse portfolio and wide range of expertise in its workforce was a better decision. Even though biologics are generally aimed at rare and grave un-met medical needs, and the target market is significantly smaller than for small-molecules, they would ensure stable growth for the American company as the US overhauls its health care system.

Today approximately 70% of Pfizer's research projects and 75% of the late-stage portfolio are focused on vaccines and biologics, and it is well on the road to becoming a top-tier biotherapeutics company.

The area of focus and strategic direction can ensure the commercialisation of not only research output, but also research pipeline. Lack of competition and state of the art infrastructure in new and emerging areas of research can be highly attractive to a commercial partner.

G. Industrial applicability

Depending on the jurisdiction where the patent is being filed, the law requires that the product or process demonstrate subscribe to one of these requirements:

Utility

Utility is a patentability requirement in the United States. It requires that an invention be "useful", that is, it must demonstrate operability, beneficial and practical utility. But utility must be specific, credible and substantial. Further, it must not be frivolous or injurious to the well-being, good policy, or sound morals of society.

Susceptible to Industrial Applicability or capable of Industrial application

Article 57 of the European patent Convention states that an invention shall be considered as susceptible of industrial application if it can be made or used in any kind of industry, including agriculture. In India, section 2 (ac) states that "capable of industrial application" means that the invention is capable of being made or used in an industry.

The EPO Boards of Appeal[8] have held that the requirement for industrial applicability in implies a "commercial exploitation," with the purpose of achieving "financial gain." It was confirmed in decision T74/93 that, when a method falls entirely within the private or personal sphere of a human being, it cannot be considered to be susceptible of industrial application. The Case focussed on a contraceptive method for women. The compound, which was new and inventive, was held to be patentable, but the method claim was found to be lacking in industrial applicability, as the use of the compound was a purely personal use which could only be carried out in private by the women themselves. Further, industrial applicability has also been read to reject those inventions the use of which is only made by professionals such as doctors or lawyers, or used only for experimental purposes.

Research institutes that limit themselves to the utility criteria in patentability often lose sight of the requirement of commercial

8 Board of Appeals decisions T204/93; T144/83

exploitation through industrial applicability. Research institutions and researchers who concentrate on utility without industrial applicability do not focus on cost of manufacturing the drug at commercial scale, or even the possibility of creating enough product to fulfil the demand. In either case, a commercial entity would not be interested in the invention, unless they are in a position to use the invention in a scale and manner that is profitable.

Commercial entities must build industrial production systems and processes that conform to their commercial strategies as well as standards established by law and regulation. For instance, in development of a commercial process for production of Sildenafil, Pfizer required focus on various aspects including an efficient synthesis with high throughput, process safety, and environmental issues.[9]

The medicinal chemistry route used for the synthesis of early toxicity and clinical batches was perfectly serviceable for the synthesis of development quantities. However, this route was suboptimal as a commercial manufacturing route for the following reasons:

• The route was linear (nine linear steps).

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[9] Dale et al, The Chemical Development of the Commercial Route to Sildenafil: A Case History, Organic Process Research and Development 2000,4, 17-22 https://erowid.org/archive/rhodium/pdf/sildenafil.synthesis.pdf

• Potentially toxic materials [such as the sulphonyl chloride] were in the final bond-forming reaction. Multiple recrystallisations of the final material were required to get the usual high-quality material required by the pharmaceutical industry and to get these potentially toxic impurities to appropriately low levels.

• The difficulties of scaling up chlorosulphonation reactions are well-known in chemical development due to competing hydrolysis during the increased quench times on scale-up (and this was also noted for this project). Having the chlorosulphonation late in the synthesis meant that these yield losses occurred from a more expensive intermediate.

• Chlorosulphonating a late-stage, relatively high molecular weight intermediate, leads to larger quench volumes and hence increases both aqueous waste streams and the environmental burden.

The strategic advantages of the commercial route were as follows:

• Greater convergency.

• The clean cyclisation reaction is now at the end of the synthesis in the final bond-forming step. The potentially toxic materials now occur near the start of the synthesis.

• The scale-up and environmental issues associated with the chlorosulphonation reaction are placed earlier in the synthesis and

are associated with a cheaper, lower molecular weight material, hence minimising the problems.

The commercial route contains all of the desired attributes required in chemical development, namely:

• a safe, robust route

• a convergent synthesis

• a high yielding process [75.8% overall from pyrazole compared with the medicinal chemistry yield of 7.5%3]

• a high throughput in production plant

• an exceptionally low environmental impact.

Industrially applicable processes and products take many years of development. The original Sildenafil molecule was made in 1990. Development of the commercial process took 7 years. Fleming serendipitously discovered Penicillin in 1928, the first commercial batch sufficient to treat a patient was produced by Merck in 1941. The closer the research team is to an industrially applicable invention, the higher the chances of commercialisation. Further, commercial processes and products command a higher value in the market for research output, as the commercial partner would have to spend less time and resource in taking it to the consumer. Naturally, there is competition among the commercial partners to acquire the product for their own companies.

H. Market outlook

One of the key truths of the patent market is that inventions, however good they might be, do not sell themselves. It is necessary that the research institution and the patent holder be able to demonstrate the technical relevance of the patent to the products being taken to the market. The commercial impact of the product represented by the patent, or embedding the patent should be possible for the commercial partner to infer.

Generally, a number of metrics are considered by the commercial partner before licensing a patent including the size of the market, and the specific countries. The research institution would also have to understand the commercial imperative of the company. A drug dealing with diabetes would have better chances of commercialisation, than a vaccine for Ebola – which not only affects a small portion of the world, but also the poorest countries. Further a radically new treatment may not find favour with the consumer or the practitioner without extensive promotional activity.

On 3rd February, 2015, CNBC announced [10] that Sanofi has launched its inhalable insulin, *AFrezza*, in the United States. Developed by Mannkind, the drug-device combination is the only inhalable insulin available in the market. In 2006, rival Pfizer's

[10] http://www.cnbc.com/2015/02/03/sanofi-launches-inhaled-insulin-for-diabetics.html

Exubera had been introduced in the market, but was withdrawn as patients were not happy with the periodic lung function tests that usage of inhalable insulin recommended. *Afrezza* too cannot be administered to those with compromised respiratory systems and smokers. Further, long term users may face conditions such as nasal irritation or damage to nasal mucosa. A research outcome therefore that may be attractive to a commercial partner may be one that has a high probability of acceptance by potential users. These could be solutions akin to existing technologies. A radical new technology may result in high returns, but may also entail high risk. Companies generally prefer to back technologies that ensure returns with less risk.

Further, commercial entities are interested in technologies that provide them an edge over their competition. Research institutions with patentable outcomes that would like to commercialise would benefit from studying the IP portfolios of companies that compete with their commercial partner. If the technology could improve the commercial partner's position in the strategic market, they would be interested in the technology.

Finally, branding of the research institution, its earlier products and commercialisation experiences could play a big role in a commercial entity's interest in the new technology or solution. The IP market recognises the brand of the university, research institution, commercial organisation or researcher as a point in favour of commercialising their technology. A powerful brand

provides long-term strategic competitive advantage to commercialisation efforts. National or global ranking of research institutions and universities in the domain in which the technology falls impacts where the paper is published, the symposia to which researchers are invited, sponsorship opportunities and the ecosystem in which it receives visibility. Branding of the institution depends on the infrastructure available for research, diversity of staff, inter-disciplinary work place, and growing student or work force. The research team benefits from the number of publications, number of citations-per-paper, amount of funding and the profile of the funding agency, previous commercialisation experience and successful spin-offs. The brand of the institution also benefits from social and community activities, particularly those focussed on schools.

With past experiences behind them, university licensing offices also learn to utilise their insights on the market to commercialise technology. Having worked with industry partners or commercial entities, they are able to provide rational valuation, and have their legal work in order before negotiations. They may also consult IP Strategists or commercialisation experts more readily than those who have not had previous experience. The brand that reaches out is that the research institution is easy to work with and understand industry requirements better. Over a period, collaborative projects may emerge. In certain cases, competitors in the market may prefer to fund a joint project in an institution that

has learnt about business imperatives. The outcome is shared by the funders.

Brand may also depend on the geographical location of the research institution. If the institution is in a reputed life-sciences cluster, it would be able to reach out to ideal commercial partners early in their research. The promoters may also know and trust each other. Well regarded peers and collaborators also add to the brand of the institution. Companies design their strategies and then focus on initiation and implementation of collaborations and consortia that can reduce the commercial risks associated with ground-breaking discoveries and research. These programmes help companies to decide on partners and collaborators from an early stage in the product development. Participating in such programmes provides the research institution and patentee with branding and market outlook to support commercialisation projects.

Brand is consolidated by building credible patent portfolios around seminal patents and ground-breaking research. Expertise and planned effort must ensure that emphasis is placed on quality over quantity. Commercial decisions must be made to ensure long-term viability of the programme, including investment in infrastructure and regular staff to manage the project when research scholars leave after earning their degrees. The research must be targeted and aligned to specific potential commercial and

industrial sectors. Periodic analysis in the trends and landscape must provide input for tactical and strategic re-orientation.

I. STRATEGIZING FOR COMMERCIALISATION

Most companies have tremendous in-house capability to explore, develop, test and market drugs, consisting of scientific and medical experts. Therefore, external collaboration with other academic and industry laboratories is not wide spread, and might be instigated only to address a specific problem. Companies may also be looking for new research or target molecules to develop their opportunity-driven focus areas. AstraZeneca, for instance, lists Cardio-metabolism, Oncology, and Respiratory / Inflammation as its core therapeutic areas, and Infection & Vaccines and Neurosciences as opportunity-driven areas of focus.

When they want to specifically close an identified gap in their product pipeline, market research shows that they do so by acquiring or merging with companies that have the drugs they are looking for. In 2014, transactions in the healthcare sector reached $193.9bn. According to a global survey conducted by KPMG in collaboration with Mergers & Acquisitions Magazine pharmaceuticals/biotechnology are expected to be among the top three industries most active in M&A in 2017. Analysts speculate that this frenzy of deals in the sector has been set off by companies facing the loss of exclusivity on some of their best-selling drugs.

For companies, external resources are valuable for their insights on difficult challenges. They enter into agreements with institutions so that they can enable a wide network of researchers to work on challenges. Researchers work in one another's laboratories and share ideas on their problems. AstraZeneca believes that the chief aim of collaboration with scientists and researchers is to advance their 'scientific excellence'. Most companies clearly define what solutions they require or what their current challenges are. AstraZeneca, awards grants, screens exploratory targets and validates mechanisms in their 'fields of core interest[11].' Their Target Innovation call for proposals is limited to these therapeutic indication and treatments for neglected tropical diseases where they support the task of development. They require researchers to submit proposals containing only non-confidential information.

PATH, an international non-profit organization and a leader in global health innovation, accelerates innovation in vaccines, drugs, diagnostics, devices, and system and service innovations by mobilizing partners around the world, scaling up innovation and delivering measurable results that disrupt the cycle of poor health primarily in Africa and Asia.

PATH picks up products that are in the 'middle of the journey of innovation,' work closely with partners to develop product

[11] http://openinnovation.astrazeneca.com/what-we-offer/target-innovation/how-does-it-work/

development work plans early in the project life cycle, which are then used to identify and track deliverables, milestones, and key go/no-go decision points. Continued investments are tied to demonstrated results throughout the development process. Products in PATH's areas of interest are difficult to develop and many potential candidates and multiple potential solutions have to be pursued to develop a single product.

Apart from scientists, PATH also works with scientific advisory boards or technical advisory groups, comprised of key experts in their field with government and civil-society institutions to develop and introduce health solutions that address the country's highest priorities. These and other specialists provide input on technology evaluation, selection, and prioritization for project support.

A 2010 McKinsey report states that R&D heads in commercial companies have to make crucial decisions about program termination, acceleration, resourcing, and prioritization. Project termination decisions are especially difficult and can cost the company hundreds of millions of dollars if made too late. They surmise that the current high attrition rate in Phase III trials suggests that companies have overlooked or ignored key signals, and in some cases made poor decisions. R&D leaders can increase returns by identifying and removing poor performers from the portfolio earlier in development. Working through non-profit or institutional partners during the crucial early stages reduces the

cost for major commercial players. Pfizer's CTI page says that the Centre for Therapeutic Innovations (CTI) models are designed to solve key challenges – namely the high cost and substantial time investment – of drug discovery.[12]

The relationship between academia and pharma is neither a recent phenomenon nor a rare one, but it does not often yield results. This is because academic investigators do not subscribe to the goals and incentives of commercial stakeholders. In general, academic research does not work in human, or their design is not robust enough to test the right hypothesis. They consist largely of random incremental discoveries and scientific insights rather than focussed translational research.

However, in the course of their work, academic researchers may develop promising candidates. Companies study research institutions and researchers according to their area of work and expertise, their experience in working with commercial timelines and goals and infrastructure available to the researcher, and enter into collaboration with the institution and the research group. In 2014, Cancer Research UK signed an MOU with AstraZeneca[13] for the former to access the discovery facilities at AstraZeneca's new MRC UK Centre for Lead Discovery. The MOU provides that Cancer Research UK will decide which novel cancer drug

12 https://www.pfizercti.com/about_cti

13 http://www.cancertechnology.co.uk/cancer-research-uk-collaborate-astrazeneca-screening-new-cancer-medicines-astrazeneca-mrc-uk-centre

discovery projects to investigate and AstraZeneca has the option to negotiate a commercial license with Cancer Research Technology, Cancer Research UK's commercial arm, to progress the most promising candidates through further drug discovery and development. Cancer Research UK would develop in-house capabilities to improve drug discovery and enter into similar strategic partnerships with other leading drug discovery organisations.

Pfizer has created around 23 CTI (Centres for Therapeutic Innovation) which envision open-ended research collaborations, where a joint scientific committee made up of academic deans and Pfizer executives votes unanimously whether or not to fund a project. Here Pfizer does not focus on specific areas of Interest. If the signal in humans is interesting but maybe not commercially interesting to the company, or the risk is too high, the university and the institutions can license it to other parties.

Academic collaboration enables companies to enter into early science at less cost than if the project were undertaken within the company. Projects in academia-industry collaboration are funded based on milestones that are shared and agreed upon by investigators and the industry partner. This provides provide a clear focus for the project and is expected to reduce the time to clinic trials.

If the data proves that the science is unviable, or the project fails to meet translational objectives, the project is terminated. However, professional documentation and Standards research practices ensure that the results are used to improve future outcomes. If the industry partner decides to take the research forward, then the institution and investigator receives the pre-negotiated payments for proof of mechanism and proof of concept inhuman beings. Pharmaceutical companies are also experimenting with hybrid models which include venture groups. This model ensures that the risk of early stage discovery is shared between the company, the investigator and the institution, and any venture group. Approaches include partnering the industry partner's assets with pre-defined buy back rights, leveraging non-dilutive funding, and establishing strategic disease area alliances with biopharmaceutical companies and private equity / venture capital groups. Pfizer Venture Investments (PVI), the venture capital arm of Pfizer, for instance, invests in private companies in traditional venture capital syndicates. PVI also uses equity to support novel business structures such as consortium-based technology development (e.g. Ablexis), product out-licensing (e.g. Clovis Oncology) and business spinouts (e.g. Ziarco).

Companies prefer to license targets, candidates and mechanisms or work from partners in the discovery phase or early clinical development phase. Late-state development is preferably undertaken within the company. Generally, commercial partners

license in technologies from non-profit organisations and institutions very early in the development, often from institutions with which they have a prior or long-term relationship. This ensures that the institutional research falls within the business imperative of the commercial partner. Selected researchers generally get access to the company's proprietary drug discovery tools and technologies. The company supports the investigator in the expensive IND (investigational new drug) - and clinical-enabling functions (toxicology, regulatory, etc.).

Often academia-industry collaborations are headed by laboratory alumni. The company and the collaborative unit are in close proximity to each other. Proximity promotes collaboration in research and enables a culture of sharing and networking between the industry research team and the institutional research team. These collaborations are designed to sustain over the long term, as laboratories with short-term strategies would find it difficult to allocate resources, build brand and capabilities and create networks.

Further, companies appear to be setting up new premises and infrastructure to house their collaborative projects. Apart from the need to update the tools and devices, perhaps, this is so because established laboratories have established culture which may not meet the needs of the industry partner; the institutional team may not coalesce with the industry researchers, for instance. There may

also be a greater focus on publication or academic goals, difficult to align with translational research.

Industry partners have also evolved so that goals of both partners receive co-equal priority. Pfizer CTIs offer equitable intellectual property and ownership rights, as well as broad rights to publication. These ensure that the academic researchers continue to have motive and incentive to deliver results. The smaller, decentralised units also enable researchers the freedom to undertake exploratory science.

J. The small window of opportunity

The vast majority of licensing deals yield little or no money, and for most universities the royalty returns are low. The industry partners too do not appear to benefit in the large majority of collaborative deals. The truly valuable commercial inventions developed in a university research lab are few and far between. There are few functional models for commercialisation of research output which seem to have succeeded.

Researchers focussing on commercialisation must focus on closing the gap between university/academic research and clinical drug development. Universities and non-profit research institutions must decide whether they are going to pursue scientific exploration which may or may not result in commercially valuable products, or whether they are going to pursue

translational technology-led projects. Having made the decision, researchers may choose to pursue an independent course or tie up to one of the collaboration/partnership programmes. Public-private partnerships may also be developed to enable access to target markets and reach commercial goals.

While it is well known that a technology-led start-up does not always succeed, universities and researchers have and are continuing to pursue this route to commercialisation with enthusiasm. The IIT-Madras Research Park focusses not just on incubation efforts but also on propelling successful innovation in established R&D companies. IIT Madras Research Park is designed to facilitate a collaborative relationship connecting industry personnel to the "innovative inputs" from the Institute and acts as a catalyst for radical, high-tech development. IIT Madras also supports some projects with the initial seed funding. However, with funding the focus shifts from science to return on investment, and may not result in viable market-led products, unless the funding model and duration is flexible enough. Seek funding from a commercial investor to develop early stage targets to the pre-clinical stage, may also help the researcher to reach a wider audience through the investor.

There are several examples of examples of successful commercialisation of molecules from academic research, which leveraged the trend in acquisition of smaller commercial entities by larger market players. A brief development history of Somavert

discloses that it was independently discovered in 1991 by an Ohio University team referred to as Chen et al. and Cunningham et al. at Genentech Corp. The drug is used as treatment for acromegaly in patients who have had an inadequate response to surgery and/or radiation therapy and/or other medical therapies, or for whom these therapies are not appropriate. The goal of treatment is to normalize serum IGF-I levels.

In 1987, John Kopchick, a Professor of Molecular Biology in the Ohio University and graduate student Wen Chen discovered the growth hormone receptor antagonist, which blocks the body's normal action of the hormone. It took 15 years of research, development and clinical trials supported by Ohio University alumnus and biotechnology entrepreneur Rick Hawkins for the drug to achieve commercial success.

In 1994, Sensus Corp. based out of Texas, USA licensed the technology for development of GH receptor antagonists from Genentech Corp and Ohio University and undertook clinical studies. In June 1999 Pharmacia Corp. (formerly Pharmacia & Upjohn) signed an agreement to purchase 19.9% of Sensus Corp. and to potentially acquire the remainder of the company at a later date. In April 2000, a Phase III trial involving 112 patients provided evidence of the effectiveness that daily administration of the drug of 10, 15 and 20 mg suppressed serum IGF-1 in patients by 54-89%. The decrease in serum IGF-1 was accompanied by significant improvements in the signs and symptoms of active

acromegaly. Sensus Corp. entered into a licensing agreement with Shearwater Corp. for the PEGylation of pegvisomant using Shearwater's proprietary technology in April 2000. In 2001, Sensus submitted an NDA (New drug application) of Pegvisomant to the U.S. FDA for the treatment of acromegaly. Later Pegvisomant was granted Orphan Drug status by the FDA and was designated for Priority Review. It also received Orphan Drug designation in the EU and Japan.

In March 2001, Pharmacia completed its purchase of all Sensus Corp. By 2003 the European Commission and the U.S. Food and Drug Administration has approved Somavert. In July 2002, Pharmacia and Pfizer announced an agreement that Pfizer would purchase Pharmacia; control of celecoxib was often mentioned as a key reason for Pfizer's acquisition of Pharmacia. The deal was finalized in April 2003.

In 2011, Ohio University and its inventors announced that they have sold partial royalty income rights to its license for the growth hormone antagonist drug SOMAVERT® (pegvisomant for injection), to a private equity firm managed by DRI Capital Inc., pursuant to a five-year agreement that could net the institution and its inventors up to $52 million for new biomedical research and technology commercialization initiatives. Ohio University reported $8 million in royalty income in fiscal year 2010 from its license to the Pfizer Corporation for the growth hormone receptor antagonist technology. The option of monetizing the

royalty income from SOMAVERT® will help the University to support research and technology transfer.

Similarly, Northwestern University in the United States, benefited from the discovery of Pregabalin by medicinal chemist Richard Bruce Silverman. Silverman's lab made a series of compounds in the 1980s to try to inhibit the aminotransferase enzyme (GABA-AT) that breaks GABA down in the brain, as a means of increasing its levels to prevent epileptic seizures. While the compound broke down GABA, it also interfered with the production of GABA by interfering with the action of glutamic acid decarboxylase (GAD). In 1988 a visiting Polish post-doc (Ryszard Andruszkiewicz) made a series of 3-alkyl GABA and glutamate analogs which were particularly good inhibitors, while actually activating GAD.

As this seemed to be a good result, the university explored the possibility of commercialisation. Parke-Davis, a Warner-Lambert subsidiary, demonstrated interest in the product. Among the 17 chemical analogs only one enantiomer of the 3-isobutyl GABA analog turned out to be a star performer in the company's rodent assay for seizure prevention, and attempts to find an even better compound were fruitless. The next few years were spent on toxicity testing and optimizing the synthetic route. The FDA approved the drug in 2004.

It is found in subsequent research that the drug's efficacy was not related to the GABA-AT substrate behaviour or its activation of the other enzyme, GAD. But it was found that the product worked well in the company's animal models. Only after industrial development did scientists find out that the actual mechanism was found to be blocking of the release of glutamate, whose actions would be opposed to those of GABA. Further, the analog had excellent blood levels and penetration into the brain which also helps account for its activity.

Meanwhile, in 2000 Pfizer and Warner-Lambert made a $90 billion merger deal to end the biggest hostile-takeover in the United States. Lipitor, developed by Warner-Lambert and co-marketed with Pfizer, was one of the driving forces behind the takeover battle. Pregabalin is today marketed by Pfizer as Lyrica. The drug is one of the two approved treatments for fibromyalgia, epilepsy and the most effective treatment for seizures as well. The drug brought in $1.2 billion in sales in 2006 and in 2010 was approved in Europe to treat central neuropathic (nerve) pain. Northwestern University sold a sizeable amount of royalty interest in 2007 to Royalty Pharma, a company that specializes in acquiring cash-generating intellectual property, for $700 million to help the university's endowment. This deal has been termed the largest sale ever of a royalty stream for a pharmaceutical product.

In both cases, it can be seen that the product was able to leverage a market-level development. Can universities and research

institutions plan for their product to be part of an acquisition? Perhaps not, but it is possible to strategise to leverage these movements in the market by shopping the invention to the right companies of the right size, who may be attractive targets for larger companies. Proximity to industrial partners and sharing of ecosystem helps in making such strategic decisions. They can also create licensing packages that are value-added and attractive to acquisitive companies.

Yet another model is similar to what IMTECH has achieved. IMTECH has used its in-house capabilities and funding to develop resources that allow them to validate candidates, develop therapeutics and conduct clinical trials. In such institutions, specific focus may be placed on refining and validating candidates in target areas of research, rather than on the traditional "open-ended" academic approach to biomedical research. This would enable the institution to close the gap between academia and industry by linking industry requirement and academic goals. Growth of capability may lead to further funding opportunities for translational research.

Institutions also are encouraged to take forward technologies that are more commercially valuable such as composition of matter, rather than processes or formulations. While support for drug discovery and translational research are met in the US and Europe by governmental and non-profit organisations, such a system is not currently operational in India.

It is also surmised by this author that pharmaceutical companies prefer to acquire companies with novel molecules and successful therapeutics, in order to prevent competing products from emerging from the same source. It is possible that companies are not comfortable acquiring technologies directly from universities knowing that they will be leaving behind enough material and expertise for the university to continue to develop the project and come out with novel formulations or competing products. Perhaps it is for this reason that companies prefer to license early-stage products, which have not been subjected to industrial development. Institutions and researchers concentrating on early stage inventions and discoveries may perhaps do well to create discrete development units, members of which may be governed by a single or a few confidentiality agreements.

By far, the most promising route to commercialisation of life science inventions and discoveries appears to be Collaborative product development with external agencies including industry partners, government agencies and investors. Further, working with contract research organisation and industry partners would be useful to the academic researcher who only want to focus on areas that interest them, while relying for development and testing on their experienced industry partners. Collaboration and partnership between a company and an academic institution with dedicated infrastructure. Such units demonstrate focussed research towards translational goals. Proximity and shared understanding

of goals, values and drivers of both the institutional investigator and the company are given importance. Projects are selected based on scientific promise but must include a clear path to a proof-of-mechanism or proof-of-concept trial in humans. Publication restrictions are relaxed.

III. Conclusion

Institutions and researchers are yet to fully comprehend that in order for inventions and scientific research to be commercially valuable, research and invention activity should be aimed at commercialisation from the very inception. Institutions and researchers have to follow a strategy that aligns the processes and direction of research to the probable products that may emerge. Integrating crucial steps that build the strength of the Intellectual Property and also its industrial and commercial potential would enhance the opportunities for commercialisation and probabilities of successful commercialisation. A successful commercialisation strategy for IP requires certain conditions and processes to be initiated at the earliest point, and in any case, at the appropriate time, during the entire product development pipeline. If the final goal of commercialisation is to use the market pipelines of successful companies to reach the relevant markets, research institutions should invest effort and time, in studying such commercial entities, their goals and their agenda, in formulating commercial strategies.

8 IJIPL 179-191 (2017)

WHAT'S AT STAKE?: ANALYZING THE IMPACT OF FREE TRADE AGREEMENTS ON FARMER'S RIGHTS IN DEVELOPING COUNTRIES

Surbhi Gupta[*]

Abstract

Agricultural corporations like Monsanto and Bayer AG have long been following the trend of harvesting Genetic Resources obtained from farmers in Developing Countries at minimal costs and developing them into costly genetically modified seeds for commercial usage. This practice has enabled these corporations to have a substantial control over the flow of seeds, which has proven to be extremely detrimental not only to the livelihoods of small farming communities but also to food security, bio-diversity, ecology, health and the economy of Developing countries. The rapidly changing climatic conditions have, further, pushed these corporations to be on a constant look-out for more of these genetically diverse crops so that their traits can be harvested at nominal costs. Their interests are also increasingly reflected in the Free Trade Agreements (FTAs) which are being propagated by Developed Nations, many of which now have clauses that directly or indirectly work

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against farmer's rights and compel parties to accede, ratify and implement the controversial International Convention for the Protection of New Varieties of Plant, 1991(UPOV Convention 91).

I. Introduction

It is significant that despite the early demise of Trans-Pacific Partnership Agreement (TPP) with U.S.A pulling out the Deal in January 2017, Developed Asian Countries like Japan and South Korea continue to push for inculcation of predatory IP Clauses borrowed from TPP into the Regional Comprehensive Economic Partnership Agreement (RCEP). Thereinafter, this trend of using FTAs to undermine Farmer's Rights, hinder innovation and endanger bio-diversity is worrisome especially in lieu of the current Global environment, where a push towards accession to UPOV Convention 91 by Asian Countries would, in fact, further widen the economic disparity between developed and developing nations. This essay examines various clauses incorporated in FTAs that directly or indirectly effect farmer's rights in order to gain an understanding of the existing negotiation strategy being used by the Developed Nations and analyzes the impact of such TRIPS Plus clauses on Developing nations in the hope that this paves way for future negotiations where Developing Countries understand all the underlying implications before consenting to clauses in FTAs that affect their farmer's rights.

One of the major impacts of the wide-adherence of countries to the Agreement on Trade Related Aspects of Intellectual Property Rights, 1994[1] has been that knowledge is now seen as a subject-matter of trade. The provisions of TRIPS act as a minimum standard which has to be followed by the member countries. With respect to protection of Plant varieties, TRIPS has an important flexibility built into the Agreement, which allows member nations to protect plant varieties either by way of patents or by way of instituting an effective *sui generis* system or by instituting any combination thereof in their national legislations.[2] Driven by the interests of agricultural corporations like Monsanto and Bayer AG; U.S.A., Germany and other developed nations have constantly sought to provide patent protection for plant varieties to commercial breeders. Developed Countries have now resorted to use of Free Trade Agreements/Regional Trade Agreements[3] as a tool to serve the commercial interests of these agricultural corporations by requiring FTA partners to join and implement the "controversial" International Convention for the Protection of New Varieties of Plant, 1991(UPOV Convention, 1991)[4].

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1 Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 33 I.L.M. 1197 [hereinafter "TRIPS Agreement"].

2 Article 27.3(b), TRIPS Agreement.

3 Hereinafter referred to as FTAs.

4 International Convention for the Protection of New Varieties of Plant, Dec. 2 1961, amended March 19, 1991, TRT/UPOV/003 [hereinafter "UPOV Convention 91"].

II. The Implication Of Subscribing To The UPOV Convention 91 Standard

The UPOV Convention 91 provides the breeder with the right to full commercial control over the protected variety of plant, control over material harvested from the protected variety if used without authorization, and control over any varieties essentially derived from the protected variety.[5] This convention has long been criticized by developing countries, civil societies and research centres for its harmful implications for farmer's rights to save, use, sow, re-sow, exchange, share or sell and the right of farming communities to their traditional knowledge. This, in light of the fact that farmers and farming communities, through years of experimentation, using their keen observation and intelligence, have been the original harbingers of the vast crop genetic diversity and have made available freely plant genetic resources which are now being taken by modern agricultural corporations operating as breeders and being developed into genetically modified seeds for commercial usage. The case of the "Turkey Black Carrot" wherein Monsanto's subsidiary, Seminis, simply purchased a handful of farmer's seeds for coloured carrots that had been generationally cultivated by farmers in Adana, Turkey and obtained breeder's rights over them both in U.S.A. and in Europe, shows just how little the innovation required under the UPOV 91 system is.[6]

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5 Article 14, UPOV Convention 91.

6 Edward Hammond, '*Biopiracy of Turkey's Purple Carrot*', THIRD WORLD NETWORK (Feb. 20, 2014 11:09 AM), available at:

Moreover, the UPOV Convention 91 places no obligation on the breeders to disclose the source of genetic resources and contains no provisions to ensure that prior informed consent has been obtained from the farmer or/ and a benefit-sharing agreement has been entered into by the Breeder with the Country of Origin so that farmers may equitably benefit from the use of their resources.[7]

With the opening up of market access due to trade liberalisation and as a result of the system put into place by the UPOV Convention 91, seeds are now increasingly being exported by the breeders to small farmers at higher costs and with added stipulations in the form of Genetic Use Restriction Technologies. This presents a number of concerns, especially for developing countries in the context of food security, livelihood of small farmers, privatisation of crops and food products, bio-piracy, detrimental ecological and health effects, inhibiting of innovation and its impact on biodiversity. For instance, Monsanto's control and supply of their patented BT cotton seeds in which they induced sterile seed technology in order to switch off the vital genes in the offspring seeds has been largely linked to the large

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http://www.twn.my/title2/biotk/2014/btk140208.html (last viewed on April 22, 2017).

7 Executive Secretary of the Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing, '*Compilation of submissions provided by parties, governments, international organizations, indigenous and local communities and relevant stakeholders in preparation for the Third Meeting of the Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing*' 160-164 (2009), UNEP/CBD/WG-ABS/3/INF/1, available at: https://www.cbd.int/doc/meetings/abs/abswg-07/information/abswg-07-inf-01-en.pdf (last viewed on April 22, 2017).

spate of cotton farmer suicides in India in 2011-12.[8] Despite this, very few developing countries have inculcated farmer's rights or privileges in their national legislations and not all have ratified enabling treaties like FAO's International Treaty on Plant Genetic Resources for Food and Agriculture, 2001[9]and the Convention on Biological Diversity, 1992[10] which create positive obligations on member nations to provide for conservation of biodiversity, sustainable use of biodiversity and benefit-sharing in case of biotechnologies based on genetic resources obtained from another contracting party[11].

III. The Negotiating Strategy Of Developed Countries: Using FTAs As A Tool To Sign Off Farmer's Rights

The rapidly changing climatic conditions have, further, pushed agricultural corporations to be on a constant look-out for more of these genetically diverse crops so that their traits can be harvested free of cost. Their interests are also, increasingly reflected in the FTAs[12], many of which now have clauses pertaining to traditional knowledge and genetic resources. Many of these have the intention of making parties sign off farmer's rights to protect their

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8 Dr. Vandana Shiva, '*The seeds of suicide: How Monsanto destroys farming*', GLOBAL RESEARCH (Mar. 9, 2016), available at: http://www.globalresearch.ca/the-seeds-of-suicide-how-monsanto-destroys-farming/5329947 (last viewed on April22, 2017).

9 International Treaty on Plant Genetic Resources for Food and Agriculture, *adopted* Nov. 3 2001, S. Treaty Doc. No. 110–19 [hereinafter "PGRFA"].

10 Convention on Biological Diversity, *adopted on* June 5 1992, 1760 UNTS 79 [hereinafter "CBD"].

11 Art. 1, CBD; Art. 19, CBD; Art. 1, PGFRA.

12 Hereinafter FTAs.

traditional knowledge and farmer's privileges to save, sow, re-sow, share seeds and to make them subscribe to the UPOV standards instead. Additionally, clauses in FTAs such as those relating to differing standards for Plant variety protection, data exclusivity, lowering of non-tariff barriers, increased investment, etc are likely to further undermine Farmer's Rights, hinder innovation and endanger bio-diversity in developing countries. Further, FTAs propagated by Developed Countries incorporate clauses requiring the Developing Countries party to the agreement to be a signatory to the UPOV Convention 91 which is definitely not in the best interest of protecting their farming community's traditional knowledge.

For instance, take the case of Peru, who was amongst the first countries to introduce a National Regime to protect the Collective Traditional Knowledge of Indigenous People associated with biodiversity, in 2002.[13] By entering the US-Peru Trade Promotion Agreement[14], Peru became obligated to adopt the UPOV 91 system for the protection of plant breeders' rights[15] and to make "all reasonable efforts" to begin patenting of Plants and Plant material[16]. Consequentially, in effect, it signed off all its farmer's rights and provided U.S. corporations the power to access its

13 Law introducing a Protection Regime for the Collective Knowledge of Indigenous Peoples Derived From Biological Resources, Law No. 27811, July 24 2002.

14 United States-Peru Trade Promotion Agreement, U.S.-Peru, Apr. 12, 2006, available at: http://www.ustr.gov/Trade_Agreements/Bilateral/Peru_TPA/Final_Texts/Section_Index.html (last viewed on April 22, 2017) (hereinafter "PTP 2006").

15 Art. 16.1.3, PTP 2006.

16 Art. 16.9.2, PTP 2006.

genetic resources on a contract-basis. This scenario has become quite common in cases where Developing Countries like enter into FTAs containing clauses for patenting of plant and plant materials with Developed countries like U.S./A [17], EU [18] and Japan. [19] More recently, the leaked Country proposals [20] from Regional Comprehensive Economic Partnership Negotiations reveal that Developed Asian Nations like Japan and South Korea

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17 United States-Panama Trade Promotion Agreement, U.S.-Pan., Art. 15.3 and 15.9.3, June 28, 2007, available at: http://www.ustr.gov/Trade_Agreements/Bilateral/Panama_FTA/Final_Text/Section_ Index.html (April 22, 2017); Agreement Between the United States of America and the Hashemite Kingdom of Jordan on the Establishment of a Free Trade Area, U.S.-Jordan, Art 4.1(b), Art 4.18, Art 4.21 and Art 4.29(b), Oct. 24, 2000, 41 I.L.M. 63 (2002), available at: http://www.ustr.gov/assets/Trade_ Agreements/Bilateral/Jordan/asset_ upload_file250_5112.pdf. (last viewed on April 22, 2017); The United States-Central America-Dominican Republic Free Trade Agreement, U.S.- CAFTA-DR, Art. 15.1 and 15.9, Aug. 5, 2004, available at: http://www.ustr.gov/Trade_Agreements/Bilateral/CAFTA/CAFTADR_Final_Texts/Section_Index.html (last viewed on April 22, 2017); United States-Chile Free Trade Agreement, U.S.-Chile, Art. 17.1 and 17.9, June 6, 2003, 42 I.L.M. 1026 (2003), available at: http://www.ustr.gov/assets/Trade_Agreements/ Bilateral/Chile_FTA/Final_Texts/asset_upload_file535_3989.pdf (last viewed on April 22, 2017).

18 Free Trade Agreement between the Arab Republic of Egypt and the EFTA States, Egypt-EFTA, Art. 23, Aug. 1 , 2007, available at: http://www.efta.int/free-trade/free-trade-agreements/egypt (last viewed on April 22, 2017); Euro-Mediterranean Agreement establishing an Association between the European Community and its Member States, of the one part, and the People's Democratic Republic of Algeria, of the other part – Annexes 1 to 6 and Protocols Nos 1 to 7, EU- Algeria , Annex 6, Art. 3, Apr. 12,2002, available at: http://ec.europa.eu/world/agreements/prepareCreateTreatiesWorkspace/treaties GeneralData.do?step=0&redirect=true&treatyId=821 (last viewed on April 22, 2017); Euro-Mediterranean Agreement establishing an association between the European Communities and their Member States, of the one part, and the Kingdom of Morocco, of the other part, EU- Morocco, Annex 7, Art. 1, Official Journal of the European Communities (OJ) L 070 of 18 March 2000, p. 0002-0204, available at: http:// www.bilaterals.org/article.php3?id_article=415 (last viewed on April 22, 2017).

19 Agreement between Japan and the Republic of Chile for an Economic Strategic Partnership, Japan-Chile, Art. 162 Mar. 2007, http://www.mofa.go.jp/region/ latin/chile/joint0703/agreement.pdf (last viewed on April 22, 2017).

20 KEI Staff, '*2015 Oct 15 version: RCEP IP Chapter*', KNOWLEDGE ECOLOGY INTERNATIONAL (19 April,2016 ,11:52 AM), available at: http://keionline.org/node/2472 (last viewed on April 22, 2017).

are pushing ASEAN Nations and also other Developing Countries like India to create similar obligations on parties to join UPOV Convention 91 and to provide for patent protection for plant-derivatives and microorganisms. This would allow for protection of transgenic seeds and also seeds that are the result of certain breeding techniques to be the subject matter for patents, in countries which are pre-dominantly agricultural.

Using these Free-Trade Agreements to pressurize developing countries into accepting TRIPS Plus obligations presents a large number of legal, strategic and socio-economic issues for developing countries party to such agreements. Unlike the GATT and GATS Agreements, TRIPS Agreement does not include any provisions which exempt the application of Most Favoured Nation (MFN) principle for TRIPS Plus obligation in FTAs. Article 4 of TRIPS Agreement states that any member which grants 'any advantage, favour, privilege or immunity' to the nationals of *any* other country (whether that country be a Member of the WTO/TRIPS or not) must accord the same treatment to the nationals of other Members of TRIPS. [21] The clause by not exempting FTAs from the purview of the MFN principle in the manner in which Article XXIV of the GATT does, would pressurize the developing nation into providing IP concessions for all members of TRIPS. These TRIPS Plus clauses even though

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21 R. Mayne, '*Regionalism, Bilateralism, and "TRIP Plus" Agreements: The Threat to Developing Countries*', UNDP HUMAN DEVELOPMENT REPORT OFFICE OCCASIONAL PAPER, 10–12 (2005).

accepted only bilaterally/ regionally, in reality have multi-lateral implications. If such clauses are regularly allowed in FTAs, the flexibilities and the minimum standard provided under TRIPS will become a mere platitude and the TRIPS Agreement would become obsolete.

Entering into such FTAs may have another un-foreseen effect for signatories to FAO's International Treaty on Plant Genetic Resources for Food and Agriculture, 2001(PGRFA) and Convention on Biological Diversity, 1992(CBD). UPOV's position on Access and Benefit Sharing of Genetic Resources remains that disclosure-of-source requirements and benefit-sharing mandated by CBD are an added stipulation and not in line with UPOV 91's limited requirement of novelty, distinctness, uniformity and stability.[22] For the same reasons, UPOV would be completely incompatible with PGRFA too. Therefore, if a signatory to the CBD and PGRFA joins the UPOV Convention 91 at a later date, the UPOV Convention 91 will have an over-riding effect on the remaining treaties.[23] Clauses proposing to introduce a contract-based system for sharing of genetic resources will also be incompatible with the far more transparent multilateral, multi-sharing system of access and benefit sharing

22 Executive Secretary of the Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing, '*Compilation of submissions provided by parties, governments, international organizations, indigenous and local communities and relevant stakeholders in preparation for the Third Meeting of the Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing*' 160-164 (2009), UNEP/CBD/WG-ABS/3/INF/1, available at: https://www.cbd.int/doc/meetings/abs/abswg-07/information/abswg-07-inf-01-en.pdf (last viewed on April 22, 2017).

23 Art 31.1, UPOV Convention 91.

that has been established under PGFRA. Therefore, FTAs containing clauses for instituting a contract-based system for sharing of traditional knowledge and for joining and enforcing the UPOV Convention 91 , will supersede the positive obligations relating to biodiversity that have been put in place by CBD and PGRFA for member nations.

IV. Conclusion

From the above analysis, it is quite apparent that using FTAs as a tool against Developing Countries in order to pressurize them into signing off their farmer's rights is a well-thought out strategy of Developed Countries representing their private interests. The major difference between granting patent protection for plant variety to breeders and other forms of IP protection is that this increased standard of protection doesn't encourage innovation and development, but rather takes credit away from the original harbingers of genetic resources and blatantly allows for bio-piracy which is being carried out by agriculture corporations on a massive scale.

However, it must be noted that much fault also lies with developing countries that consciously trade off farmer's rights in exchange for increased market access. This is why, despite a number of NGOs and research groups like Genetic resource Action International (GRAIN), Institute for Agriculture and Trade Policy, Food First etc. who protect the impact of trade deals on small farmers and food security, developing countries continue to negotiate FTAs. The reason for this is that bilateral

agreements offer developing countries real gains in a competitive trade environment instead of the symbolic victories of multilateralism [24] and help these countries dodge unilateral sanctions that maybe initiated against them if the bilateral negotiations fail.[25]

Countries agreeing to signing off their farmer's rights must recognize they not only are agreeing to amend their national laws, without discussion with relevant stake-holders but that they also agreeing to standards that would have a frightening impact on food security, ecology, health, farming communities and on biological diversity in their nations . When seen in this manner, the perceived short-term benefits from trade deals for developing countries are far removed from long-term economic and social benefits for these countries. Further, if this trend of regionalism/ bilateralism is continued, it would eventually defeat all the efforts taken by the developing countries in the Nairobi Conference for the Adoption of the Convention on Biological Diversity in May 1992 to ensure fair and equitable sharing of benefits arising from the use of genetic resources.

On a positive note, it has been seen that certain Agreements amongst developing countries having a commonality of problems act as Regional Support Groups in their realisation of farmer's rights. In conclusion, it is, therefore, suggested that clauses such as those given in the Agreement on Establishing of a SAARC

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24 M. Baucus, '*A New Trade Strategy: The Case for Bilateral Agreements'* 22 CORNELL INT L J 1, 8 (1989).

25 M. Leaffer, *'Protecting United States Intellectual Property Abroad: Toward a New Multilateralism'* 76 IOWA L REV 273, 295 (1991).

Regional Seed Bank (2011)[26] can be used as model clauses by Developing Countries during trade negotiations in order to put in place a system to protect farmer's rights. Further, an attempt should be made to ensure that these clauses are in line with the mandatory provisions of FAO's International Treaty on Plant Genetic Resources for Food and Agriculture, 2001(PGRFA) and the Convention on Biological Diversity, 1992(CBD) so that it can be made certain that farmers equitably benefit from the use of genetic resources. Lastly, developing nations with large farming communities should prefer instituting an effective sui generis system for protection of plant varieties legislations rather than patenting plant varieties. Legislations like Protection of Plant Varieties and Farmer's Rights Act, 2001 of India can serve as a pedestal with this regard. Initiatives and projects such as the Traditional Knowledge Digital Library (TKDL) project which seek to codify Traditional Knowledge and make it available to Patent offices, though often criticized for presenting an open target for bio-piracy[27], if worked upon for the purpose digitalising traditional knowledge and genetic resources of farming communities with their consent, could also act as a scheme for protection of farmer's rights especially to prove prior art during examination of patent applications nationally as well as internationally.

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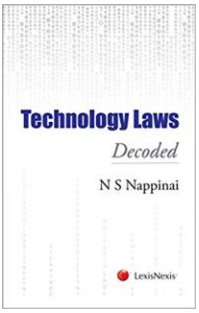
26 GOI, Ministry of Agriculture, Department of Agriculture & Cooperation, ESTABLISHING OF THE SAARC REGIONAL SEED BANK, Notification No.5-1/2011/SD-V (2011).

27 KS Jayaraman, '*Biopiracy fears cloud Indian database*', SCIDEV (Dec. 5, 2002), available at: http://www.scidev.net/global/bioprospecting/news/biopiracy-fears-cloud-indian-database.html (last viewed on April 22, 2017).



BOOK REVIEW

TECHNOLOGY LAWS DECODED

N S NAPPINAI, LEXIS NEXIS
ISBN 978-93-50350972-3, RS 1595

Prof. V. C. Vivekanandan[*]

The interface of new technology (cyberspace) and law has been a fascinating area of discourse in the last decade. The earlier technologies had a period of stability, which could be matched by legal systems as regulators. The new technology of cyberspace or Internet has been evolving and mutating in a rapid manner leaving the Legal system behind the curve.

This also makes publishing about technology and law interface a challenging task and in such times the book 'Technology Laws Decoded" by N S Nappinnai is a treat to read for its content, context, comprehension, communication and command of language.

* MHRD IP Chair Professor, NALSAR University of Law, Hyderabad.

The first chapter begins with the quote from Lennon's song of 'imagine' and continues with the author's imagination of sleek titles and subtitles - an oxymoron like 'borderless boundaries' and numerous other titles like 'Khulja Sim Sim' – the book additionally qualifies to be prescribed for 'Law and Literature'.

The book divided as six chapters dealing the interface of technology with constitution, crime, IPR, contracts, evidence and Jurisdiction covers the contemporary legal happenings and the under currents in the cyber space. The chapters are written with comparative state of affairs in UK, USA, Australia, New Zealand, South Africa and Sri Lanka giving us the diversity of approaches, impact and results.

With cover-to-cover 1000 pages of content has a veritable resource of references, case laws and other report information. This book will cater to both the beginners to the subject and researchers alike.

It will be sometime to get another treatment like this about the subject- read the author's quote of Michel Foucault's assurance that 'other books are possible not necessarily written by me'.

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