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I express my deep gratitude to Hon'ble Vice Chancellor Justice Mrs. Mridula Mishra, Hon'ble Registrar Shri Manoranjan Prasad Srivastava, for their free hand generous support in bringing this journal released. I also express my profound sense of gratitude to all the contributors of research papers, peer reviewers, all the Hon'ble members of the Editorial Board, my colleagues at CNLU. I acknowledge the sincere efforts of composition Team: Mr. Prashant Kumar Pushkar (Research Scholar), Ms. Lakshmi Gupta, Mr. Rajnish Kumar, Ms. Upasana Priya, and Mr. Amit Kumar (IT) for composing this e-journal (E-JAIRIPA) a proper shape, publication and release.

Prof. Dr. Subhash C. Roy
Chief Editor, E-JAIRIPA
Director (CIRF-in-IPHD)

CHANAKYA NATIONAL LAW UNIVERSITY

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CENTRE FOR INNOVATION RESEARCH AND FACILITATIONIN INTELLECTUAL PROPERTY FOR HUMANITY AND DEVELOPMENT

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VICE-CHANCELLOR'S MESSAGE

E-JAIRIPA

Hon'ble Justice
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It is a matter of immense pleasure and pride that the CIRF in IPHD of Chanakya National Law University is going to release Vol. III, Issue-01 of E-JAIRIPA (E- Journal of Academic Innovation and Research in Intellectual Property Assets) on 6th May 2023, on Sri Rabindranath Jayanti. It is also a subject of great pleasure that the journal is being released continuously for the last three years celebrating the fourth anniversary of the Centre for Innovation Research and Facilitation in Intellectual Property for Humanity and Development (CIRF in IPHD).

The pandemic 2020 has been a period of unrest in all walks of life, especially in academics too. Thanks to Information Technology that supplemented the class room teaching and sitting in the Physical library to online teaching and access to Online learning material ,books ,journals, magazine, newsletters etc. The significance of Online publication has been understood and the universities have been converting their hard copy into soft copy for the worldwide access and benefits. This e- journal (E-JAIRIPA) is an effort by CIRF to contribute to the academic world in the domain of Intellectual Property Research. Intellectual Property is a creation of human mind. The Patents Law deals with the invention and innovation. It is a tool for Industrial Development furthering industrialization, employment, and economic development. Patents Law has become the backbone of the Economy of any country. The Pharmaceutical Patents helps in health care along with continuous research for human development. Patents is granted to the inventors and protects the invention from infringement by any person. It is a guaranteed safeguard to the invention and economic gain. The patentee avails this right for twenty years (As per TRIPS), thereafter it enters into public domain, which is open to use by anyone without payment of royalty or permission. The trademarks are an essential Intellectual property for safe business and safety to consumers. The information technology, semi-conductor integrated circuits lay out design (chips) are essential tools used in our daily life. The Community intellectual property (GI, Biodiversity, Biotechnology, Plant Variety, and farmer's rights) are the part and parcel of intellectual Assets. This online journal will encourage the researchers, academicians, students to do fundamental research and this journal will disseminate the ideas and understanding world- wide.

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REGISTRAR'S MESSAGE

E-JAIRIPA

Shri M P Srivastava
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&
Registrar, CNLU

The Journal is a forum for the scrutiny, examination and discussion of academic research. It is an examination as to what is happening in academics. The journal E-JAIRIPA carries scholarly research papers which are peer reviewed before publication. This is the examination by the unknown experts in that discipline. Hence the knowledge of authors are examined, analyzed, debated and disseminated. This helps in learning and further improves the knowledge of the trainer. It results in the refined understanding of the students and academicians.

The journal E-JAIRIPA has been published and released keeping its importance in academics. This will surely encourage the students, authors, teachers in the field IPR to write on certain issues and try to find solution. Since the papers has to be peer reviewed, it will be a guide line as to how to write scholarly papers. Most importantly, when the journal is online (E-Journal), it has easy access to all the people on this globe. Hence merits and demerits of articles cannot be concealed. In the paperless world, the e-journal is a need.

I appreciate the efforts of the CIRF team in bringing Vol. III, Issue-01 (January-June 2022) of E-JAIRIPA to the public for learning and examining the quality of the writings. The reader's corner will be a feedback for the improvement in its quality. Despite this is a third volume, the team keeps open mind for learning its strength and weaknesses which shall be certainly incorporated in the succeeding volumes and issues. Wishing the CIRF Team all the Best for all success of the Journal.

CO-PATRON
SHRI M.P SRIVASTAVA

DIST. JUDGE (RETD.) & REGISTRAR, CNLU

PREFACE

Prof. Dr. Subhash Chandra Roy,
Chief Editor, E- JAIRIPA,
Director, CIRF in IPHD

E-JAIRIPA (E-Journal of Academic Innovation and Research in Intellectual Property Assets) is a Peer Reviewed E-Journal of the Centre for Innovation Research and Facilitation in Intellectual Property for Humanity and Development (CIRF –in-IPHD) of Chanakya National Law University, Patna. The E-JAIRIPA is a half yearly on-line journal of Academic Innovation and Research on the issues related to copyright, Patents, Trade Marks, Geographical Indications, Plant Varieties and Farmer's Rights, Bio Diversity, Layout design and integrated circuits, Industrial Design, Traditional Knowledge, on current Academic issues. It is a half-yearly Vol.-III, Issue-01(Jan- June 2022). This E-Journal shall have open access to all world-wide for Common Good. The ISSN will be obtained later as per Rule.

Research is the backbone of academics. The journals are the conveyances on which the research papers are carried on from the authors to the readers, the reaction of reader's to authors' vice-versa. The journals expedite the process of thesis –antithesis and synthesis. The research scholars' survey the problems in the area of their disciplines and think over the gap. Hence the contribution made by the author-researcher helps to the teaching community, research scholars and policymakers. It helps the book authors, either it be student edition or reference. It is the journal that keeps the teachers updated and well informed. The class teaching is monotonous without current and relevant issues as it correlates the academics with real world. The Journals are Supplementary and complementary to academics, a bridge between society and academicians for the benefit of students and researchers. This cycle goes on with observation, scrutiny, comments, analysis, updating the existing knowledge and filling the gap. The regular readers of the journals are well informed, advanced and confident. They learn the style of writing and way of expression. The journal carries variety of opinion, ideas, information that help in the correction of concept and revealing the truth. This is the reason that research writing and publication is essential component for the Academic positions. The paper writing is a proof that the person has academic bent of mind. It is a proof that one is growing. This E-Journal has been launched and released for the benefit of all the stake holders without making any discrimination on the basis of caste, creed, race, color, class, gender and political boundary, etc. This journal has open access to all concern. This issue of E-JAIRIPA carries ten research papers contributed by researchers from different parts of India. All the papers have been peer reviewed, and similarities checked. The editors and reviewers have tried their best to allow the best possible papers before the readers. The comments, criticism, and advice of the readers are most welcome for further improvement. Hence this half- yearly E-Journal (JAIRIPA), is hereby submitted with all humility before the readers.

PROF DR. SUBHASH C. ROY

CHIEF EDITOR: E-JAIRIPA

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E- Journal of Academic Innovation and Research in Intellectual Property Assets (E-JAIRIPA)

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Changing Dynamics of the Relationship between IP Law and Competition Law: Special focus on Copyright Law

Dr. Parineeti Kaur[1]

ABSTRACT

The birth of the possible conflict between Intellectual Property Rights (IPRs) and Competition Law is from the ultimate objectives they want to achieve. IP owner is compensated in the form of incentives by according limited period monopoly rights and Competition Law on the other hand works in the opposite direction by restricting monopolies which abuse their dominant position and augments fair play in the market. Since these two branches do converge or diverge at some point, leads to immediate inference of their overlap and the need for IP Law to be interpreted in the light of doctrine of freedom of competition in the market and envisage their probable conflict and complimentary role. Since, the dichotomy and similarity between IP and competition invariably exists in the application of these laws, this paper will analyze the various grounds where this interface exists so as to address the contemporary issues in the trade sector. The author thus, proposes to explore this relationship between IPRs particularly Copyright Law and Competition Law with the key task to appreciate the existence of IPRs minimizing its anticompetitive effects and the societal objectives it is intended to endorse.

Keywords: IPRs, Competition Law, Monopolies, Conflict, Complimentary, Copyright Law etc.

INTRODUCTION

Intellectual Property (IP) Rights are the legal rights granted exclusively for possessing moral and commercial worth awarded to works of literation, art, trade names, symbols, inventions and designs in commercial usage and are creations of minds IP rights not only work advantageously for the consumers but benefit the society at large as it enables better investment

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in products and services for advancement and progress in the society and better sustenance to creative fields. Advancement in technology has greatly affected the creation and dissemination of creative content be it writing, animation, photography, architectural design, moviemaking etc. at an extraordinary rate[2] and hence transformed the intellectual property regime leading to the social, political and economic advancements. [3]

Various industries irrespective of their scale of business, owe their existence to the dynamic Intellectual Property (IP) regime as it has allowed them to develop innovative business frameworks augmenting their growth and also simultaneously benefitting the consumers and the society at large. [4]

The most important and powerful industry of an economy at any stage of development is a creative industry and a situation of fair competition is a guarantee that this position is maintained. A broad definition of Competition according to World Bank Report (1999) is *"a situation in a market in which firms or sellers independently strive for the buyers' patronage in order to achieve a particular business objective for example, profits, sales or market share*". Competition gives a boost to the industries to innovate, primarily for the benefit of society and preserving competition law against anti-competitive practices is taken care by the competition policy[5]. Competition Law thus ensures that businesses are fairly competing and are protected from the unfair acts of others.

Relationship between IP and Competition Law

The goal of this section is to precisely stipulate the basic concepts of IPR and Competition Law and further scrutinize their conflicting role if any or whether in essence, they execute complimentary roles of maximizing consumer welfare. Also, whether it is correct to infer that instead of being in contradiction with each other, they choose diverse paths to reach the same objective of augmenting the welfare of consumers? And if this is affirmative, can we presume that there exists a fair balance between competition and IPRs?

The intersection between IP and Competition Law is not new and has been a priority for dialogue at various international platforms. The 1948 Havana Charter for the International

[2]Intellectual Property Rights in the Global Creative Economy (2013), http://www3.weforum.org/docs/GAC/2013/WEF_GAC_IntellectualPropertyRights_GlobalCreativeEconomy_Report_2013.pdf (last visited Nov 01, 2020).
[3] A. Mitchell. Polinsky & Steven Shavell, 2 Handbook of Law And Economics (2007).
[4] Sumanjeet Singh, *Intellectual Property Rights and Their Interface with Competition Policy: In Balance or in Conflict?* COMMUNICATION POLICY RESEARCH SOUTH CONFERENCE (CPRSOUTH5), XI'AN, CHINA (2010).
[5]SHAHID ALIKHAN & RAGHUNATH MASHLEKAR, INTELLECTUAL PROPERTY AND COMPETITIVE STRATEGIES IN THE 21ST CENTURY (2009).

Trade Organization contained provisions relating to General Policy towards Restrictive Business practices:

"Each Member shall take appropriate measures and shall co-operate with the Organization to prevent, on the part of private or public commercial enterprises, business practices affecting international trade which restrain competition, limit access to markets, or foster monopolistic control, whenever such practices have harmful effects on the expansion of production or trade and interfere with the achievement of any of the other objectives act forth in Article 1."[6]

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) also comprises of certain provisions that suggests widespread discretion to Members states in their application of Competition Law in respect of the acquiring and exercising of IP rights. Article 8.2 of the Agreement relates to *requirement of appropriate measures for preventing the abuse of intellectual property rights by right holders*. Article 31 gives detailed conditions for the *granting of compulsory licenses aimed at protecting the legitimate interests of rights holders* and specifically Article 31(k) validate the *right of Members to use such licenses as anti-competitive remedies with the condition that such anti-competitive practice needs to have been determined through a judicial or administrative process.*

Further, Article 40 of the TRIPS Agreement recognize *"licensing practices or conditions pertaining to intellectual property rights which restrain competition may have adverse effects on trade and may impede the transfer and dissemination of technology"* and also allows Members to specify anti-competitive practices constituting abuses of IPRs and to adopt measures to prevent or control such practices (Article 40.2). Such practices may include coercive package licensing, exclusive grant backs and clauses preventing validity challenges. Thus, Member-states have significant decision making power under the TRIPS Agreement in the advancement and application of Competition Law to the operation of IP Law.

Tracing the historical evolution of the relationship between Competition Law and IPR Law, they have seemed to emerge as different and unique practices of law but there is a significant concurrence in the goals and objectives of the two as they both focus on furthering innovation which ultimately leads to economic growth. IP rights are exclusive legal rights accorded to the creator to enjoy their fruits of creation whereas competition law affords an

[6] Havana Charter for an International Trade Organization 1948, art. 46

outline of restricting anti- competitive practices with the ultimate objective of consumer welfare. IP protects individual interest and creates monopolies to some extent while the competition protects the market and battles monopolies. Numerous domains addressing the interface between IP and Competition also exist which may arise while granting the IPR protection or at the time of use in the form of misuse of licensing provisions, tying in arrangements etc. or also on the enforcement front by way of facing anti-competitive litigation.[7] The Raghavan Committee Report on Competition Law in India observes as:

"All forms of Intellectual Property have the potential to raise Competition Policy/Law problems. Intellectual Property provides exclusive rights to the holders to perform a productive or commercial activity, but this does not include the right to exert restrictive or monopoly power in a market or society. Undoubtedly, it is desirable that in the interest of human creativity, which needs to be encouraged and rewarded, Intellectual Property Right needs to be provided. This right enables the holder (creator) to prevent others from using his/her inventions, designs or other creations. But at the same time, there is a need to curb and prevent anti-competition behavior that may surface in the exercise of the Intellectual Property Rights".[8]

"There is, in some cases, a dichotomy between Intellectual Property Rights and Competition Policy/Law. The former endangers competition while the latter engenders competition. There is a need to appreciate the distinction between the existence of a right and its exercise. During the exercise of a right, if any anti-competitive trade practice or conduct is visible to the detriment of consumer interest or public interest, it ought to be assailed under the Competition Policy/Law."[9]

In essence, since both IP Law and Competition Law do converge or diverge at some point, leading to an instantaneous inference of their overlap and the need for IP Law to be interpreted in the light of doctrine of freedom of competition in the market and envision their probable conflict and complimentary role. The contradiction and similarity between IP and competition invariably occurs in the application of these laws, requiring their thorough analysis on various grounds where this interface exists so as to effectively address the current challenges faced by the trade system.

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[7] Maximiliano Santa Cruz Scantlebury & Pilar Trivelli, INTERACTION BETWEEN INTELLECTUAL PROPERTY AND COMPETITION LAWS E15 INITIATIVE (2016), https://e15initiative.org/publications/interaction-between-intellectual-property-and-competition-laws/ (last visited Jul 15, 2020).

[8] Report of the High Level Committee on Competition Policy and Law (2000), Para 5.1.7.

[9] Report of the High Level Committee on Competition Policy and Law (2000), Para 5.1.8.

IP Law and Competition Law: The Conflict

The basic idea of conflict between IP and Competition Law is validated by the historical explanation of the role of IP Law of excluding the third parties from exploiting the subject matter of the creator without their permission and finally incentivizing the creator. The basic goal of this reward is to make the creator's work available to public at large which would otherwise have remained a secret. Traditionally, granting IP protection was regarded as a price paid by the society at large to the creator for public access of his work with a key focus on the individual right of the inventor.[10] This legal monopoly created by IP Laws, taking into account the unavailability of substitutes on either the demand or supply side in the relevant market results into creation of market power and barriers to entry leading to monopoly situation envisaged under Competition Law. In situations where alternative substitutes do not exist, IP holders have monopolistic positions in their relevant markets. However, being in this position does not automatically justify creation of a competition violation. It is only when this advantage or dominant position is abused, a situation of conflict is formed between the application of IP and Competition Law. To illuminate, the justification behind this conflict is that the IPRs by identifying the boundaries within which different competitors operate and exercise monopolies over their inventions, seemingly appears to be against the principles of constant market access and fair play envisaged under the competition rules and policies particularly, on horizontal and vertical restrains and abuse of dominant position in the relevant market.

Competition Law strives to create a division between allowable practices adopted by businesses and abuse of IPRs which is somehow distorted by various practices like tie-in arrangements, restrictive agreements, licensing restrictions etc. that are not expressly authorized by the IP statutes but that appears to have anticompetitive effects. *The prime question therefore is to ascertain as to when the legitimate operations of IP cease and becomes anticompetitive*.[11] Thus, inherent tension between the two will prevail as long as competition law emphasizes on static market access and IPR focuses on incentivizing the creator.

As soon as an asset is produced, the property rights are allocated to it whereas the invasion of competition policy occurs at a later stage when the asset has gained some market power. It therefore leads to a situation of difference in timing of the information present at the

[10]Gitanjali Shankar & Nitika Gupta, *Intellectual Property and Competition Law: Divergence, Convergence, and Independence*, 4 NUJS LAW REVIEW (2011).
[11] Vishakha Sharma, *Intellectual Property Rights and Competition Policy: An Overview of Approaches Adopted by the US, EU and India to Harmonize the Two*. INTERNATIONAL JOURNAL OF LAW AND LEGAL JURISPRUDENCE STUDIES (2014).

time of granting of property rights and when cases of competition law emerge.[12]

Drawing inference from the above discussions, both IP Laws and Competition law are actually moving parallel rather than being in conflict with each other and reaching a complimentary position dependent on each other for the attainment of optimal welfare. As IPRs are crucial in advancing competition a priori and competition law checks unwarranted behavior a posterior, therefore, at a common junction, Competition policy and Intellectual Property Law cross paths to increase efficiency, encourage innovation leading to consumer welfare and economic growth.

IP Law and Competition Law: Complimentary Role

In the previous section, it has been discussed that the role of is IPRs to award monopoly rights and it is the competition law that battles monopolies in the market. However, monopoly per se is not anti-competitive but it is the abuse of monopoly which is considered anti-competitive. As the stipulated goal of IP Law is to augment innovation by offering conducive environment for development of diverse products. These products are then available to the consumers at better prices and quality, which is same as the prime objective of competition law of promoting consumer welfare, thus both IP Law and Competition Law complementing each other.

Both IPR and Competition Law coexist at various level. Since, IPR and Competition policies intends to foster technological growth to promote innovation but will deter if pursued too stringently or too gently. Firms will be eager to innovate if some protection is afforded to them at some level from free riding or face strong competition in the market which further encourages them to create new products and maintain their position in the market. From the viewpoint of IP law, if it is not very difficult to acquire intellectual property protection, firms will be discouraged to innovate as their will be a number of IP holders who will be tough to locate for obtaining licenses. From the viewpoint of Competition Law, if a very stringent perusal of law enforcement is undertaken where the competitors are permitted to make unrestrained use of a company's innovation, then there will be very less or no incentive to innovate in the first place. Also, under any IP Law, it is expressly recognized that the protection granted is for a definite period which after the period of protection is over goes in the public domain. Even within the period of protection, the creation can be used with/without some

[12] SINGH, *supra* note 10, at 20.

restrictions for the purpose of research, teaching, granting compulsory licenses in the interest of public health or national emergencies and also when the patentees indulge in anti-competitive practices.[13] Once the said objective of IP is achieved, the protection is only meant for a limited time and when furtherance of such protection beyond specified time is not prevented, competition law in such cases can exercise limiting role. Therefore, in such situations, where the inherent purpose of the rights i.e. exceeding the crucial function for which the right is granted is lost, application of competition law the defends the ultimate aim of IP law, when IP Law is not in a position to safeguard the same.[14]

Considering the short term scenario, and in the reasonable exercise of the exclusivity granted under the IP Law, IPR holder is in a position to sue any potential competitors for infringement and can also deny access to technological innovations crucial for the development of next generation products. This leads to a situation of barring the entry to compete. At this juncture, the role of competition law becomes pertinent to scrutinize the fairness of IPR protection in attaining the ultimate goal of consumer welfare. Therefore, in the long run, the role of both competition law and IPR law is to attain enhanced efficiency and welfare and not only on competition and protecting the IP.[15]

In 1990, the Court of Justice of the European Union handed down a few landmark decisions[16], which in essence held that there can be violation of competition law in certain exceptional cases involving the *exercise* of IP rights. This led to the birth of new modern view on the relationship between IP and competition law i.e. complementarity theory, where the two regimes are considered to complement each other as opposed to the historical view of them being in conflict with each other. In accordance with this theory, these two systems of law require each other to function and the ends they strive to achieve are not considered to be too divergent. This theory strives to pursue the long-term goals of innovation which IP Law furthers through the concept of long-term incentives and competition law practices by promoting dynamic competition in the market. Complementarity theory thus rests on the belief

[13] SINGH, *supra* note 10, at 20.
[14] SHANKAR, *supra* note 16, at 22.

[15] Alice Pham, COMPETITION LAW AND INTELLECTUAL PROPERTY RIGHTS: CONTROLLING ABUSE OR ABUSING CONTROL? (2008), http://www.cuts-international.org/pdf/CompetitionLaw_IPR.pdf (last visited Jan 17, 2021).
[15] Radio Telefis Eireann v. Comm'n of the Eur. Cmtys, Joined Cases C-241 & C-242/91and Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, 1998 E.C.R. 1-7791, Case C-7/97.

[16] Radio Telefis Eireann v. Comm'n of the Eur. Cmtys, Joined Cases C-241 & C-242/91and Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, 1998 E.C.R. 1-7791, Case C-7/97.

that IP operates in a competitive environment. The function of IP law is to restrain competition by restricting the rivals from contending by imitation. This is done basically for increasing dynamic competition by substitution. From the perspective of competition law, intellectual property creates a bargain in which it is anticipated that pro-competitive vital impacts will counterbalance the anti-competitive consequences. The theory of complementarity emphasizes that resolving the aforementioned tension between the concepts of intellectual property and competition calls for a case-by-case evaluation of the pro and anticompetitive impacts.[17]

General exemptions of IP from Competition Law

Various jurisdictions around the world reserve the application of Competition Law on the exclusive rights granted under the IP Law protection either expressly or impliedly. Some jurisdictions have no mention of IP Laws in their Competition legislation, while other contains statutory provisions exempting IP from competition law application. For jurisdictions which are relatively younger, this has resulted in certain issues primarily being under erroneous faith that there should be no application of competition law to IP related cases as opposed to the experienced jurisdiction that uses much matured theories to map the precise scope of application. These exemption clauses should guarantee that there is enough room for competition authorities to attentively implement a 'rule of reason' approach on individual case basis so that the goal of IPR to foster innovation does not lead to anti-competitive practices. Therefore, in situations where there is abuse of IP by the IPR holder in terms of unreasonable restrictive practices, the affected parties can claim relief under the Competition Act.[18]

In India, Section 3(5) of the Competition Act on restrictive agreements exempts conduct relating to the protection of IPRs. Section 3(5) reads as follows:

"Nothing contained in this section shall restrict—(i) the right of any person to restrain any infringement of, or to impose reasonable conditions, as may be necessary for protecting any of his rights which have been or may be conferred upon him under— (a) the Copyright Act, 1957 (14 of 1957); (b) the Patents Act, 1970 (39 of 1970); (c) the Trade and Merchandise Marks Act, 1958 (43 of 1958) or the Trade Marks Act, 1999 (47 of 1999); (d) the Geographical Indications of Goods (Registration and Protection) Act, 1999 (48 of 1999); (e) the Designs Act,

[17] COPYRIGHT, COMPETITION AND DEVELOPMENT (2013), https://www.ip.mpg.de/fileadmin/ipmpg/content/forschung_aktuell/02_copyright_competition/report_copyright-competition-development_december-2013.pdf (last visited Sep 10, 2020).
[18] *Id*. at 6.

2000 (16 of 2000); (f) the Semi-conductor Integrated Circuits Layout-Design Act, 2000 (37 of 2000)"

In one of the landmark cases of *Shamsher Kataria v Honda Siel Cars Ltd and others* [19](Automobile Spare Parts case), the Competition Commission of India dealt with the claim of IPR exemption under section 3(5)(i) of the Act. The CCI noted: *"The Commission is of the opinion under section 3(5)(i) allows an IPR holder to impose reasonable restrictions to protect his rights 'which have been or may be conferred upon him under' the specified IPR statutes mentioned therein. The statute is clear in its requirement that an IPR must have been conferred (or may be conferred) upon the IPR holder prior to the exception under section 3(5)(i) being available"*

"The Commission is not the competent authority to decide, for example if a patent/trademark that is validly registered under the applicable laws of another country fulfills the legal and technical requirement or is capable of being registered under the Indian IPR statutes, specified under section 3(5) of the Competition Act. Such a mandate would lies with the IPR enforcement agencies of India. For the Commission to appreciate a party's validly foreign registered IPR, in the context of section 3(5) of the Act, satisfactory documentary evidence needs to be adduced to establish that, the appropriate Indian agency administering the IPR statutes, mentioned under section 3(5)(i) have: (a) validly recognized such foreign registered IPRs under the applicable Indian statues, especially where such IPR statutes prescribe a registration process, or (b) where such process has been commended under the provisions of the applicable Indian IPR statutes and the grant/recognition from the Indian IPR agency is imminent."

Also, the first case in India dealing with the conflict between IPR and the Competition Law was *Aamir Khan Production v Union of India*[20] . In this case the Bombay High Court held that Competition Commission of India has the jurisdiction to deal with matters relating to IPR when it is directly in contravention of the provisions of the Competition Act. Court also stated that *"every tribunal has the jurisdiction to determine the existence or otherwise of the jurisdictional fact, unless the statue establishing the tribunal provides otherwise. On a bare*

[19] [2015] CCI 133.
[20] [2011] 1 Bom CR 802.

reading of the provisions of the competition act it is clear that CCI has the jurisdiction to determine whether the preliminary state of facts exists."

In *Kingfisher* v. *Competition Commission of India*[21] , the Court echoed the competency of CCI to deal with all the issues that come before the Copyright Board. These judgments reflect an effort by various Indian Courts in addressing the emerging case laws of competition law involving IPR.

Taking into consideration the above points and also focussing on the applicability of Section 3(5), it has to be observed that the nature of non obstante clause in section 3(5) of the Act is not unconditional in nature which can be inferred from the terminology employed exempting the right holder from the strict application of competition law only for the purpose of safeguarding his rights from infringement and enabling the right's holder to impose reasonable restrictions as may be required to safeguard those rights.[22] It therefore follows that the clash between intellectual property and policies governing Competition and their long-term impact on economic growth cannot be understated.

According to World Intellectual Property Organization (2016) : *"There is a close link between patent rights and competition, which, in simple terms, can be characterized by two factors: on the one hand, patent laws aim to prevent the copying or imitation of patented goods and thus complement competition policies in that they contribute to a fair market behavior. On the other hand, competition laws may limit patent rights in that patent holders may be barred from abusing their rights. In sum, experience shows that too high or too low protection of both patents and competition may lead to trade distortions. A balance has thus to be found between competition policy and patent rights, and this balance must achieve the goal of preventing abuses of patent rights, without annulling the reward provided for by the patent system when appropriately used."*[23]

It is also stressed by William J. Baer, Former Director, Bureau of Competition, and Federal Trade Commission, *"Enforcement of competition laws no longer begins with the assumption that restrictive use of IP is necessarily anti-competitive. Current enforcement*

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[21] [2010]SCC OnLine Bom 2186.

[22] *FICCI - Multiplex Association of India v. United Producers/Distributors Forum* [2011] CCI 32.

23 EXAMINING THE INTERFACE BETWEEN THE OBJECTIVES OF COMPETITION POLICY AND INTELLECTUAL PROPERTY (2016), https://unctad.org/system/files/official-document/ciclpd36_en.pdf (last visited Nov 7, 2020).

instead starts with three basic assumptions about intellectual property: First, intellectual property is comparable to other forms of property, so that ownership provides the same rights and responsibilities; second the existence of intellectual property does not automatically mean that the owner has market power; and third, the licensing of IP may often be necessary in order for the owner efficiently to combine complementary factors of production, and thus may be pro-competitive."[24]

The vital task is to appreciate the existence of IPRs while minimizing its anticompetitive effects and focus on the societal objectives it is intended to endorse. An appropriate balance is therefore achieved when applying Competition Law and policy to IPRs. Since these two branches do converge at some point, the entire constitution of IP Law requires being interpreted taking into consideration the principle of freedom of competition, which is critical to competition policy. Therefore, it can be clearly inferred from the above discussions that both IP Law and Competition Law are complimentary approaches of facilitating technological advancement, innovation and ultimately economic growth taking into account the consumer welfare at large.

INTERFACE BETWEEN COPYRIGHT AND COMPETITION LAW

Works in which copyright subsists varies from country to country but the motive for awarding the copyright owner is the same which is incentivizing them for their investments. In the US Supreme Court judgment of *Twentieth Century Music Corp. v. Aiken*[25], it was declared that *"the immediate effect of our copyright law is to secure a fair return for an 'author's' creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good."* Therefore, copyright law grants a bundle of exclusive rights to the author for his creative work in right of reproduction, distribution, derivative work, public performance etc.

Various in- built safeguards are inserted in the copyright legislatures around the world in the order to strike a balance between access of work to the public as well as rights of the copyright owner. These safeguards include fair use/ fair dealing, idea expression dichotomy, originality requirement, first sale doctrine etc. These safeguards are believed to accommodate the societal interest. Therefore, the pertinent question which arises is whether the inbuilt

24 William J. Baer, ANTITRUST ENFORCEMENT AND HIGH TECHNOLOGY MARKETS FEDERAL TRADE COMMISSION (2013), https://www.ftc.gov/es/public-statements/1998/11/antitrust-enforcement-and-high-technology-markets (last visited Apr 15, 2021).
25 422 US 151 [1975].

safeguards under copyright law are adequate or is there any necessity for the courts to intervene by using legal doctrines outside the copyright system.[26]

The evolution and advancement of creative and cultural industries in *'independent individual countries or the high level of concentration in rather isolated small national market's*, various agencies have stressed on the relevancy of competition law enforcement in the copyright area.[27]

Relationship between copyright and competition law also have to be understood in identical sense as furthering complimentary goals same as that of the interface between the IPR and Competition being complimentary to each other with the ultimate goal of promoting market efficiency and consumer welfare. However, the conflict may arise at the application stage, between these two areas when excessive reliance is placed on the competition law to seal the copyright exclusivity. Therefore, in defining the boundaries of the application of competition law in the copyright based industries, the question is "how" it should be applied but not "whether" competition law should be applied. This calls for further harmonizing, taking into account the copyright's pro and anticompetitive effects on market competitiveness.[28]

Fundamentally, the role of copyright law is pro- competitive in the larger market of ideas and not in any specific markets of books or a cinematograph film etc. The author is awarded an exclusive right in the expression of his idea for supply of a *'commodity'* to be sold in the larger market. This will particularly lead to competition in the market of underlying idea which is the larger market and between authors' expression and the expression generated by others suggesting a likely role of competition law in the outcome of copyright suit. A situation where an owner of copyright abuses his dominant position or carries out certain acts to protect its rights, competition can be restricted in the market of ideas. Therefore, under appropriate circumstances, competition law may intervene to preserve some degree of fair competition in these other markets.[29]

A copyright abuse can also ascend in cases where the copyright owner because of his exclusive right behaves in an improper way and perform certain acts to his advantage and which are detriment to others. Copyright abuse can be assumed in the cases where *the licensee's ability to deal with competitors is restricted*. For the economic benefit of the copyright owner, the owner will make sure that the licensee can only buy from him/her. Owners undertake

[26] John T. Cross & Peter K. Yu, COMPETITION LAW AND COPYRIGHT MISUSE SSRN (2007), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=986891 (last visited Sep 15, 2019).
[27] *Supra* note 17, at 23.
[28] *Id*. at 5.
[29] Cross, *supra* note 32.

various agreements in order to limit the ability of the licensee to negotiate on reasonable terms with the competitors. Peculiar example is of a 'tying arrangement' where the right of the licensee to acquire the license of a copyrighted work is based on his agreement to procure the second product in the same transaction leading to linking a competitor's ability to compete in the market for that other product, leading to unfair advantage to the competitors.

A situation of copyright abuse can also arise where another's ability to compete is also restrained. In situations where the competitor is a probable licensee, the copyright owner may not be willing to deal with the competitor. This situation is known as 'refusal to deal' where the copyright owner for competing in the market for the sale of that work or even in some other market may refuse to sell or license copies of the work to a competitor. Other situations may involve circumstances where the competitor enters into an agreement of pooling their assets or dividing the market among themselves generating serious anti-competitive concerns. This can lead to increased market concentration which will eventually come under the glances of competition authorities.

Also, when concessions are demanded from the licensee can also lead to situations of copyright abuse. The copyright owner usually enjoys a beneficial bargaining power during the grant of the license in its dealing with prospective licensees. In cases where the demand for copyright work is high, the copyright owner will be in an advantageous position to extract both price and non- price concessions concerning the use of copyrighted work from the licensee. These can be in the form of charging high price for the use of copyrighted work, license for only non-commercial use, preventing reverse engineering, and concessions not directly related to the copyrighted work but beneficial to the owner. All of these concessions come with present peculiar competition policy concerns.

Copyright owners are entitled to certain procedural benefits and therefore are also in a position to extract considerable damages from the defendants in a copyright law suit. It is usually alleged by the defendants that the basic objective in instituting such suits is not to protect the legitimate interest but to safeguard conduct that is unrelated or only incidentally related to the copyright even though the defendant's conduct may technically infringe the copyright. Infringement suits in these types of cases are also directed against a probable licensees or competitors to limit competition in some other market or increase sales of the copyrighted product. This leads to *anticompetitive use of the judicial system* and can be considered a case of copyright abuse.

CONCLUSION

The probable clash between IP and Competition Law escalates from the aims they seek to augment. The IP owner is incentivized by giving monopoly rights for a limited period and but Competition Law goes against this rule by curbing abusive monopolies and enhancing market conditions leading a market with fair competition. Through the lens of competition law, IP like any other form of property is not inherently detrimental to competition and a well-defined IP regime is meant to advance innovation and promote dynamic competition in the market. Therefore, the relationship between both IP Law and Competition Law is not inherently conflicting but is rather compatible in nature. As long as both focus on promoting consumer welfare the conflict will not arise but intervention of competition law may be required in the cases of abuse at the hands of the IP right holder.

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IP, SME and Traditional Knowledge: Reviving Our Traditional Medicine

Aditya Singh & Anjali Gupta[30]

ABSTRACT

Intellectual Property is essential for protecting traditional medicine, but its value is not appreciated. Big corporate entities have realised its importance, while SMEs must use traditional knowledge to protect it and survive competition. Canada and the US have decriminalized the use of medicinal marijuana. The Narcotics and Psychotropic Substances Act 1985 has made marijuana illegal, limiting its medicinal uses in the public domain. Traditional knowledge has been sacred for centuries, making it difficult to claim medicinal use of it. This article highlights the importance of Intellectual Property Rights and how they can be an economic tool and discusses certain challenges faced by SMEs and why they must invest in them to get long-term returns in the future. Furthermore, this article analyses, why laws relating to traditional medicine should be modified for the benefit of Indian Entrepreneurs and why any form of patent on marijuana plants abroad should be challenged by India as they challenged patents on neem and turmeric.

Keywords: Traditional Knowledge, SMEs, Indigenous, Intellectual property.

INTRODUCTION

Traditional knowledge is something that belongs to the local community, it has been there for centuries and has an element of holiness to it. The aim of bringing biodiversity into the ambit of intellectual property rights has been to make sure that the creation of mind processes continues in flora and fauna respectively. Such creations will allow tribal communities to become entrepreneurs and earn money with the intellect available to them.

This is a community-based approach, and the concept of traditional knowledge has evolved to make sure that no person takes exclusive benefit of the knowledge which already exists in the community. This allows two things to happen, firstly tribal take their product to market and secondly if their product goes to market after certain innovation has been done by an

[30] LL.B., Amity Law School, Noida.

entrepreneur then the tribal community will get benefits for the basic knowledge which was modified by the entrepreneur. Such knowledge is to be used with the consent of the community and they should be given monetary benefits for the same, hence the concept of access and benefit-sharing saw light with the Nagoya protocol. Traditional knowledge is undervalued in Small and Medium Enterprises (SMEs) because a strong policy and implementation mechanism for the same is missing.

SMEs are the backbone of the Indian economy where they play an integral role in its development and growth[31]. They have continued to contribute immensely towards creating employment and reducing rural-urban disparity. As per the data of the World Bank, they represent 90 per cent of the world's businesses, and they employ 50 per cent of the global workforce[32]. In India, they employ more than 120 million people and ensure the flow of money across various levels of society[33]. They also account for 29 per cent of the Gross Domestic Product (GDP)[34]. Focusing on small and medium enterprises, especially in countries like India which has a huge population, and a high unemployment rate is very crucial as they operate in major sectors. They are like the building blocks of sustainable growth and innovation in developing countries. According to the World Bank, SMEs account for the majority of businesses around the world[35]. However, their importance is eclipsed by the big corporate entities that are already established. With globalisation and liberalisation, SMEs are facing tough competition from their global counterparts. Their potential is not being fully realised due to a lack of resources in terms of finance, technology, labour etc. Insufficient information and know-how, inability to adapt to changing market demand and lack of technological advancement are some other factors that contribute to their failure.

The usage of traditional medicine in India is highly undervalued. Legal hindrance has stopped production, procurement, selling, distribution, research, and development. In general, many SMEs fail to survive as they are unable to cope with the tough competition and large players in the market. With the opening of borders and flexible trade barriers, there is a global market for the expansion and growth of traditional medicine. The widespread globalisation and

[31] United Nations, *MSMEs: Key to an inclusive and sustainable recovery*, THE UNITED NATIONS, https://www.un.org/en/observances/micro-small-medium-businesses-day.
[32] World Bank, *Small and Medium Enterprises (SMEs) Finance*, THE WORLD BANK, https://www.worldbank.org/en/topic/smefinance.
[33] IBEF, *MSME Industry in India*, INDIA BRAND EQUITY FOUNDATION, https://www.ibef.org/industry/msme.aspx.
[34] Id. at 2.
[35] Id. at 1.

liberalisation allow consumers and buyers to not restrict themselves to the domestic markets. As far as traditional medicine is concerned, we are way behind our international counterparts. Many industrialised countries have dedicated businesses that have monopolistic rights in some way or the other on medicinal compounds of these traditional plants such as marijuana. The same is illegal in India, if the government changes the law, then such SMEs will face strong competition not only from the domestic players but from established international players first. In the past, we have witnessed international firms entering the domestic markets often consuming small enterprises like big sharks in the sea. Thus, making it extremely difficult for small businesses to survive or retain in the market. The Covid-19 pandemic further made matters worse for SMEs where over 82% of more than 250 small businesses suffered negative impacts[36]. Traditional medicine is growing in the international field rapidly. The World Health Organization (WHO) in the last few years has recognized the increasing potential of traditional medicine and has been actively trying to promote its usage worldwide. Traditional medicine is part of traditional knowledge, and it is important to discuss the medicinal uses of marijuana because even though this plant is associated with the creation of harmful substances, but its medicinal properties has been practiced for centuries by many Indian tribes as customary. Indian tribal communities being one of the biggest stakeholders of traditional knowledge should be able to benefit economically from the same.

In general, sometimes the Intellectual Property Rights strategy used by other big entities creates a legal monopoly in the market which not only leads to reduced businesses for SMEs but also leads to legal consequences against them if they infringe any such rights. Lack of technical knowledge, business intelligence and ignorance with respect to IPR is leading to the downfall of many SMEs. Despite such obstacles, economies like India are tremendously dependent on SMEs, especially for employment generation and economic development thereby, improving the standards of living and shifting the workforce from the unorganised sector to the organised sector[37]. Sometimes, the Government also steps in to save the SMEs by providing subsidies, rebates, and other incentives. A recent European study shows that SMEs that use IP Rights perform better than companies that do not focus on Intellectual Property[38]. IP Rights have

[36] FE Online, *Over 82% small businesses had negative Covid impact; lack of market access top challenge: Survey*, FINANCIAL EXPRESS, https://www.financialexpress.com/industry/sme/msme-eodb-over-82-small-businesses-had-negative-covid-impact-lack-of-market-access-top-challenge-survey/2238325/.
[37] SME, *SME Sector in India*, SME CHAMBER OF INDIA, https://www.smechamberofindia.com/about-msme-in-india.php,
[38] EPO, *Study highlights economic benefits of owning intellectual property rights - especially for small businesses*, EUROPEAN PATENT OFFICE, (Feb. 98, 2021), https://www.epo.org/news-events/news/2021/20210208.html (Visited on July 04, 2021).

gained attention in the last few years as they are at the centre of interest in the knowledge-based economic environment. Many large international companies have included intellectual property in their growth strategy. However, in India various small companies are unaware of intellectual property so, it is tough for them to build strategies dealing with intellectual property rights. Some are even sceptical about investing in such rights. There is no question that small and medium enterprises have a lot to worry about, from surviving in the market to building their name to growth and expansion. However, they must realise that Intellectual Property is the key economic asset and at the end of the day they are very core to whatever activities they are doing. They must build a strategy to use the Intellectual Property as leverage for their growth in the future. However, over the years trends of IP Filling in India have improved.

SIGNIFICANCE OF INTELLECTUAL PROPERTY SMEs

Melting borders and losing trade barriers have made the market highly competitive and dynamic. Enterprises do not only have to protect and secure their tangible properties but their intangible properties as well to survive the cut-throat competition. Leveraging intellectual property rights as tools to combat high competition will not only provide SMEs with the chance to build a resilient business but they will become more competitive as well. Inventors and entrepreneurs themselves must treat their intellectual property as valuable assets[39]. The fact that they are not tangible does not mean that they are less valuable. There is a common misconception that Intellectual Property is only preserved for big businesses, but that it is not the case. SMEs that apply for patent, trademark, design, Copyright, or Geographical Indication are more likely to experience high growth than SMEs that do not[40].

When a business owner is focused on establishing their brand or when their business is growing rapidly, it is understandable that they might overlook the need to register and protect their patent and trademark or any other IP rights. However, this can result in dire consequences for small businesses. SMEs must realise that Intellectual Property is the path to their future growth and expansion. It is extremely important for businesses to stand out from their competitors in order to survive in the market.

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[39] CNIPA, *Intellectual Property Basics*, CHINA NATIONAL INTELLECTUAL PROPERTY ADMINISTRATION, (2019) https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1056.pdf.

[40] Frank Tietze, *Empowering SMEs to leverage IP for innovation*, WORLD INTELLECTUAL PROPERTY ORGANIZATION, https://www.wipo.int/wipo_magazine/en/2021/02/article_0003.html.

Intellectual Property will not only provide protection to their technology and innovation, but it will also boost brand value. It will help the business to grow and flourish by setting it apart from competitors which may facilitate global expansion. New ideas are the lifeblood of SMEs and Intellectual Property has become their core asset which not only makes the owner the certified owner of their intellectual property but also boosts business potential. It is very crucial for SMEs to use the Intellectual Property as a commercial tool to protect new ideas, innovations, brands etc. Earning profit is the main objective of all companies and it is a necessary component that keeps them alive. Investment in Intellectual Property will provide more grounds for increased revenue in the future apart from building and protecting their brand name and inventions.

The investment in traditional medicine will provide new areas of exploration to the entrepreneurs. The chances of such investment maturing into exclusive intellectual rights is a very favorable outcome. The trajectory may support the rise of SMEs but an absence of a strong framework to complement the same is a very big issue. As far as traditional medicine is concerned its biggest component or marijuana is illegal to use.

WHY MARIJUANA IS TRADITIONAL KNOWLEDGE OF INDIA

The Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization of the convention on biodiversity is the only international instrument that could be considered to have touched the domain of traditional knowledge but failed to define the same. This protocol talks about access and benefit-sharing as well as indulging local communities by giving them a share of profits. The drawback of this protocol is that it does not define what can be traditional knowledge in exact words. To understand what traditional knowledge means we have to rely on the definition provided by the World Intellectual Property Organization (WIPO). WIPO defines Traditional Knowledge as "tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields. Tradition-based refers to knowledge systems, creations, innovations and cultural expressions which: have generally been transmitted from generation to generation"[41]. If we keep this definition in mind, then we can very confidently conclude that

[41] World Intellectual Property Organization, *Composite Study on the Protection of Traditional Knowledge*, Secretariate WIPO, (2003).

marijuana is a traditional knowledge of India.

The ancient Hindi and Sanskrit texts have defined the use of parts of the marijuana plant for medicinal purposes by referring to it with various names such as bhang, indrasana or Vijaya[42]. The Atharvaveda in 1400 BC mentioned it as a sacred grass that can help remove anxiety[43]. The Sushruta in the 8th century mentions that if bhang is mixed with other herbs, then it can be anti-phlegmatic and be used to treat excess diarrhoea, bile, and phlegm.[44] The Unani Medical System talks about the use of marijuana to treat the nervous system as antispasmodic and anticonvulsive[45]. The efficacy of bhang and its potent presence in many ayurvedic medicines either as a major or a minor ingredient to treat diseases such as irritable bowel disease, urinary disorders, fever, skin diseases, hair diseases, edema, cold, and impotency and so on makes it highly important[46]. The above documented ancient documents can help us to reiterate that Marijuana is a traditional knowledge of India respectively.

MEDICINAL USE OF MARIJUANA

In recent years there have been many reports from the developed countries where people have used marijuana in oil form to cure their cancer. In other forms, it can be used to cure or alleviate the symptoms of many diseases such as Crohn's disease, Parkinson's, glaucoma, seizures, headaches and inflammation to name a few. The presence of various cannabinoids, cannabidiol (CBD) and tetrahydrocannabinol (THC) in marijuana plants are the responsible factors that have medicinal uses in them. Opioids and cannabinoids are both among the world's oldest drugs, with usage dating back thousands of years[47].

The problem is these medicinal uses of marijuana are not new discoveries, but a mere rediscovery of the same. The use of marijuana in Ayurveda is very much present in India but since the passing of the Narcotics and Drug Prevention Act 1985 (hereinafter to be referred as the Act), its use has become hidden and limited. Today there is a re-emergent use of marijuana, which is being led by western countries. India and its indigenous tribal communities are not able to benefit at all. This is undermining the local communities who cannot benefit from it respectively. The Act has significantly undermined documentation as well as the practice of

[42] Umair Mirza, *The Indian antiquary* 260-262 (September 1894).
[43] Id (8).
[44] Id (8).
[45] Himalayan Hemp, *The Ayurvedic view on cannabis,* HIMALAYAN HEMP (Oct. 16, 2019), https://www.himalayanhemp.in/post/the-ayurvedic-view-on-cannabis.
[46] Swagata Dilip Tavhare & Rabindra Narayan Acharya. *Exploring the pharmaco-clinical view on bhanga* 59-78, (Cannabis sativa linn.).
[47] Greg T. Carter, MS, MD, Volume 14, *The Argument for Medical Marijuana for the Treatment of Chronic Pain*, 14 PM 800, (2013).

many medicinal uses of marijuana held by communities to come out in the open. The developed countries have well defined intellectual property rights systems that allow patents for such discoveries, as we have seen in the past how American firms were able to get patents on medicinal uses of neem and turmeric respectively. The developed countries have granted a few patents on marijuana, its by-products, and its properties respectively.

The medicinal use of marijuana has been part of intense research and development[48] and because of it there has been a tremendous increase in the number of patents that are being filed for marijuana plants in western countries, many of such patents are being granted and India as a mute spectator is witnessing all this without claiming any benefit from it. Today marijuana-related businesses cost more than 15 billion dollars[49] .

The State of California is among the first places in the world to allow the use of marijuana for medical purposes, the mother of a child who was not able to treat her son's bipolar disorder, post-traumatic stress disorder and impulse control disorder over the years, even after seeing many physicians and taking numerous numbers of medicine, ultimately with the use of medicinal marijuana in a cookie, the child could be treated[50]. This all could have been possible because of proposition 215 or popularly known as the compassionate use Act of 1996 which is a Californian State law, and the above-discussed case pertains to the late 1990s and early 2000s respectively.

The point that needs to be understood is that though marijuana was illegal in the United States and many parts of the world. Its medicinal uses cannot be ignored and when medicinal science could not work, nature's substance came to the rescue. In cases of epilepsy the use of medicinal marijuana does highlight a reduced seizure frequency and severity, apart from it such patients even reported better sleep at night[51].

We can say that the medical field has been disrupted and forced to study and experiment with the use of marijuana to either cure or in many cases alleviate the symptoms of the diseases where pharmaceutical medicines in a sense could not perform adequately.

WHAT ARE POTENTIAL IP RIGHTS THAT NEED TO BE PROTECTED?

How a company uses IP rights solely depends upon the business strategy. SMEs must factor in

[48] Riboulet-Zemouli & Kenzi, *Traditional medicine & Cannabis Changes in the scope of control over cannabis*, (2020).

[49] Indra Shekhar Singh, *Is India Missing Out on the Cannabis Dollar?* https://thewire.in/business/is-india-missing-out-on-the-cannabis-dollar.

[50] O'Brien, Kevin & Peter A. Clark., *Case Study: Mother and Son: The Case of Medical Marijuana*, 41 THCR 11-13, (2002).

[51] Ladino, Ronquillo & Francisco, *Medicinal Marijuana for Epilepsy: A Case Series Study*, 41 CJNS (2014).

Intellectual Property as something critical to their success. In this era, SMEs can communicate information about their goods and services directly to their customers and they can also have a huge global market to do business. The chances of misuse of crucial ideas, innovation and brands by other competitors are very high. Against such backdrops, it is very important for companies to register their patents, design, and trademarks. By creating monopolies globally through intellectual property rights, various Multinational companies (MNCs) and other enterprises have increased their revenues and profits. Various foreign enterprises were successful in building their brand name by protecting their intellectual property rights.

SMEs must figure out their potential Intellectual Property Rights that needs to be protected. The interplay between traditional medicine, IP rights and SMEs can create opportunities For example, a Patent- an intellectual property, gives the creator of the invention, and the exclusive right to use it and others may not use such inventions without their permission. The patent allows the company to create a legal monopoly for a certain time thereby, eliminating competition legally. This will not only generate income for SMEs through IP assignments and IP protection, but it will also help in building their brand name. The use of technology for support, administration or manufacture traditional medicines can become a good area for grant of patent rights.

When it comes to trademarks, they usually help in identifying the specific brand and its logo when you see it. Brands are the reasons that loyal customers come back time and again to buy the same product or services from the same business. Trademark registration boosts brand value and helps the business grow and flourish by setting it apart from that of the competitors. Registration of trademarks also helps in protecting against frauds and counterfeiting. Having a registered and enforceable trademark is very important for global expansion and building a commercial reputation. In India, a registered Trademark is not a legal requirement however, a business must get its Trademark registered. Medicine for fever is not famous as paracetamol but the trademarked name “Crocin”. Pharmaceutical companies enjoy such leverage and the same can be utilized by traditional medicine start-ups.

SMEs can also acquire another IP asset that is an Industrial Design through which they can protect the design, pattern, shape, or the combination of colour with the shape or pattern of packaging, which not only gives the product a different use or utility but also makes it fit for industrial application.

Another intellectual property asset that SMEs can use is Geographical Indication (GI). It will help in increasing sales, especially in the international market and in differentiating products. Many traditional medicines have a long-standing reputation of being region-centric and the same has good potential to qualify for GI tags. Many people around the country travel to specific regions to procure these medicines and such usage are enough to justify the regional importance of the same.

Whereas copyright serves those who are engaged in literary and artistic works. Although it is an underrated IP asset, SMEs generally underestimates Copyright as worthy intellectual property, however, it must be noted that any marketing regulatory literature, brochures, pamphlets, product manuals etc. qualify for Copyright protection.

AREA OF INNOVATION FOR NEW ENTREPRENEURS

Today coronavirus has created opportunities for our health entrepreneurs and startups to research new medicinal products. Exploring this domain further needs a push from our government. Traditional medicine start-ups will enable our communities to earn money and benefit society at large. The health benefits of marijuana, which our communities know should be accepted and promoted respectively. Giloy is also a traditional herb that boosts immunity and is today being used by almost every household. The positive framework by the government allowed many traditional medicines to come into the mainstream. Today, many traditional medicine startups have become big brands, like Divya pharmacy, Patanjali and Himalaya. Their rise benefited local communities as well. Similarly, we have many other traditional medicines that should come into the mainstream. Marijuana is already in the mainstream and India, despite having all the knowledge, is not able to benefit from it in any way. Today there are many businesses worldwide selling marijuana in the form of cookies, biscuits, toffees and cakes. Many of these nations have gone to the extent of allowing its recreational use and here in India we are not even allowing its medicinal use. If the government legalizes its medical use for the public, beneficiaries will be able to take this in the form of tablets, syrup, powder, and oil respectively. Furthermore, new medical uses which were hidden from us will also become known to the public at large. We can have a say in the international market and save our indigenous communities from exploitation as well. We have established a traditional knowledge digital library to document and claim what is left of it, similarly, we need to claim futuristic uses of it right now and let our businesses expand in this direction. Small businesses will be able to innovate further in this regard.

CONCLUSION AND SUGGESTIONS

Our failure to recognise, safeguard and protect our traditional medicines has forced us to be a mute spectator to the international development taking place in industrialised countries. Today marijuana is being researched and used by the American pharmaceutical industry. Our ancient texts and books have highlighted the medical efficacy of this plant even before its criminalization which was used for centuries. The problem is not its re-emergence, but the way developed countries are manipulating the traditional knowledge of India without taking prior consent from the respective authorities. SMEs have a good domain to expand, but the locus standi of India is weak because we have legislation that highly limits the use of marijuana. The need of the hour is to amend the Narcotics and Drugs Prevention Act, 1985 which will allow us to use medical marijuana in the public domain and allow us to challenge the already filed patents or existing patents which has given few people exclusive rights to manipulate the medical use of this substance. Previously India had challenged neem and turmeric patents as they have been part of traditional knowledge of Indian culture since ancient times and successfully preserved them.

The move to challenge these patents saved our communities and ensured their economic benefits. These companies planned to make Neem oil and cut import dependency from India. Today this knowledge is being used by our entrepreneurs for commercial purposes worldwide. India exports neem oil to over a hundred nations and is the largest exporter of the same[52]on the other hand, turmeric exports had an economic value of 236 million dollars in 2018 and India is the largest exporter of the same as well[53]. If we act, then medical marijuana exports can reap good money by exports and in turn will benefit our economy.

We need to approach its medicinal use from two aspects, firstly for the health of the public at large and lastly as the sacred traditional knowledge of India. The court has said that the right to life is not limited to just mere animal existence[54] and health is an integral part of the right to life. The use of medical marijuana has come to us as a last resort, especially when medical science failed and could not provide relief. Furthermore, the economic value that is linked with

[52] Pisum, *Indian neem exporter*, PISUM FOOD SERVICES, https://pisumfoods.com/herbs/neem.
[53] PTI, *North America is the largest market for India's turmeric export*, June 26, 2019 https://www.thehindubusinessline.com/markets/commodities/north-america-is-the-largest-market-for-indias-turmeric-exports-tpci/article28157907.ece.
[54] Maneka Gandhi vs Union of India, 1978 AIR 597.

the use of medical marijuana is increasing day by day as more and more people have started their research on how marijuana plants can be used in different ways to treat various types of diseases or how they can provide relief to the people. The presence of marijuana in ancient texts acts as documented proof in Atharva Veda and Ayurveda helps India develop a strong case in front of the world to reclaim the marijuana plant as well as make sure that our tribal communities who hold this knowledge benefits economically for the same. The longer we ignore this topic the weaker our claim will become. We have already lost enough, and we can't lose more. We need to learn lessons from the past on how potato plants which were indigenous to Bolivia became part of the palate of the whole world but could not benefit economically to the Bolivian farmers. Hence, we cannot let something like this happen to our Indian community. We need to give our Indian entrepreneurs a big say in this scenario by legalizing the public use of medical marijuana.

SMEs should treat intellectual property rights as an asset rather than treating them as an expense. They must realise that the only way to save themselves from big sharks in the market is to become one. Investment in traditional medicine does not only provide them with the means to opportunities to create their businesses but generates revenue as well. It does not only help them to cope with the tough competition in the merciless international markets, but also provides them with the opportunities to expand and grow in the same market. The sooner the small enterprise realises the need to protect their ideas, innovation, and brand the better it is for them. The Government of India has taken several initiatives to boost MSMEs and it has also provided various demarches in the field of IPR. But when it comes to the utilisation of IP rights by MSMEs, India is still lagging. Those efforts are recognised, but still, there are miles to cover. The whole idea of having a fusion of traditional medicine and SMEs will stay a myth as long as the use of marijuana, the major component of Indian traditional medicine, stays illegal to use. The best we can see is international companies getting rich at the expense of Indian entrepreneurs and traditional knowledge holders because research and development in this field were “forbidden” due to some international pressure and the countries that bullied us to criminalise the same are earning billions of dollars from the production of the same.

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Intellectual Property Assets- An Essence to Creativity

Mugdha Pathak[55]

ABSTRACT

In this article I have discussed about importance of intellectual property through various aspects. Just after that I have discussed about various IP assets deeply and their importance in human's life for enforcement of their rights. This article identifies and presents various enactments, procedures, rules and policies which are effective in promoting and assisting in the growth, accumulation, management, and application of intellectual property as an economic asset concerning inventors and the general publics. This article gives a glace of Intellectual Property Assets framework by World Intellectual Property Organization.

Keywords: Intellectual Property, Economic Asset, WIPO.

INTRODUCTION

Intellectual property rights (IPR) are the rights granted to individuals for their mental creations, such as innovations, literary and artistic works, and commercial marks, brands, and pictures. They are generated to grant the inventor exclusive rights to utilize his or her creation for a set duration of time limit. These rights are precisely stated in Article 27 of the Universal Declaration of Human Rights, which states that the right is to enjoy from the protection of moral and material interests of human resulting in authorship of scientific, literary, or creative works and is fully guaranteed. Various IP laws have emerged with the time to secure the creativity and innovations of people by enforcing their rights. Intellectual property rights (IPR) laws were enacted to preserve, secure, and promote the intrinsic worth of such intangible properties. Intellectual property rights (IPR) laws were enacted to preserve, secure, and promote the intrinsic worth of such intangible properties.

What is Intellectual Property?

Intellectual property is nothing but an umbrella term for all the intangible assets that is those

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assets which cannot be seen and felt physically. It is the output of human conduct of ideas, inventions, creative expressions, and intellect which is protected by law from unauthorized use of others. Intellectual property creates a limited monopoly and gives ownership right in the protected property. It is present in the form of copyright, patents, trademarks, industrial designs, geographical indications tags, and trade secrets etc. types of incorporeal property. These are the means for development, ownership, commercialization, and management to get return from the investment made[56].

The significance of intellectual property was originally recognised in the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1905). (1886). The World Intellectual Property Organization is in charge of both the accords (WIPO).[57]

World Intellectual Property Day is observed every year on 26th April across the globe which focusses on motivation to the young mind by implying innovation, creativity and energy to their inventions and bring positive change and transition to a sustainable future.[58]

Importance of Intellectual property in modern era

There is a very high risk of infringement of any innovation by copying ideas and content of the inventor and without knowledge of him. With the increase of IP infringement there was a need of IP laws. An IP asset is said to be just like a physical property of a person which offers them commercial benefits. Therefore, Organizations are dependent wholly on proper patent, trademark, and copyright protection law, while purchasers purchasing goods would require IP to verify that they obtain protected and guaranteed goods.[59]

Intellectual Property Assets provides following benefits: -

1. For protection of unique innovative ideas and creativity-

   Competitors try to copy the innovative and unique ideas or the creation of a person who created it. Therefor IP Assets are important to safeguard the rights of the creator from getting infringed illegally. Before IT laws were implemented, there was little to no worth of innovative ideas but after the successful implementation of the same, wide recognition has been provided to the potential ideas by transforming them into commercially viable

[56] World Intellectual property Organization, https://www.wipo.int/about-ip/en/ (Last Visited Jun 29, 2022)
[57] Drishti IAS, https://www.drishtiias.com/to-the-points/paper3/intellectual-property-rights (Last Visited Jun 28, 2022)
[58] GK Today, https://www.gktoday.in/topics/world-intellectual-property-day/ (Last Visited Jun 20, 2022)
[59] Mondaq, https://www.mondaq.com/india/trademark/1107184/importance-of-ipr-in-today39s-world (Last Visited Jun 20, 2022)

products and services, also it's the responsibility of the proprietor to get protected by the IP laws.

2. Helps in increasing the market value of the company-

   Companies should get themselves registered and protected by IP laws as soon as they commence their businesses, this helps them in not only protecting the business from rival companies but also enhances the goodwill and creditworthiness of the company. early licensing and sale, or commercialization of secured IP for goods or services can generate a consistent flow of money as due to the registration and licensing of IP, helps to increase revenue, profits, and market share

   For example – amazon recently came up with a new idea of using a modular drone for online deliveries, in addition to this they acquired the patent for the same, implementing such new concepts by firms can result in big earnings and goodwill.

3. Enhances the export business-

   Intellectual property increases the opportunities for business in export market without having much risk of infringement and helps in expansion of the business.

   For example - McDonald's and Burger King Use to only had franchises in the United States, but today they have franchisees all over the world; they grew their businesses by adopting franchising.

4. To raise capital for the business-

   Intellectual property assets can be monetized and commercialized through sale, licence, or use as collateral for debt financing also. Furthermore, intellectual property can be leveraged as an advantage when requesting from public or government funding, grants, subsidies, or loans.

   For example, the National IPR Policy allows enterprises to use their intellectual property assets as collateral when seeking finance. As a result of protected intellectual property which can assist a company in raising capital.[60]

[60] I Blog Pleaders, https://blog.ipleaders.in/benefits-intellectual-property-rights-modern-era (Last Visited, Jun 26, 2022)

What are IP ASSETS?

IP Assets are the group of protected and exclusive rights given to the innovators including- patents, trademarks, copyright, geographical indication tags, trade secrets, industrial designs. Which was systematically and strategically selected for their commercial value. Intellectual property has economic worth because of its ability to increase the value and financial return of technology, products, and services.

By using the word asset businesses treat Intellectual Property as their own assets of the company. IP gives legal right which increases the economic value of the product. Human resources have limited commercial importance in the absence of intellectual property since it is interpreted as a non- proprietary unit, because human talent cannot be owned. Intellectual property asset is broadly regarded as a valuable income - generating asset, the worth of which can be expanded through effective strategic management policies. Therefore, use IP Assets has been increased since time and region.[61]

According to WIPO's World Intellectual Property Indicators Report (WIPI), patent and industrial design filing activities started to recover back in 2020, reflecting the adaptability of ideas and inventions even at the mid of a severe worldwide medical and health situation. According to the WIPI, trademark filings increased by 13.7%, patents by 1.6%, and designs by 2%.

WIPO Director General Daren Tang also mentioned that - "WIPO's World Intellectual Property Indicators Report shows that despite having the deepest economic contraction in decades, intellectual property filings – which is a strong indicator of innovation - showed remarkable resilience during the pandemic period, This shows how enterprises across the globe have emerged with new products and services in the market, as reflected by the double-digit growth in trademarks filing activity in 2020 despite the massive kind of economic shock, enterprises are seeking for the opportunities to reach customers in new ways, open new markets and bring their ideas to the world using IP."

Let's now talk about IP Assets one by one:

[61]Dr Monzur Ahmed, Scholar at Experimentarium, Denmark, Scientific American, Molinos Nuevos (Museo Hidraulica), Murcia, Spain; WIPO

Patents

A patent is an exclusive right given to an inventor for his innovation of product and service, which generates any solution to a problem or a new process of doing something.

To obtain a patent, all the important information about the product and invention must be revealed to the public in a patent official application.

A patent owner after mutually agreeing to the terms may grant permission or license to any other parties to use the invention. The owner can sell his right over the invention to any other person, who will become the owner of the patent after getting ownership. The protection ends as soon as patent expires, and the invention enters public realm. After expiration of patent right duration, it can be utilized by anyone, and anyone can take an undue advantage of the same without infringing the patent.

Well, who can or cannot utilize the patent right is decided by the owner for the period until which it is protected, therefore, without the consent of the patent owner no one can commercially sell, import, distribute the invention. Patent protection is approved for a specified period, usually 20 years from the date of the application filed. Patents are primarily territorial rights which are exclusively applicable in the country or region where a patent has been filed and granted, in compliance with the local law.

Patent rights are enforced by the holder of the patent in court of law which has the authority to stop any further infringement. Moreover, the patent owner has the primary responsibilities of tracking, monitoring, detecting, and prosecuting patent infringers. Patents helps in providing incentives and protection to individuals and recognition of the creativity.

Patent information - patent information is something which contains each significant information about the issued patent such as bibliographic information of the inventor and patent applicant or holder, a detailed description about the claimed invention and relevant technological achievements, and a list of claims outlining the scope of patent protection sought by the applicant.

Reason behind revealing very extensive information by the patent holder about his innovation is that the patent system requires to balance patent holder's exclusive right and his responsibility towards share the information to the public

This disclosure is may also help for the development of the technology continuously. This material information acts as a foundation for other inventions to develop a technical solution further. Otherwise, the people would have no method of learning about new and emerging

technological breakthroughs.[62]

The duration of security through a patent in India is Twenty years from date of registration and is regulated by the Patents Act of 1970. The Indian Intellectual Property Office is said to be the major patent office in India (IPO).

Some important aspects under the act are mentioned below

Any person may file an application for a patent:

a) By any person claiming to be the real as well as first assignee in terms of the right to file such an application.
b) By the legal representative of any deceased person who, immediately prior to his death had the right to file such an application.

Necessary contents of specification

Every specification, whether provisional or complete, must describe the invention and must begin with a title that clearly defines the subject-matter related to the invention,

If the controller asks for an application to be accompanied by a sample of an invention demonstrating about it, then such model or sample as he may require shall be furnished before the application is filed. The application is discovered for a patent to be granted, but such model or sample shall not be used to be part of the specification.[63]

Copyright

According to world Intellectual property Organization a copyright is the legal right granted to a creator of any artistic or literary works. Books, music, paintings, sculpture, and films are all examples of works that can be protected by copyright law, it also includes computer programme, databases, advertisements, maps, and technical drawings, literary works such as novels, poems, plays, reference works, newspaper articles; musical compositions, and choreography; artistic works such as paintings, drawings, photography, and sculpture; architecture, advertisement, maps, etc.

Copyright laws applies only to expressions, and not to process, operational methods or mathematical concepts. Copyright may or may not be accessible for several objects such as titles, slogans, or logos, depending on whether they contain sufficient authorship.

[62] WIPO, https://www.wipo.int/patents/en/ (Last Visited, jun15, 2022)
[63] The Patents Ac, 1970

Some countries used to have legislation that required the copyright owner to follow specific procedures to get copyright protection. One of those formalities was to include an indicator through which copyright is to be declared, such as the sign or the mark. Since very few nations now apply for copyright formalities, the usage of such marks is no more a legal obligation. However, many copyright holders continue to add the mark as a high visibility approach to indicate that the work is copyright protected and that full rights are preserved, as opposed to a less restrictive license.

In India, the term of protection for original literary, theatrical, musical, and creative works is until author's lifetime plus 60 years, which begins with the year of author's death and is controlled according to the Copyright Act, 1957. In the same way, for the purpose of publication in a newspapers or magazine, dramatic, or artistic works are created by the author under a service or apprenticeship contract, for the purpose of publishing in a newspaper, magazine, or similar periodical.

Owner of the copyright in the work insofar as it relates to the works of publication in any newspaper, magazine, or similar publication, or to the reproduction of the work for the purposes of the author shall be done through initial owner of the work in all other respects, except for the purpose of its publication.

The copyright holder of the previous works or the potential owner of the copyright in the future work may lend the copyright to any individual, totally or partially, generally or subject to restrictions, and for the entire life of the copyright or any part thereof: Provided, however, that the assignment of copyright in any subsequent work shall take effect only once the work is completed.

Unless the assignment clearly refers to such means or method of exploitation of the works, no such assignment shall be implemented to any means or method of exploitation of the work that simply didn't exist or wasn't even in economic use at the time the assignment was made. The creator of a literary or artistic work included within the cinematograph must not assign or waive of the right to obtain royalties to get equal share with the assignee of copyright for the use of such work in any manner other than disclosure to the people of the work together with the film, save to the legal heirs of the creators or to a copyright society for accumulation of cinematograph film in a cinema hall and circulation, of any alternative agreement shall be null and unlawful.[64]

There are two types of rights under copyright:

[64] WIPO, https://www.wipo.int/copyright/en/ (Last Visited Jun 22, 2022)

Economic rights – this right is allowed to the owner of the copyright to get rewarded for his work of art and creativity.

Moral rights, are the rights which protects the non-commercial and social interests of the author.

There is a right given to every copyright holder that he has the economic right to authorize or prohibit certain uses of their work or, in some cases, to get compensated for the use of his any of the work.

Most countries, such as the Berne Convention, provide automatic copyright protection to the owners of the works, without the need for registration or other formalities.

Nevertheless, often these economies have a system already in place to allow for the discretionary registration of creations. Such voluntary enrolment system can assist in the resolution of property or emergence of disputes, and the facilitation of monetary operations, profits, sales and the appointment or transfer of protections.[65]

Trademark

It is a kind of service mark that distinguishes one company's goods or services from that of other companies. Intellectual property laws safeguard trademarks.

A trademark protection can be obtained through registration by applying to the national or regional trademark office by paying applicable fees.

Talking about international trademark filing, there are two choices given, first to file an application of trademark with the trademark office of respective country where you need to have protection or WIPO'S Madrid system can also be referred. As a rule, trademark registration grants you the exclusive right to use the registered trademark. This means that the mark may be used exclusively by the holder of trademark or licensed to another party for use against payments. Registration creates legal certainty and strengthens the rights of holder in position, for example, in the case of any legal disputes. The duration of a trademark registration can differ depending, but it is generally ten years. It can be extended indefinitely with the payment of additional fees. Trademark rights are kind of private property rights that are enforced by orders of the court.

Any words or combination of various words, numbers, letters, can perfectly form a trademark. A trademark can be a single word or a combination of words, letters, and numbers. However, trademarks also consist of drawings, symbols, three-dimensional figures such as shape of the

[65] The Copyright Act, 1957

product and packaging, non-visible signs such as sounds or fragrances, or color shades used as distinguishing features.

The duration of registration for a trademark in India is ten years from the date of application, renewal can be done in every ten years depending upon payment of the required fee, and is principally governed by the Trademarks Act, 1999. The Indian Intellectual Property Office is the official office for trademarks in India (IPO), Trademark act, the Registration of Trademarks shall be placed at the head office of the Trademarks Registry, in which it is managed to enter all registered trademarks with the names, addresses, and descriptions of the owners, as well as notices of infringement, assignment and transmission systems, registered users' names, addresses, and descriptions, conditions, limitations, concerning registered trademarks that may be prescribed.

For the purposes of trademark registration, the Authority shall categorize goods and services in compliance with the international classification of goods and services, any question concerning to the classification of goods or services shall be resolved by the Registrar, whose decision is said to be final.[66]

Application of registration

Any person who claims to be the owner of a trademark used or presented to be used by him and who wishes to enroll it, must apply in writing in the prescribed manner. A single application for registration of a trademark for different classes of goods may be made, as well as the fee payable for each of such class of goods or services should be made accordingly.

The Registrar may reject the application or accept it with or without legislative changes, adjustments, conditions, or constraints as he may see fit. In the case of a user's rejection or conditional acceptance, the Registration needs to record it in writing the reasons for such rejection or conditional approval, as well as the materials he used to arrive at his choice.

Registration: Unless otherwise directed by the Central Government, the Registrar shall register the said trademark [within eighteen months of the filing of the application], and the trademark shall be registered as of the date on which the said application was made, and that date shall, subject to the provisions of section154, be considered the date of registration.

When a trademark is registered, the Registrar issues the applicant a certificate in the prescribed form of the enrolment, sealed with the Trademarks Registry's seal.[67]

Industrial designs

[66] WIPO, https://www.wipo.int/trademarks/en/ (Last Visited Jun 22, 2022)

[67] The Trademark Act, 1999

An industrial design is the ornamental component of an article in a legal context. An industrial design may include three-dimensional elements, such as in an article's form, or two-dimensional elements, such as patterns, lines, or color. In general, the holder of a registered industrial design or a design patent has the right to refrain and restrict other third parties from creating, making, selling, or importing articles carrying or embodying a design that is a copy of the owner's design, or substantially a copy, of the protected design when such acts are carried out for commercial purposes for profits.

Industrial designs are however used on a wide-ranging handcrafted design of industries, they consist of packages and containers of furniture and household goods, lighting equipment used for jewelry and electronic gadgets to textiles. Graphic symbols and graphical user interfaces (GUI) also used logos may constitute significant for an industrial design.

In most of the country's industrial designs are registered to get safeguarded as a "registered design" under industrial design law, against people who may copy the ideas. Industrial designs are protected under patent law in some countries and named as "design patents." most countries uses industrial design laws which provide time- and scope-limited protection for "unregistered industrial designs" without requiring registration.

Industrial designs may be secured as artistic works under copyright protection, depending on the specific country's law and the type of creation.

In India, the duration of design law protection is ten years from the date of filing of application and can be stretched for another five years more upon payment of an extension fee under the Designs Act, 2000. The Indian Intellectual Property Office (IPO) is India's premier design office. One of the greatest instances of industrial design is the "iPhone."[68]

Some important aspects covered under Indian designs act, 2000

Prohibition of certain designs from being registered— A design that is not genuine, new, or original; or has been In front of the public in India or any other nation through publication in a journal is prohibited under the said Act.

Date of the registration of application; or cannot be distinguished from known designs or combinations of known designs; or includes scandalous or obscene material, must not be registered.

Publication of registered design particulars — The Controller shall, as quickly as possible after the registration of a design, then should open to the public inspection because the prescribed particulars of the design to be published in the manner prescribed.

[68] WIPO, https://www.wipo.int/designs/en/ (Last Visited Jun 29, 2022)

Registration certificate — whenever any design is being registered, the Controller issues a certificate of registration to the owner. In the case of the loss of the original certificate, or in any other circumstance in which he considers it necessary, it would be deemed to be necessary for the controller to provide one or more copies of the certificate.[69]

Geographical indication

A geographical indication is a kind of sign or marking placed on items that have a specific geographical origin and have attributes, characteristics or repute that is derived from that origin. A mark must indicate an item to be originated from a specific location to operate as a Geographical Indication. Furthermore, the traits, features, characteristics, or reputation etc of the products should be primarily owing to its origin. Since, the attributes vary accordingly to the geographical location of production, there is an obvious connection between the product and its originality of the location of production.

A geographical indication right allows individuals and people who has the right to use the GI Tag to restrict and refrain any third party from using it if their product does not meet the applicable and required standards. Taking an example of Darjeeling tea which is protected through geographical indication; however, producers of Darjeeling tea can restrict and prohibit anyone from using the term "Darjeeling" for their tea that was not grown in their tea gardens or produced in accordance with the standards outlined in the geographical indication code of practice.

A protected geographical indication, on the other hand, does not allow the holder to restrict someone from producing a product using the same processes as those specified in the standards for that indication. It just not allows to use the name.

Geographical indications are commonly used for agricultural products, meals, wines and spirit drinks, hand crafted works, and industrial goods.

A geographical indication can be protected through these ways:

1. Sui generis systems that is special regimes of protection,
2. By using collective methods or certification marks,
3. methods focusing mainly on business practices, commercial operations including administrative product approval systems; and
4. Through unfair competition laws.

In general, geographical indicators are used to protect owner's rights on the sale of the goods

[69] The Indian Designs Act, 2000

they produce internationally and regionally both using number of techniques and approaches, typically combining two and more of the approaches listed above. These techniques were established in conformity with various legal traditions and within the context of specific historical and economic circumstances.

Registrations for geographical indications are not limited to a specified duration of validity in many sui generis laws and legislation. This means that unless the registration is revoked, the security for a registered geographical indicator will remain in effect.

Geographical indicators registered as collective and certification marks are normally protected for ten-year durations that can be renewed.

The right to use a protected geographical indicator belongs to producers or the owner residing in the particular geographical area who claims and does meet the product's unique required production standards.

Geographical indications (GI), like all other intellectual property rights, are enforceable by the administration of national laws, often through any legal proceeding and in a court of law. A competent authority, the public prosecutor, or any interested party, whether a natural person or a legal entity, public or private, has right to take an action.

National legislation provides relief by allowing for civil such as (injunctions limiting or forbidding unlawful activities), actions for damages, compensation, etc.[70]

CONCLUSION

Since intellectual property is becoming increasingly important globally, realizing its importance in one's life is the need of hour. Every individual and enterprise should now get themselves and their works registered in IP, which will allow them to generate additional income with profits, while also preventing others from stealing their ideas and innovations. However, the difficulty is that IP networks are still readily available or regional in nature. Another significant difficulty for intellectual property is that rights awarded in one jurisdiction may not be applicable in another. This highlights the importance of all countries to have strong intellectual property rules. The government must develop appropriate intellectual property regulations for both individuals and businesses that are neither too strict nor too lax. India has with time implemented a number of improvements to its intellectual property policy in order to increase efficiency and reduce the time required to grant IP Assets. India has ideally positioned itself to prioritize R&D. This has resulted in an increased rating in the Global

[70] WIPO, https://www.wipo.int/geo_indications/en/ (Last Visited Jun 28, 2022)

Innovation Index over time. An effective and equitable intellectual property system can assist all countries in realizing the potential of intellectual property as a catalyst for economic progress and social and cultural well-being. The government must develop appropriate intellectual property regulations for both individuals and businesses that are neither too strict nor too lax.

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Collective Marks: A Species of Trademark Law

Shalini Bhatt & Priya Singh[71]

ABSTRACT

Collective marks are typically characterized as signs which distinguish the geographical beginning, material, method of manufacture, or other normal characteristics of goods or services of various ventures utilizing the collective mark. The proprietor might be either an association of such ventures who are individuals or some other element. All in all, a collective Trade Mark or collective mark is a Trade Mark claimed by an association or an association), utilized by its individuals to identify themselves with a degree of quality or exactness, geographical beginning, or different characteristics set by the association. This paper discusses collective Trade Marks vis-a-vis laws related to collective trademarks and its advantages.

In the light of the same, this paper aims to study the following things: -

1. *What is a Collective Trademark?*
2. *Legal Provisions for Collective Trademark.*
3. *Advantages of Collective Trademark.*
4. *Case laws related to trademark.*

Keywords: Collective Mark, Trademark, Geographical Indication.

1. Introduction

The protection of collective marks is covered by the intellectual property laws of the majority of nations. Generally speaking, collective marks are indicators that identify the geographical origin, material, method of manufacture, or other shared qualities of goods or services provided by several businesses utilizing the collective mark[72]. The proprietor might be either a relationship of such enterprises who are individuals or some other substance. In other words, a collective Trade Mark or collective mark is a Trade Mark claimed by an association or an

[71] B.A. LL.B. (Hons.) 4th Year, Chanakya National Law University, Patna.

[72] Prachi Gupta, Collective trademarks: An Overview, Manupatra (June 14, 2022, 10:45 AM), http://docs.manupatra.in/newsline/articles/Upload/7991B723-EB64-495C-B323-A9D15B1DFCAD.pdf.

affiliation), utilized by its individuals to distinguish themselves with a degree of value or precision, geographical origin, or different qualities set by the association[73].

Collective Trademarks are special cases for the hidden guideline of Trademarks in that most Trademarks act as "badges of origin"; they show the singular wellspring of the labor and products. A collective Trademark, in any case, can be utilized by different traders, as opposed to only one individual concern, provided that the trader has a place with the association who owns the collective trademark[74]. Collective trademarks are frequently used to advance products that are normal for a given district. In such cases, the formation of a collective mark not just assists with marketing such products domestically and sometimes internationally, yet additionally gives a structure for participation between nearby makers.

The formation of the collective trademark, truth be told, should remain closely connected with the improvement of specific norms and rules and a typical methodology. In this sense, collective trademarks become useful assets for the nearby turn of events. The capability of the collective trademark is to illuminate general society about specific highlights of the item for which the collective trademark is utilized and the proprietor of the collective trademark is liable for guaranteeing the consistency with specific principles (normally fixed in the regulations concerning the utilization of the collective mark) by its individuals. Most wards expect that an application for a collective mark is joined by a duplicate of the regulations which oversee the utilization of the collective mark.

Collective Trademarks come into play when products that might have specific qualities well defined for the makers in a given region are connected to the area's verifiable, social, and social states. A collective trademark might be utilized to epitomize such highlights and as the reason for the marketing of the said products, in this manner helping all makers. A collective trademark might be utilized to embody such features and as the reason for the marketing of the said products, in this way helping all makers. Associations of small and medium enterprises register collective marks to mutually market their product(s) and upgrade item acknowledgment. Collective trademarks might be utilized along with the singular Trade Mark of the maker of a given decent. This permits organizations to separate their products from those of contenders, while simultaneously profiting from the certainty of the consumers in products or administrations presented under the collective trademark. Collective may accordingly

[73] Karan Singh, What is collective Mark? A complete guide, Sawarit Advisors (June 26, 2022, 11: 10 AM), https://swaritadvisors.com/blog/what-is-a-collective-mark/.

[74] Aishwariya Parameshawara, All you need to know about Trademark and its types, Blog iPleader (June 24, 2022, 11:00 AM), https://blog.ipleaders.in/everything-you-need-to-know-about-trademark-and-its-types/.

address helpful instruments for SMEs helping them to defeat a portion of the difficulties related to small size and disengagement in the marketplace[75].

The term 'Collective mark' is characterized under Section 2(1)(g) of the Trade Marks Act, 1999 as a trademark that recognizes the labor and products of individuals from an association of people who isn't being a partnership with the importance of the Indian Partnership Act,1932 and which is the importance of the trademark those of others[76]. It is dealt with under Chapter VIII of the Act from Sections 61 to 68 and Part II of the Trade Mark Rules, 2002 arrangements with significant provisions for collective marks.

Article 7B[77] of the Paris Convention for protection of Industrial Property provides for the mandatory provision for the member country to accept the security and to protect the collective marks of associations and associations of producers, distributors, manufacturers, and sellers by the relevant laws of the state. India is a member of the Paris Convention for the protection of Industrial Property. Indian Trademarks Act complies with the convention. Section 61 of this act gives that the provisions will apply to collective marks subject to the provisions contained in Chapter VIII of this specific act.

Corresponding to the collective mark to recognize the goods or administrations of one individual from those of others will have alluded as a manual for recognizing the goods or administrations of individuals from an association of people which is the owner of the trademark, from those of others. Accordingly, the whole meaning of 'trademark' is relevant to collective trademark subject to the arrangements contained in Chapter VIII of this act[78].

2. Relevant Legislation of Collective Mark

The term 'Collective mark' is defined under Section 2(1)(g) of the Trade Marks Act, 1999 as a

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[75] *Supra* Note 1.

[76] Trademark work Manual, IPIndia, Writers Adda (June 24, 2022, 11: 20 AM), https://ipindia.gov.in/writereaddata/images/pdf/proposed-tm-manual-for-comments.pdf.

[77] Article7bis, Paris Convention reads as follows: "Marks: Collective Marks
(1) The countries of the Union undertake to accept for filing and to protect collective marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if such associations do not possess an industrial or commercial establishment.
(2) Each country shall be the judge of the particular conditions under which a collective mark shall be protected and may refuse protection if the mark is contrary to the public interest.
(3) Nevertheless, the protection of these marks shall not be refused to any association the existence of which is not contrary to the law of the country of origin, on the ground that such association is not established in the country where protection is sought or is not constituted according to the law of the latter country."

[78] Sakshi Shairwal and Priya Singh, An Introduction to Collective Marks under Trademark Law, Lexology (June 14, 2022, 11:00 AM), https://www.lexology.com/library/detail.aspx?g=668edffa-72cd-4292-9e05-b05a6ef3aba3.

trademark that distinguishes the goods or services of members of an association of persons who is not being a partnership with the meaning of the Indian Partnership Act,1932 and which is the importance of the trademark those of others.[79]

Chapter VIII (section 61-68) of the Trademark Act, 1999 deals with the collective trademark.

- **Section 61-** This section says that the provisions of this Act shall apply to collective marks subject to the provisions contained in this Chapter.[80]
- **Section 62-** This section of the trademark act mandate that the —A collective mark shall not be registered if it is likely to deceive or cause confusion on the part of the public in particular if it is likely to be taken to be something other than a collective mark and in such case, the Registrar may require that a mark in respect of which application is made for registration comprise some indication that it is a collective mark.[81]
- **Section 63-** This section of the Trademark Act mandates that an application for collective mark registration shall be accompanied by the regulations governing the use of the collective mark.[82]
- **Section 64-** This section of the Trademark Act provides that if it appears to the Registrar that the requirements for registration are satisfied, he shall accept the application together with the regulations, either unconditionally or subject to such conditions including amendments of the said regulations, if any, as he may deem fit or refuse to accept it and if accepted shall notify the regulations.[83]
- **Section 65-** This section of the Trademark Act provides that the regulations referred to in sub-section (1) of section 63 shall be open to public inspection in the same way as the register as provided in section 148.[84]
- **Section 67-** This section of the Trademark Act provides that in a suit for infringement instituted by the registered proprietor of a collective mark as plaintiff the court shall take into account any loss suffered or likely to be suffered by authorized users and may give such directions as it thinks fit as to the extent to which the plaintiff shall hold the proceeds of any pecuniary remedy of such authorized users.[85]

[79] The Trade Marks Act, 1999 (Act 57 of 1999), s. 2(1)(g).
[80] The Trade Marks Act, 1999 (Act 47 of 1999), s. 61.
[81] The Trade Marks Act, 1999 (Act 47 of 1999), s. 62.
[82] The Trade Marks Act, 1999 (Act 47 of 1999), s. 63.
[83] The Trade Marks Act, 1999 (Act 47 of 1999), s. 64.
[84] The Trade Marks Act, 1999 (Act 47 of 1999), s. 65.
[85] The Trade Marks Act, 1999 (Act 47 of 1999), s. 67.

- **Section 68-** This section of the Trademark Act provides the grounds for removal of registration of the collective mark.[86]

3. The distinction between Collective Trademark and Ordinary Trademark

Trademark Act characterizes a collective mark as "a sign used, or planned to be utilized, comparable to goods or administrations managed or provided throughout trade by individuals from an association to separate those goods or administrations from goods or administrations so managed or given by people who are not members of the association". An important feature of a collective mark is that it is used to signify it as a badge of origin to indicate the goods and services produced or originate from a particular association. It is somewhat similar to an ordinary mark because they are both used as a badge of origin.

Collective marks are specifically used as their marks to indicate the company's membership in an association. It does not necessarily use to certify the quality of products (Sometimes it is used to indicate the quality of goods/services). An important difference between the collective trademark and ordinary trademark is that the collective trademark does not depend on the signs per se rather than other factors such as ownership and its use[87].

Mark not to be misleading as to the character of Significance

Collective marks shall not be eligible for registration if it is liable to be misleading concerning the character of the mark if the mark is applied for some other purpose than the purpose required for registration of the collective mark. This implies that an objection will be raised assuming the mark is probably going to be taken as some different option from the genuine designation of the mark, for example, that it is bound to be taken as an "ordinary" trademark mark rather than a collective mark[88].

Position in the USA

In the USA, a collective mark is a kind of Trade Mark that might be registered and protected under the Lanham Act. Two distinctly various sorts of the collective mark are incorporated under the Lanham Act as collective marks and collective membership marks.

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[86] The Trade Marks Act, 1999 (Act 47 of 1999), s. 68.

[87] Istinaf Abdullah, Categories of Trademark: Certification Marks, Collective Marks, Well-known Marks and Non-Conventional Marks, Law Bhumi (June 24, 2022, 01:00 PM), https://lawbhoomi.com/categories-of-trademark/.

[88] Section 62 – Collective mark not to be misleading as to character or significance, Trademark Act, 1999, Iplaw (June 25, 2022, 09:00 PM), https://www.iplaw.in/section-62-collective-mark-not-to-be-misleading-as-to-character-or-significance/.

The expression "collective mark" incorporates both Trade Marks and administration marks. The Lanham Act portrays a "collective" as a helpful, affiliation, or other collective gathering or association; friendly associations and associations are both viewed as collectives. The mark taken on by a specific collective is just accessible for use by its individuals. The individuals from a collective utilize its mark to recognize their goods and services and distinguish them from those of non-individuals.

The actual collective doesn't offer goods or services under the mark, yet may publicize or in any case advance goods and services bearing its mark. If a collective offers its goods and services under the mark, it isn't viewed as a collective mark; it is a Trade Mark for the goods and services presented by the coordinated collective. The second kind of collective/local area mark perceived as a collective mark under the Lanham Act is the "collective enrollment mark." The collective participation mark is special among those marks protected under the Lanham Act in that it isn't utilized in trade to distinguish the source or beginning of goods or services; its only design is to recognize the individual showing the mark as an individual from the organized collective[89].

4. Advantages of Collective Mark

Some significant advantages of collective marks are given below:

I. **The distinctiveness of Products:** Regarding competition, trademark registration of a good service can help in making a service distinct from others and also helps in its advertisement. The trademark signifies the idea and quality of the brand which helps in uniting the business with it.

II. **Symbol of Product:** An incorporated Trademark can use the symbol on its logo to let others know that it is a part of a registered Trademark & everyone else is barred from using this symbol.[90]

III. **10 Years of Validity Period:** The registration of a trademark is valid for 10 years and it can be renewed after the expiration of 10 years. It is very cost-effective and helps businessmen to create and maintain a distinctive identity.

IV. **Build Reputation and Goodwill:** A product with a trademark helps in building goodwill and the reputation of a brand. It helps the customer to recognize the product

[89] Collective Marks, Legal Information Institute, Cornell law University (June 24, 2022, 11:00 AM), https://www.law.cornell.edu/wex/collective_mark.

[90] Karan Singh, What is a Collective Mark? – A Complete Guide, Swarit Advisors, (June 25, 2022, 3:36 PM), https://swaritadvisors.com/blog/what-is-a-collective-mark/.

and hence enables a set of loyal customers who will always choose a product of a particular brand for their daily use.

V. **Exclusive Trademark Right:** In the case of collective trademark, the owner of the business has the exclusive right over the trademark use. The owner of the business can use the trademark for all the products produced and services rendered by its business. This exclusive right of the owner barred others from using the trademark.

VI. **Attracts Leading Personalities:** A good brand helps in attracting leading personalities and celebrities as its brand ambassador. Because of their popularity among common people, such leading personalities help in increasing business and also help in building brand image.

VII. **Recognizes Values:** One of the important advantages of trademarking a product is that it helps in attaching identity to the value furnished by the products or service. It helps in creating a distinctiveness of the product in eyes of the customer and hence attracts new customers.[91]

5. Why Registration of Collective Trademark is Necessary for India?

I. **Website Name:** Registration of a collective trademark helps in protecting the trademarked business name as well as the name of the website.

II. **Express Business Offers:** As a business is concerned, a trademark must identify what its business offers, and a collective mark help in explaining what its company offers.

III. **Helps in Recognizing the Trademark Class:** There is a total of 45 sectors in Trademark and each sector is called a class. Registration of a trademark decides in which class that product will fall and after registration, the trademark offers the owner to sell the product under a particular brand name within a specific sector of the economy.[92]

6. List of Documents Required for Registration of Collective Trademark in India

Following are the important documents required for the registration of a collective trademark in India:

[91] Ibid.

[92] Karan Singh, What is a Collective Mark? – A Complete Guide, Swarit Advisors, (June 25, 2022, 3:36 PM), https://swaritadvisors.com/blog/what-is-a-collective-mark/.

- In the case of an individual applicant, the name of the individual, his address, and nationality have to be given. If the applicant is a company, then the documents supporting its registration with the full address of the company have to be furnished. In the case of Partnership, the documents supporting all the partners have to be furnished.
- The list of products has to be given which requires the registration of the trademark.
- Copy of trademark which is to be registered has to be submitted.
- If the application has already been submitted in another nation for registration then it can be used in India for applying for the registration by giving details like date of filing, application number, goods or service, name of the country, etc. for this kind of application, a certified document or the notarized copy of the same has to be furnished within two months in the trademark office.
- If the trademark is already in use then the proof of the same has to be submitted with the date. An affidavit testifying its use has to be attached with the trademark application.[93]

7. Procedure for Registration of Collective Trademark

- **Step 1- Trademark Search:** A trademark search is necessary to ensure that the name to be registered is not already taken.
- **Step 2- Filing a Trademark Application:** After ensuring that the name is not taken, one can proceed with the filing of the application in any trademark office or on the online website of the trademark registry. After completion of the application process, a receipt will be issued which can be used to check the status of the trademark application.
- **Step 3- Examination of Trademark application:** After filing the trademark application successfully the trademark examiner will examine it within 12 to 18 months. After the trademark examiner accepts the application unconditionally only then it will get published in the journal. If there is any objection raised or condition required in the application then the examiner will mention it in the examination report and it will send back to the candidate and he will get 1 month time to fulfill those conditions or reply to the objection raised. If, acceptance of those replies by the examiner, the trademark will get published in the journal. In case, where reply has not been accepted by the examiner, then the candidate can request for hearing where he can again reply to the condition and objection raised.

[93] Ibid.

- **Step 4- Certificate of Registration (COR):** After successful registration of a trademark, a Certificate of Registration with the trademark office seal is issued to the candidate.
- **Step 5- Renewal of Trademark:** The validity of a registered trademark is 10 years after which it can be renewed indefinitely.[94]

8. Case laws related to Collective trademark

International Society for Krishna Consciousness (ISKCON) vs. Iskcon Apparel Pvt. Ltd and Ors[95].

The High Court of Bombay recently declared ISKON which is a registered trademark of the International Society for Krishna Consciousness as a well-known trademark in India. The matter of the case is related to trademark infringement and passing off a suit against an apparel company using the brand name ISKON. When the original ISKON files a suit against the said brand for infringement of trademark for using the name ISKON.

The court examines the contention that whether "ISKON" qualifies as a well-known trademark within the meaning of section 2(1) (zg) of the Trademark Act, 1999. The Judicature of Bombay held that serious steps should be taken against ISKON Apparel for misleading and misusing the brand name in the name of ISKON. To support their argument, ISKON proved that they are the first creator of a trademark that was established in the year 19666 in New York. With time, ISKON has created a global brand, including India. They have also proved that the prominence of the ISKON is not restricted to only a particular product but a diverse range of products.

In this case, the court was satisfied that the ISKON has fulfilled all the requirements of Trademark under the trademark Act and it qualifies to be recognized as a valid trademark[96].

NESTLE INDIA LIMITED VS. MOOD HOSPITALITY PVT. LTD[97].

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[94] *Supra* Note 18.

[95] International Society for Krishna Consciousness (*ISKCON*) *v. ISKCON* Apparel Pvt. Ltd. & Anr. (2020) SCC Online Bom 729.

[96] *Mohd Rameez Raza & Shereen Abdin,* ISKCON vs. ISKCON Apparel Pvt. Ltd. & Anr. Analysing the Four Major Commandments of Trademark Law, Nyaysharatram (June 24, 2022, 08: 15 AM), https://www.nyayshastram.com/post/iskcon-vs-iskcon-apparel-pvt-ltd-anr-analysing-the-four-major-commandments-of-trademark-law.

[97] Nestle India Limited vs. Mood Hospitality Pvt. Ltd. 2010 (42) PTC 514 (Del.) (DB)

This is one of the famous cases related to trademarks. It is also known as **YO! China V Masala Yo! and Chilly Chow Yo! Case**. Yo is a plain and formal expression used to signify excitement among customers that have been subject to a trademark war in India. Moods Hospitality is a service brand that runs a chain of Chinese food restaurants across India under the name YO! China. YO! China has filed a suit in the Delhi High Court seeking interim relief against the expression used by Nestle India for their recently launched products called Maggie Chupa Maggie in two flavors—Chilly Chow Yo! and Masala Yo!. Moods Hospitality claims rights over the name YO for noodles. They argued that YO China has its distinctive popularity in India. On the other hand, Nestle India puts forth its argument that Yo China lacks trademarks and popularity.

Setting aside the request for the single bench judge, wherein Nestle was limited to utilizing the saying "YO!", the Appellate Court saw that pretty much nothing remained to be proposed that "Yo" in "Masala YO!" and "Cilly Chow Yo!" would create an association in the personalities of the customers with a respondent similar to the source of the item. On the contrary, YO is used for requesting attention or as an exclamation. Whereas Maggie is prominently displayed on the appellant's Chupa Mania products.

The court held that the YO! and YO China! It cannot be confused with Yo. Both are different. Hence, there is no trademark infringement in the present case[98].

9. Conclusion

From the above-detailed discussion about collective marks, it is clear that a collective trademark is one of the species of trademark for goods or services which are owned by organizations or associations. In general terms, collective marks are indicators that identify the geographical origin, material, method of manufacture, or other shared qualities of goods or services provided by several businesses utilizing the collective mark.

In the current market trend, consumers use the collective mark as an instrument to differentiate between various companies or brands that are dealing with goods and services of similar nature. Collective mark helps the companies in building goodwill and reputation in terms of quality, accuracy, etc., in the market. Collective marks are very useful for organizations and associations as it gives exclusive trademark right to the owner which is valid for 10 years and

[98] Vijay Pal Dalmia, India: Indian IPR Decisions, Vaish Associates, Mondaq (June 22, 2022, 09: 45 AM), https://www.mondaq.com/india/trademark/113148/indian-ipr-decisions.

can be renewed indefinitely.

It is also a very important tool for promoting products of a particular region that is distinctive and belongs to that particular region only. It enhances the sales and production of that particular product which ultimately helps the dealer of that product.

Therefore, one can say that a collective trademark is an incarnation of all the goods or services of a particular region which helps the local producers in marketing those goods. It is a cost-saving tool that cuts down on the cost of mark development and its advertising and marketing. Thus, a collective mark gives a unique identity to the goods or services belonging to the association by making them marketable and popular.

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The Copyright Conundrum in the Works Created by Artificial Intelligence

Divya Singh & Mahima Srivastava[99]

ABSTRACT

Artificial intelligence refers to the ability of a computer or a device to perform tasks that require the intelligence, skill, and judgment of that of humans to do so. There has been a paradigm shift pertaining to Artificial Intelligence, from AI programs being capable of playing computer games of checkers to AI programs being capable of generating artistic and creative works without any human intervention, the development is remarkable. Along with the remarkable evolution, it brought about certain complexities and issues in the field of law, specifically copyright law. The copyright law aims to grant copyright protection against copyrightable work that flows from investment of creativity, skill, and judgment by the author. Artificial Intelligence opened a Pandora's Box on whether copyright can subsist in copyrightable works generated by AI, whether the status of authorship can vest with AI devices, and whether the existing copyright law is well equipped to handle works generated by AI. This article is aimed at addressing the aforementioned issues, especially in the Indian context, through extensive doctrinal research.

Keywords: Artificial-Intelligence, Copyrightable, Authorship, Originality, Copyright.

Introduction

The dominance of AI in the contemporary world is such that if it were to disappear into thin air one day, mankind would find itself devastatingly crippled. Apart from the most obvious replacements, AI has also made its way into those careers where human contribution would seem impossible to substitute. While it looks like Artificial Intelligence is on the track to obliterate human intervention; the things which it cannot do are those which come most naturally to humans. Morals, ethics, cultural dynamics, and social reasoning are just some of the things one can't feed into an algorithm. With Artificial Intelligence, the programmers ingest a string of data and algorithms into the computer, from which it learns to perform a specific function. Upon analysing it, the computer deploys the algorithm to perform the task and builds

[99] B.A. LL.B., School of Law, KIIT University.

up from its results. In this process, it learns attributes and patterns from the data and can also learn to mimic a human brain to produce a desired result. In simpler terms, the algorithms used in AIs are simply a set of instructions that teach a computer how to learn and operate by itself. Programmers feed a set of rules into the computer, set the parameters till which it can run, and each time it is processed, the computer develops enhanced expertise by building up from what it has learned. It is indisputable that AI has helped enhance human precision and effortlessly manages tasks that would require huge manpower. It is also clear that behind AI there is an unconditional human contribution in the form of the people that lay down the framework for making these frontier technologies. Artificial Intelligence is being applied to work in diverse sectors, even those without arithmetic parameters. It can however, be said that a machine would not be able to match the aesthetic style or the symphonic sequence made by an artist who has channeled years of experience into his work. But an arts-collective company called Obvious in 2018, made 'a generative adversarial network portrait painting' titled - Edmond de Belamy, using AI. The company created the artwork on canvas using an algorithm that referenced over 15,000 paintings from various periods of art history. The artwork itself created a lot of commotion in the art world, and received mixed reactions. While it was purchased for a hefty amount, the copyright implications on it were just as big. Most recently, AI was also credited with restoring the edges of Dutch artist Rembrandt's painting. Statutorily, it is clear that computer programs and software are protected under Copyright Law, but who exactly would own the copyrights to works generated using Artificial Intelligence? This question has been around since the influx of mechanically generated works and poses a copyright issues to not only works of art, but also musical and literary works.

In most traditional works, copyright protection is automatically afforded to the artists/author/composer as soon as it is expressed in tangible form. So it is only fair that for works generated mechanically using artificial intelligence, the copyright protection would vest with the person who writes the algorithms which were used to generate the work. As simple as it seems, the process of creating an AI tool is not easily discernible. The programmers who write the algorithms only set the parameters within which it has to function, and once it is processed AI does most of its own work to generate the desired result. Thus, it can be assumed that most AIs are capable of functioning without human intervention especially when it comes to generating the work that is under question. If this argument is to be purported, then AIs could just as easily be granted the same status as human authors since it satisfies the two most important requirements for copyright protection i.e. originality and creativity. Once it is clear that copyright protection may be given to AI the next issue that would arise is ascertaining who

exactly would be given the rights to such work. Since computer algorithms are sets of instructions that are independently processed and such algorithms are often scattered among various programmers. Determining the contribution of each contributor in a quantifiable manner would thus prove difficult. Additionally, AI also depends on several other external and internal determinants to function. Works created by AI identify as being made with GAN, which is called generative adversarial networks. The process of creating unique images through GAN is called training and is done by putting two neural networks against each other. These neural networks are called the generator and the discriminator. The generator is fed with real data and learns to create fakes from it. Each time this function is processed, the generator generates believable data for the discriminator to check. The discriminator distinguishes the real data from the fake and gradually, the generator becomes better at creating passable fakes. This results in an authentic output, which is created by drawing references from real data that was fed into the system. The output is often unique, having subtle undertones of works from which they were referenced. The fusion in the work generated is so unclear that it becomes difficult to ascertain where exactly they have been referenced from. This might seem like a monumental step forward in the world of creative arts, but its copyright implications are far from being unraveled.

Artificial Intelligence & Art

In the curious case of Edmond de Belamy, the artwork was created by French developers and auctioned off in England. At the bottom, it was signed with a part of the algorithm code that was used to create it, to perhaps match the style of a conventional painting. The portrait was created using GAN- something that was developed by an independent researcher called Ian Goodfellow in 2014. In an interesting disclosure later, the French developers revealed that they had borrowed a majority of the code used in their process from a student called Robbie Barrat who posted them to the popular code-sharing website- GitHub. The case in question here, has three elements to it- the first being the artwork itself, the second is GAN and the third one is the algorithm used to train the GAN. Since each of these elements owes it origin to a different creator, the copyright implications on works generated combining all three would be almost too difficult to ascertain. In another instance, Artificial Intelligence helped restore the missing edges of Rembrandt's painting called The Night Watch. The edges of the original painting had been trimmed to fit in the city halls and have since been restored by using AI tools. The machine was trained to learn the Baroque-style of Rembrandt's work and also referenced an original

copy of the full painting made by Gerrit Ludens. The digital restoration resulted in not only an off-center perspective which was originally intended by Rembrandt, but also attracted high praise from art critics coming close to what it could have been if it were never cut-off. The underlying principle in most of these AI tools used for generating artwork is that they can be programmed to pick up and build upon on what already exists. It may be trained to mimic the style of a certain painter, to emphasize certain brush stroke techniques, embody certain patterns and shapes or to encapsulate all in the same work. This ensured that there remained a touch of human intervention and control over the machine. The question of copyright protection that can be afforded to all such current and future works created using AI, thus becomes a pertinent one. In all of the above instances, the works continue to exist in the public domain, be it owing to the expiry of copyright protection or the total lack of it. The answer to the question will determine the fate of the role of Artificial Intelligence in Art. As of 2022, there are very few jurisdictions in the world which have evolved the definition of an 'author' under copyright law to include non-human actors. If the laws continue to remain as rigid as they are, it can be said that works created using AI will remain in the public domain since it will be too difficult to credit each contributor. It may seem like the distribution of credits is the biggest obstacle in the path of granting copyright protection to AI but that too, has been nearly eliminated by AICAN. AI Creative Adversarial Networks, is an algorithm created by Dr. Ahmed Elgammal comes close to resolving the issue. AICAN is designed as an autonomous artist that has learned existing styles and aesthetics and can generate innovative images of its own.[100] This has been made possible by feeding the machine with 80,000 images ranging from various epochs of art without confining the program to conform to any specific style. On top of this, AICAN has its own team of coders which work on the code for the algorithm but have no actual control over the kind of work that will be generated. This means that the result can be termed as a tasteful concoction of various art forms, without the application of human creativity or intervention. The works produced by AICAN are said to be credited with the same name, as the creator insists that even though he set the framework, the algorithm is fully at the helm when it comes to the elements and the principles of the art it generates.[101] It is clear that any work produced by AI, whether literary, musical, or artistic, isn't devoid of its own input. There is definitely creativity exercised in producing the result, which would become capable of copyright

[100] Ahmed Elgammal, *Meet AICAN, a machine that operates as an autonomous artist The Conversation* (2018), https://theconversation.com/meet-aican-a-machine-that-operates-as-an-autonomous-artist-104381 (last visited Mar 10, 2022).
[101] Ibid.

protection but it is questionable whether the autonomy of AI can at all, be considered creative. The Feist Publications case not only affirmed that there is creativity in rearrangement, but also set the parameters for what was to be considered creative. Courts in the United States have since heavily relied upon these parameters in different cases. While discussing creativity, it was held that purely random, arbitrary or insignificant selection is insufficient to be afforded copyright protection[102]. The working of neural networks in AI is similar, the programmers might set the parameters within which it is to function but the extraction and creation process, even though independent is completely random. The conundrum is that in the same Feist Publications case, the Court also held that creative choices visible in selection and arrangement were necessary to generate sufficient originality to warrant copyright protection.[103] The working of an AI Tool designed especially for creating art, the creativity in the result is ensured by the incidental extraction and arrangement. In Bleistein v. Donaldson Lithographing Co., it was held that the measure of copyright was not the end use or aesthetic value of the work, but rather the introduction of a unique element by the author.[104] It is clear that every new element introduced by AI into the resultant artwork would be deemed as an expression of its own artificial personality. With the ingress of this element of its own personality, even though artificial, works produced by AI becomes unique. With both creativity and uniqueness garnered through random extraction, granting copyright protection to AI would only be logical as it seems to satisfy the most basic requirement for copyright protection.

Artificial Intelligence & Music

With the art world seemingly conquered, Artificial Intelligence was also used to venture into music. AI generated music seemed too farfetched, for it was claimed that it would never be able to live up to the legacy of great composers and musicians. But Artificial Intelligence can be trained to mimic the discography of not only one, but hundreds of musicians. What separates AI from machines which are designed to perform a limited set of actions strictly under human control is the ability of the AI to apply existing knowledge to a new set of facts or problems.[105] Google Magenta's NSynth Super, Amper Music, IBM's Watson Beat, Spotify's Creator Technology Research Lab and OpenAI's- Jukedeck, all use deep learning networks to create

[102] Daniel Geravis, *The Machine as Author*, Iowa Law Review (2020), https://ilr.law.uiowa.edu/print/volume-105-issue-5/the-machine-as-author/ (last visited Mar 20, 2022).
[103] Feist Publications v. Rural Telephone Service Co., 499 U.S. at 348.
[104] Bleistein, v. Donaldson Lithographing Co 188 U.S. 239 (1903).
[105] Bob Ryan, *Al's Identity Crisis*, BYTE, 239, 240 (1991).

music through AI.[106] The problem with these seemingly easy-to-make-music software are the layers of copyright involved. In case of original programme created to make music, it is clear that copyright for the source code rests with the programmers but there is still ambiguity regarding the extent of protection to music created by using these programs. The more capable the software is in exercising its autonomy, the more ambiguous the origins or authorship of copyrightable works produced using it.[107] Behind these applications, are human actors which contribute to the technical aspect of making music using AI, which is done through writing the code for the programs, training the neural networks, and feeding the system with sample music. Then comes the ability of AI tools to mimic- which has consistently been one of its pertinent features. In order to be able to produce a musical composition, the machine is fed with a number of existing musical works, which is called as-source material. The source material used may not always be free of copyright, which means that in the final result, for an artist to be able to determine whether or not a part of his work has been used for AI generated music will be extremely difficult. If the argument of granting copyright protection to AI generated music is relied upon, the task of determining and crediting each contributor will also pose difficulty. For most AI tools using a number of musical works as references to create a unique tune, recognizing and abstracting the contribution of each musician is nearly impossible. This would bring up a similar situation, which is determining all the different elements involved in producing the work. The final result is the combined effort of programmers, composers, and in some cases, AI's own ability. Granting copyright protection to such musical works may thus provoke the need for a separate category under copyright law for AI and to ensure equitable distribution among all. Granting copyright protection to even one would still not suffice the ambiguity, as all these elements are mutually dependent on each other. The next question is if the music made by using this software is ever fully copyright-free? And if so, who would own the copyrights to the final product? The possible answers to this question are the user, the programmer, the computer, or a combination of one or more of these entities.[108] The Monkey Selfie case proved that copyright ownership cannot be given to animals, essentially not to anyone who would be unable exercise the rights bestowed by virtue of copyright protection. Assigning copyright to Artificial Intelligence or machines would have similar ramifications.

[106] Dani Deahl, *How AI- Generated Music Is Changing the Way Hits Are Made*, THE VERGE (March 15, 2022), https://www.theverge.com/2018/8/31/17777008/artificial-intelligence-taryn-southern-amper-music.
[107] Ralph D. Clifford, *Intellectual Property in the Era of the Creative Computer Program: Will the True Creator Please Stand Up?* 1697, Tulane Law Review (1997).
[108] Pamela Samuelson, The Future of Software Protection: Allocating Ownership Rights in Computer-Generated Works, 47 U. Pitt. L. Rev. 1185, 1190 (1986).

Machines and even humans, acting under the direction of another, such that they are acting as an amanuensis, do not have a claim in the copyright of the work.[109] As a general test of infringement under copyright law, it is important to show what has been taken from an existing work, and not what has been added to it. Which means that even if an artist's music was used as source material for a subsequent work produced by AI, it would be impossible to identify as the whole process would have to be reverse engineered. This would make it extremely difficult for an artist to even know or identify if at all, his work has been sampled from. In Alfred Bell & Co. v. Catalda Fine Arts, Inc. the Court while discussing engravings, found originality in "distinguishable variations" from the original public domain works.[110] The same can be said about music produced by AI, as anything with substantial similarity could be considered as an infringement whereas distinguishable variations combined with random extraction and rearrangement would make the work qualify the threshold for creativity. As observed in the Google Book case, it can be suggested that the use of "copyrighted works for the non-expressive purpose of training AI models amounts to fair use". It is noteworthy that Japan has amended its copyright laws and included "exemptions of the use of copyrighted works for machine learning".[111] What must also be considered is whether the AI tool in use is actively learning or its work is limited to assimilation. Google's recent research project NSynth Super, has made it possible to generate not only new notes in music, but sounds of an instrument- the NSynth algorithm learns the core qualities of what makes up an individual sound and then is able to combine sounds to create something completely new.[112] This would not only render the possibility of a copyright infringement in sampling music invalid but the result could also be deemed eligible for copyright protection. However, where computers act as independent *actors,* generating Computer-Generated Works algorithmically, sequentially, or non-deterministically, there is an apparent gap between the human's input and the computer's output. [113] Since active learning AI is autonomously functioning, the resultant work would definitely have an imprint of its own artificial personality, which makes a compelling case for

[109] Andrien v. Southern Ocean County Chamber of Commerce, 927 F.2d 132, 135 (3d Cir. 1991).
[110] Alfred Bell & Co. v. Catalda Fine Arts 191 F.2d 99 (2d Cir. 1951).
[111] Karen Robinson, "Copyrights in the Era of AI", Adobe Blog, February 27, 2020, available at: https://blog.adobe.com/en/publish/2020/02/27/copyrights-in-the-era-of-ai.html#gs.opdukw (last visited on April 15, 2022).
[112] Dani Deahl, *Google's NSynth Super is an AI-backed touchscreen synth*, The Verge (2018), https://www.theverge.com/circuitbreaker/2018/3/13/17114760/google-nsynth-super-ai-touchscreen-synth (last visited Apr 15, 2022).
[113] Nahide Basri, "The Question of Authorship in Computer-Generated Work", Penn Law, University of Pennsylvania, January 13, 2020, https://www.law.upenn.edu/live/news/9691-the-question-ofauthorship-in-computer-generated. (last visited on April 15, 2022).

AI to be granted copyright protection. In a way forward for AI, the UK Copyright, Designs and Patents Act, 1988 deals with computer-generated work, and the reason for such a provision is "to create an exception to the requirement of human authorship in order to provide due recognition and protection for the work that goes into creating a program capable of independently generating works".[114]

Copyright in I.P.

When a work is created, with it the avenue of the author and author's ownership comes into play; generally, the creator of the work is the author and owner until the author delineates it right to some other person or it creates under the banner of work for hire.[115]

"*It's often presumed that the work emanates from pre-existing works, ideas, and already existing work; thus, it won't be wrong to say that the codes which the programmer input into the computer is just a source, an idea from where the computer independently without human interaction creates a work[output]*."

The Authorship to Programmer or A.I.

If we go by the traditional way of assigning copyright to humans, the programmer will certainly qualify for the author's tag as he has input the programs. In the Case of *Kelly v Chicago Park*, it gives a glim of hope in assisting authorship status to AI, when the seventh circuit stated that in AI-generated work (programmer) has limited control over the outcome and thus assessing copyright protection was dubious. Further, they have emphasized that just because the output is not in the programmer's control does not destroy their claim to be the sole author. The learner who is inclined towards human, who is the programmer to be sole author emphasized on certain theories as they claim that it's the programmer's creativity, skill, hard work which result in AI related work outcome.[116]

The labour theory come to protect this claim as according to it the programmer is entitled to bear the fruit of their labour of making program with source from all AI output. The utilitarian

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[114] Nina Fitzgerald and Eoin Martyn, "An In-depth Analysis of Copyright and the Challenges presented by Artificial Intelligence", Ashurst, March 11, 2020, https://www.ashurst.com/en/news-andinsights/insights/a indepth-analysis-of-copyright-and-the-challenges-presented-by-artificial-intelligence/ (last visited on April 15, 2022).

[115] Lior Zemer, *The Idea of Authorship in Copyright* (Ashgate Publishing 2007). See also Lior Zemer, "*The Copyright Moment*" (2006) 42 San Diego L Rev 247 [Zemer, *The Copyright Moment*]

[116] John Pavlus, *Stop Pretending You Really Know What AI is and read this Instead,* Quartz., https://qz.com/1067123/stop-pretending-you-really-know-what-ai-is-and-read-this-instead/ (last visited on April 2, 2022)

theory envisages that the scope of further improvement or creativity is possible only when the programmer is duly awarded authorship, which is the traditional theory of giving people these rights. The UK for instance is one of those jurisdictions which follows this tradition. A person is the author of his creation, and thus paternity right lies with it; a person/programmer who is being given authorship over the work which he does not own and did not create in a way as was unaware of the outcome cannot snatch what AI has created.

Shlomit Yanisky Rawid[117], who forwards a seed of thought that when a programmer is given the author's status, which he/she himself does not own, it is not justified. Similarly, Emily Dorothew states that just because the programmer was the creator of codes does not automatically qualify the programmer to be the author of the work he had not created nor apprehended. When a person is kept in an isolated room, and in parallel, one outcome is given by a human and another by AI, and the person could not recognize which one is an AI-generated work and which one is human-generated work, then AI should be provided with the authorship tag as was stated in the Turning Test.[118]

When we strictly dive into the definition of "*author*" envisaged under Section 2(d) of the Copyright Act 1957[119]. Here "*person"* strictly does not mean to be a human person, and the definition is flexible enough to cover a natural or juristic person.[120] Additionally Article 1 of the Berne Convention talks about an author without defining it and thus leaves the interpretation open to include an Artificial Intelligence Program A company registered under the Companies Act, 2013 in India holds the same status in another jurisdiction. In that case, that is not a natural person per se (not a human), but rights and duties are still envisaged on the company. It is treated as a person who is represented, and a human regulates work; the same principle can be cast on AI, where AI is given the status of a person and authorship right given to AI.[121]

Further Kerr and Craig[122] argue that AI should not be given the authorship status as it does not communicate or a standard provided by them is that it requires participation in social relations,

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[117] Shlomit Yanisky-Ravid and Xiaoqiong (Jackie) Liu, "*When Artificial Intelligence Systems Produce Inventions: An Alternative Model for Patent Law at the 3A Era*" (2017) 39 Cardozo L Rev 2215, 2224–28.

[118] Brian Merchant, "*The Poem That Passed the Turing Test: They Should Have Sent a Computer*" Motherboard, February 2015 (last visited on April 3, 2022)

[119] "author" means, -

(vi) *in relation to any literary, dramatic, musical or artistic work which is computer generated, the person who cuase the work to be created;] 6dd[(dd) "broadcast" means communication to the public – 3[(dd) "broadcast" means communication to the public* – "

[120] HLA Hart, The Concept of Law, (3rd Edition, OUP 2012)

[121] Jerry Kaplan, Artificial Intelligence: What Everyone Needs to Know (OUP 2016)

[122] Carys Craig and Ian Kerr, "*The Death of the AI Author*" (2019) Osgoode Legal Studies Research Paper, http://dx.doi.org/10.2139/ssrn.3374951/ (last visited on April 3, 2022)

but AI does not hold this merit as it can't communicate. This contention somewhat doesn't hold true as it is because of "*user interest that AI give the outcome*" moreover, to qualify for the status of authorship or copyright, it does need to seemingly need to penetrate into social communication, as in the copyright regime we have the concept of pseudonymous and anonymous work.

A middle ground can come to the rescue and give a way of joint authorship status both to AI and Programmer, and it brings forth the argument about who should be an author? Joint authorship means work created by the collaboration of two or more authors in which the contribution of one author is not distinct from the other.[123] When there is no clear answer to the question, which puts forward a complex situation of who may be regarded as the author of the AI-generated work and on the face of it can be seen that there is the contribution of both the actors involved thus it can be concluded that the work is combined effort of both the actors (AI and Programmer)[124]

However, when AI comes into the picture is still unclear. It becomes difficult to fit it into the traditional law of different jurisdictions like the US[125], UK, Canada did not open gates to welcome AI in joint authorship as these jurisdictions define joint authorship.[126] This element of intent in their definition lag behind in the case of AI-created work. These requirements are jurisdiction-specific, not global thus, to qualify for joint authorship intent is unnecessary for many jurisdictions. Thus, this clears the fog and makes way for joint authorship for AI.

Public Domain

When dissected through the work of AI it is argued that the outcome of AI work, could not come under the realm of copyright law. As argued by Ralph Clifford, that AI does not constitute a human element thus is unable to claim copyright, its human who can only claim thus this outweigh the whole concept of authorship or giving copyright to AI and ultimately putting the work in the public domain. Rallif Cliford's contention is accompanied by Canadian and American Copyright laws[127], but when we talk about the work which should qualify for

[123] Lionel Bently and Brad Sherman, *Intellectual Property Law* (4th Edition, OUP 2014)
[124] Alan R Durham, "*The Random Muse: Authorship and Indeterminacy*" (2002) 44 Wm & Mary L Rev 569, 571
[125] US s. 2217, *A bill to require the Secretary of Commerce to establish the Federal Advisory Committee on the Development and Implementation of Artificial Intelligence, and for other purposes*, 115th Congress (2017–2018)
[126] *Section 2(z)*, Copyright Act, 1957
[127] Oren Bracha, "*Owning Ideas: The Intellectual Origins of American Intellectual Property*", 1790–1909 (CUP 2016) 32

copyright it has to map on the scale of originality and AI very well qualify on this criterion. AI qualifies on the scale of originality used by many jurisdictions like UK, US[128], India itself.
The '*doctrine of sweat of the brow'* talks about minimum time and effort, if a work has then it qualifies for copyright, A.I. work is created by its own permutation and a combination of programs gives a different outcome and hence it's AI's own effort. Secondly, '*the modicum of creativity doctrine'* tells about the minimum amount of creativity should be in the work in order to qualify for copyright protection and this can be cast upon the AI created work, as the outcomes are very different and the outcome is the creativity/work of AI itself without the intervention of human [programmer] and thus qualify for AI protection.

Work for Hire

An employer – employee concept comes into the picture when we talk about the work for hire concept, generally, the creator of the author is the owner of the work but work for hire falls into the exception of this preconceived notion. The person who pays the person to do the work for him or for his organization is generally considered an employer who employs a person to do work within the instructions and directions provided by the employer and the employee needs to remain within this boundary and do the work and work created by the employer though he is the author but ownership shift to the employee.[129]
Many scholars have drawn a parallel line between work for hire in the traditional way and that of the AI world, where the programmer is conceived to be the employer who hires AI to do the work under the context of work for hire. The programmer in this case gives the command, basic instructions through the codes, and the AI in return provides the outcome by infusing its own creativity and effort. Hristov[130] echoes with Bridy[131] and do confer with this where they want AI to come under the realm of employee definition. The UK has a similar law where if a computer generates a work without human intervention providing ownership right to the programmer [employer].[132]

[128] Jacobellis v Ohio [378 US 184], 197 (1964)
[129] Kwall, "*The Soul of Creativity*", Bently and Sherman, 273–74, 279 and 289
[130] Kalin Hristov, "*Artificial Intelligence and the Copyright Dilemma*" (2017) 57 IDEA 431, 444
[131] Annemarie Bridy, "*Coding Creativity: Copyright and Artificially Intelligent Author*" (2012) 5 Stan Tech L Rev 1
[132] Justine Pila and Andrew Christie, "*The Literary Work Within Copyright Law: An Analysis of its Present and Future Status*" (1999) 13 IPJ 133, 156

As advocated by Wu[133] and Timothy Butler[134], the author-in-law model where an author is a fictitious person and suggests that when the court finds that the said work is produced by AI/ Computer who is the author then the court should assign the copyright to the person who controls the AI, that is the programmer who should be regarded as the owner. This however promising looks and on the face of it shows that the conflict of assigning rights to either of them is solved but as Joanna Bryson[135] also rightly puts it, AI to be treated as employees; slaves who can be directed, exploited, and not given AI due right would be detrimental for the social welfare as with time these machines will develop and anthropomorphize and treating AI as salves and not giving them due rights would impact the human behavior and inflict wrong tendencies into a human being as it also brings our attention to Karl Marx's theory where a person in power exploits the labour class people by churning out all the work yet not giving due consideration in any kind.[136]

Does moral right persist?

When we talk about any work it is regarded as the mirror image of the person and it does qualify to get moral rights and no one by any means can devoid the author of their moral right. The right of *paternity* and *integrity* cannot be snatched from the author and thus AI which generates work without the intervention of the human qualifies to be the author of the work.

Hence moral rights get attached to the work, and though the ownership can be caped on the programmer but to give credit to AI remain immortal and the programmer need to give authorship status to the AI.

Conclusion

Since the Industrial Revolution corporate entities have continually received the legal status of an artificial person and it has carried with itself certain other ancillary rights. This essentially shows that change is the only constant and therefore we cannot hold onto the old conventional ways of thinking and obstruct creativity.

Artificial Intelligence and its scope need to be expanded and there is a necessity to dive into it

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[133] Andrew J Wu, "*From Video Games to Artificial Intelligence: Assigning Copyright Ownership to Works Generated by Increasingly Sophisticated Computer Programs*" (1997) 25 AIPLA QJ 131, 134

[134] Timothy L Butler, "*Can a Computer be an Author? Copyright Aspects of Artificial Intelligence*" (1982) 4 Comm & Ent LJ 707, 746

[135] Joanna J Bryson, "*Robots Should Be Slaves*" in Yorick Wilks (ed.), Close Engagements with Artificial Companions: Key social, Psychological, Ethical and Design Issue (John Benjamin's Publishing 2010) 63–74

[136] Aviv Gaon, "*Intellectual Property at a Crossroad: Awarding IP Protection for Algorithms*" in Woodrow Barfield (ed.), The Cambridge Handbook of the Law of Algorithms (CUP 2020)

and understand how artificial intelligence is making progress in leaps and bounds in works of art, music, games, etc., to get the status of an author/joint author or any status to properly acknowledge its contribution. The *Shibuya Mirai* artificial intelligence is a pioneer example where it received a residency in Tokyo, Japan. In fact a novel written by *Shibuya Mirai* has been recognized as one of the best literary works in Japan. This essentially clears any kind of doubt regarding the capability of an artificial intelligence program and lays down a foundation where AI should be given a status in Copyright Law.

If we look back, there have been several instances where non-human actors have gotten copyright protection for their work, for instance, *Naruto* the monkey, and very absurdly a ghost have allegedly been granted copyright protection, which very pertinently births the question that why not artificial intelligence then? The primary objective of copyright has always been to multiply creativity as is already visible & undoubtedly, AI's entrance into the copyright world has expanded the horizon and paved out new areas of development in the field of Intellectual Property Especially Copyright. So, what's the point of not granting AI the status of copyright protection?

It is said that a work of an author is the mirror image of his/her personality. The concept of moral rights is very well accepted in the current Indian copyright regime where an author cannot be stripped of their *right to paternity and right to integrity* even by way of an agreement. In the current situation, the work which an artificial intelligence creates by its own permutation and combination can be awarded moral rights, or at least the right to paternity is granted along with recognition. Armoring artificial intelligence with moral rights will be important the first step in its acceptance & growth until a major overhaul or statutory amendment is effected that would give space to all forms of artificial intelligence so that it can breathe freely and mushroom under a copyright regime.

Therefore, where non-human actors have been accorded with copyright protection, serving no such protection to the AI programs is indeed unethical & should subsequently be thought upon.

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Contemporary Coherence of Big Data into I.P.

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ABSTRACT

As the evolution of man took place, his intellect started to develop eventually. The concept of 'Intellectual Property' emerged in the 17th century itself but the term began to be used only since the 19th century. As technological development took place, the intellectual property started its march towards reaching the zenith since the 20th century. In the present 21st century, it can be observed that the intellectual property has ventured in almost all the fields, and the digital world is no exception. The businesses today are no longer advocating the storage of data manually. The data is being stored and processed digitally in huge quantities and this kind of a huge collection of data is known to be the 'Big Data'. The legislators felt the need for protecting the digital data, they amended the various Intellectual Property Rights. As the usage of big data also started increasing, the need for protecting these big data as an intellectual property emerged. This paper dwells into the big data and various aspects of intellectual property like the copyrights, patents and trade secrets. The paper will also elaborate about the benefits of protecting the big data as an IP and also, about the hindrances that come up with it.

Keywords: Intellectual Property, Big data, Copyrights, Patents, Trade Secrets.

Introduction:

With the today's world becoming a knowledge- based society, every new idea is playing an essential role in the business scenario. In an era where an idea is generating capital, along with the idea comes the concept of 'Intellectual Property'. Intellectual Property can be precisely defined as the rights that are granted legally for the creators and innovators to gain the economic benefits out of their creations and innovations respectively. This ensures that their works are not misused by anyone else maliciously.

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Intellectual property is defined by the *Oxford English Dictionary* as "*Intangible property that is the result of creativity*".

Intellectual property rights are the rights that adhere to such creations and that grant the holder(s) thereof a monopoly on the use of that creation for a specified period and subject to certain exceptions.[138] The underlying aim of granting such (temporary) monopoly, which – admittedly – entails a certain social cost, is to incentivize creators to share their creation with the public, and to achieve the social benefits of increased creative activity.[139]

What is big data?

Big data refers to the huge and complex data that cannot be processed by traditional methods. Even before the usage big data gained momentum, there were a lot of efforts made to store and access large information for analytics. But none of such efforts succeeded until the concept of 'Big data' came into the practice in the early 2000s.

In simpler terms, it can be said that big data is a huge collection of data that keeps growing exponentially with time. It can be structured like that of an employee table in a company's data base or unstructured like that of the results of the "Google Search" or even semi-structured like that of a personal data stored in an XML file.

Characteristics of Big data:

The characteristics of the big data can be described by using the 5V's which are:

- Volume
- Variety
- Velocity
- Variability
- Veracity

The name itself states that the size of the data is huge. Only such enormous collection of data can be put under the umbrella of 'Big data'. Whether a particular collection of data is a big data or not, depends on its size.

Secondly, the variety of data being stored in big data is varied i.e., heterogeneous data is only stored in big data.

[138] R. S. Khemani and D. M. Shapiro, 'Glossary of Industrial Organisation Economics and Competition Law' (OECD 1993) <http://www.oecd.org/regreform/sectors/2376087.pdf> Accessed on 27.06.2022.
[139] Ibid.

Thirdly, the speed at which the data traverses from sources including such business processes, application logs, networks, social media websites, sensors, mobile devices, etc. is referred to as big data velocity. There is an immense and continual influx of data.

Fourthly, since big data consists of a huge collection of data, each data might be in different formats and thus, maybe be collected from different sources. This makes it seem to varied in nature.

And finally, the enormous data stored in the form of big data is not in consistency with each other. They are all inconsistent and it is difficult to predict their certainty.

Interaction between IP and Big data:

An insight into the world of big data tells that it necessitates access to massive amounts of information for its growth and dominance in analytics. With more than three quarters of the world involved in being online, businesses are able to draw conclusions and make decisions mostly through the data available online. And now, this places a demand from the creators' side to deserve and withhold the originality of their works.

And this is where the interface between the big data and the Intellectual Property protection happens. Even though big data cannot generate any meaningful insights by itself, it can be analyzed, which is where intellectual property enters the equation. The patented hardware used to access, gather, and store data, as well as the copyrighted software that aids in deduction, are all examples of intellectual property. Moreover, once the deduction is made, this may yield protectable subject matter or assets which can be useful to the company and, as a result, be secured as a trade secret.

When the big data is being processed for analytics, there are huge chances that there might be an infringement of the Intellectual Property Rights like copyrights, patent, trade secrets, etc. The freely available information on the big data can cause severe losses to the businesses if it infringes the IPRs. This happens in a way that the businesses may use up the creator's original work and build their big data. Thus, ensuring moral usage of big data analytics assists in ensuring maintenance of IPRs.

Big data and Copyright:

According to World Intellectual Property Organization (WIPO), *"Copyright is a legal right that is provided to the creators of literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings."*

It can be said as an accumulation of rights of adaptation, reproduction and translation of another's work. By means of copyright, one's creativity is protected from stealing and rewarded. This encourages the creators to come up with more and more creative works. In India, the copyright laws are enshrined in the *Indian Copyright Act, 1957* which is protecting literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings from unauthorized usage.

When a creator of a tangible work is given a privilege like that of a copyright, then what will be the stature of a creator of an intangible asset? Well, in order to provide the same kind of dealings with the digital creators, copyrights have been introduced into the digital field. The emergence of online platforms and Internet have enhanced the significance of using the copyright laws in big data. Copyright comes into the picture since the law safeguards the computer software and programs that are used to collect and analyze big data. These tools are useful in data analytics which involve protecting the data that can be searched, segregated, transformed or deleted. Notwithstanding the growth of powerful datasets on the utilization of such works and the technological resources available to content and technology companies, there are still serious accountability and accounting issues related to the use and remuneration of such works in copyright.

Criteria for qualification of being copyrighted:

For a work to be protected by copyright, it must only have the personal touch of the creator. It must be the author's original creation. A software like big data will be protected only if it is original, which is one of the basic tests to qualify for a copyright. Most of the information collected and processed in the form of big data will not be original and thus, cannot be protected. So, the law been tailor made that the software need not be mandatorily hundred percent original. A certain degree of originality will fulfill the criteria of originality in order to be copyrighted. But this degree of originality varies from each and every country. Some countries follow lower degree and while others follow a higher degree of originality.

Similarly, for a software to be protected under copyrights, it must be fixed upon a tangible medium. When a work is stored on a medium that allows it to be perceived, reproduced, or otherwise communicated, it is considered to be fixed. The way of keeping data can range from handwritten notes (files) to photographic documentation (images) or recorded testimonies (sound) to digitized archives (digital files), as long as it is concrete, easily identified, and described. For the time being, results that have not yet been produced (future data) or results

that cannot yet be described (e.g., because there are no means to express them) are not protected by copyright[140].

Is copyright an absolute right?

The creator once he copyrights his works, is conferred upon with numerous exclusive rights with respect to the facilitation of usage of the work by a third party with or without authentication. The rights of copying, deleting, translation of another's works is balanced by some copyright exceptions which indirectly allows an optimal protection of the creator's interests. These exceptions are elaborately explained in the catalogue of the rights related to copyrights. These rights and exceptions deal with the scope of using another's works but at the same time, protect the legitimate interests of the creator.

Now a question arises as to how these rights and exceptions are incorporated in a data environment. Many big data analytics feel that the significant hindrance caused by copyright protection that they face is the requirement to obtain permission from the copyright holder for each individual piece of data. Usually, big data deals with huge amounts of data. Now, copyrighting each and every data will be a great deal of work for them. Another major problem is that of identifying the creator or owner of the copyright of every data. Each data collected will have its distinct creator. Tracking these creators and then using their data is a time-consuming as well as a tedious process. Moreover, there might be some anonymous creators who do not prefer to reveal their identity. Such kind of creators pose a bigger task to the big data analytics to figure out their rights.

Another major threat these big data analytics face is that a particular data cannot have more than one copyright. For example, if a particular creator already owns the copyright over a specific data, then another creator with the same kind of data cannot claim the copyright, irrespective of whether they have collected from the same or different sources. Each copyrighted data must be distinct and unique. But at the same time, the law does not prohibit the co ownership of two or more creators on a particular data. Say, if a certain data has been collected and processed by two creators jointly, then both of them can own a copyright over the data worked upon by them.

[140] Big data & Issues & Opportunities: Intellectual Property Rights - Bird & Bird (twobirds.com) Accessed on 29.6.2022.

Electronic Copyright Management Systems:

The IPR Acts does not provide with legal protection through the copyright laws. It also provides technological protection through methods like Electronic Copyright Management System (ECMS) and prohibiting the acts that are overriding the copyright laws. The ECMS, also known as DRMS (abbreviated as Digital Rights Management System) makes the copyrighting protocol tougher but the licensing protocol easier. The enormous collection of data constituted in the big data can be protected through the technological ways. Some of these are through watermarking, finger printing, tamper proof hardware and software; access control by user ID and password; content use through disabling printing and downloading, copying specified number of times only and restricting copying through originals (masters) only. The DRMS was, thus created with the sole purpose of protecting the digital product from unauthorized use and distribution.

In a big data environment, copyrighting has become simpler than before. The DRMS will itself scrutinize whether a particular data will be qualified to be copyrighted or not and whether its origin is from the creator himself or stolen from other's. It provides a continual protection of the works and rights, no matter where the works are located and who possesses the rights. It is going to ensure that the digital products are transferred to authenticated persons and devices. Some techniques of the DRM like watermarking, encryption, finger printing, etc. are going to block all the unauthenticated access of the data, if found any.

Complications in copyrighting big data:

The complication from a practical point of view arises as it is difficult to select or arrange big data primarily because of its 5V's and also big data is almost always automatically generated in a segment from varying sources, which introduces the need of case-to-case analysis of whether an invention about the said subject-matter shall attract copyright protection or not. This brings with the complication of tracking the legal and illegal usage of such data.

The process of copyrighting the big data is still in its amateur stage. An in-depth analysis is required to find out about how the online infringement happen while processing the big data and to identify the part that the internet has to play in blocking the unauthenticated data. Moreover, the rights that are entitled to a digital creator has to be jotted down clearly because only then copyrighting can be utilized to the fullest. By doing so, digital creators will be motivated to come up with new innovations and creations in the field of big data.

Big data and Patents:

When an inventor uses his intellect and invents a new product or process which might be the probable solution to an existing problem, then such an invention should be given some sort of protection from others copying it. It is moral to protect one's invention from the unauthorized use and distribution by the others. This kind of protection given to an invention is called as 'patent'. The world patent has been coined from a Latin word *patent-em* meaning open. A patent is a document issued by government to the inventor granting permission to exclusively make, use and sell on disclosure of the invention for a definite period of time. According to the WIPO, *"A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem."*

In principle, the patent owner has the exclusive right to prevent or stop others from commercially exploiting the patented invention. In other words, patent protection means that the invention cannot be commercially made, used, distributed, imported or sold by others without the patent owner's consent.[141]

In India, the laws related to the patency are enshrined in the Patents Act, 1970. According to *Section 3, 5* of the Act, inventions that are frivolous, obvious, exploiting commercially to public, immoral, prejudice to human, animal, plant life or health or to the environment, scientific principles, abstract theories, identified to possess new use for a known substance, known process, known machine or known apparatus, aggregation of the properties by admixture and process for production of such substances, arrangement or re-arrangement or duplication of known devices, methods of agriculture, horticulture, processes for the medicinal, surgical, curative, prophylactic or other treatment of human beings, animals to render them free of disease or to increase their economic value or that of their products, a mathematical or business method or a computer programme *per se* or algorithms, literary, dramatic, musical, artistic work, cinematographic works, television productions, rule or method of performing mental act, method of playing game, presentation of information, topography of integrated circuits, aggregation or duplication of known properties of a traditional knowledge, atomic energy, claiming substance intended for use, or capable of being used, as food or as medicine or drug, or substances prepared or produced by chemical processes are not patentable.

The Patents Act, 1970 was then amended by the Patents (Amendment) Act, 2005, wherein the product patent was extended to all fields of technology. Now a question arises as to whether

[141] Patents (wipo.int) Accessed on 30.6.2022.

the big data is included in this ambit? It can be said that big data is itself not patentable; but its algorithm and software programme may be protected by patents. Big data is so large that it cannot fit into the main memory of a single machine. This brings in the necessity to process big data by efficient algorithms which arises in Internet search, network traffic monitoring, machine learning, scientific computing, signal processing, and several other areas[142]. This algorithm can be protected by means of patent.

This concept was later discussed by the Australia's Full Federal Court in the case of *Commissioner of Patents vs. RPL Central Pty Ltd*[143]. It was held that the RPL's invention is a "business method or scheme" and is not patentable subject matter. This decision highlights how the Court differentiates between business and technical innovations, and sets out Australia's position on software patenting. The court reiterated the key requirements of patentable inventions – novelty, an inventive step, and manner of manufacture.

Big data does not entirely fulfil any of these criteria. The radical novelty of big data techniques would result in relatively isolated technological groups, which share a low similarity with each other. Big data being a heterogeneous mix, when separated will definitely produce only heterogeneous individual products. Moreover, big data is created on its own by means of artificial intelligence without any human intervention. So, it is definitely not an inventive step and the manner of manufacture of big data does not fall under the purview of patency.

Challenges in granting patents to big data:

As mentioned earlier, individual components of data that perform specified functionalities are patentable. Now, when such individual components are bound together as a single collection, then the notion of granting patent to this huge collection becomes a difficult and complex formula.

In accordance to the judgement in the case of *Commissioner of Patents vs. RPL Central Pty Ltd*[144] wherein the Court held that putting a business method or scheme into a computer is not patentable unless there is an invention in the way in which the computer carries out the scheme or method.

It can be said that acquiring patents for these inventions inferred from computer-generated works can be a complicated equation since works produced by unchaperoned artificial intelligence are not patentable subject matter.

[142] Algorithms for Big Data (CS 229r) (harvard.edu) Accessed on 30.06.2022.
[143] [2015] FCAFC 177.
[144] Ibid.

Thus, it is hard to protect big data through patency and if the system begins to issue patents to big data, then the rate at which the patency is issued will also be slower and this will make the entire process complex and time consuming. So, it can be concluded that patent and big data do not go hand in hand.

Big data and Trade secrets:

According to WIPO, trade secrets are intellectual property (IP) rights on confidential information which may be sold or licensed. In general, to qualify as a trade secret, the information must be:

- commercially valuable because it is secret,
- be known only to a limited group of persons, and
- be subject to reasonable steps taken by the rightful holder of the information to keep it secret, including the use of confidentiality agreements for business partners and employees.

The unauthorized acquisition, use or disclosure of such secret information in a manner contrary to honest commercial practices by others is regarded as an unfair practice and a violation of the trade secret protection.

In general, trade secrets can be any confidential business information that gives an enterprise a competitive advantage and is unknown to others. Trade secrets include both technical information, such as manufacturing processes, experimental research data, and software algorithms, and commercial information, such as distribution methods, supplier and client lists, and advertising strategies. A trade secret can also be a combination of elements, each of which is in the public domain on its own, but the combination, which is kept secret, provides a competitive advantage. Other types of information that may be protected by trade secrets include financial information, formulas and recipes, and source codes.

When the domain expertise of data scientists and business knowledge is used to enrich the data collected by machines, very specific performance-enhancing actions can be taken. The additional knowledge and human expertise of this enrichment step is what allows the creation of ratios of variables, trends or derivatives (e.g., changes in customer behavior), and categories from numerical variables (e.g., low, medium, high income instead of the actual number) that

then enable powerful action[145]. Companies like Amazon[146] can be taken as an example of how companies can use Big Data to further improve customer preference and develop their business. Now this naturally requires IP protection since IP deals with creation or innovation in fields of new technologies, designs and promotes economic growth and the only way to reward any person/organization that helps in this aspect is by rewarding their effort with complete and legal control over their creation so that they may exploit its use in any way they seem fit [147].

In the case of *Palantir Technologies, Inc. v. Marc Abramowitz[148], major* complains as to the increasing cases of theft of trade secrets where the trade secret is in form of data or a business model and is found in places where start-ups are densely present and the competition is very high. It was also felt that as access to internet and more sophisticated technology increases there will be more cases of theft of trade secrets hence it will be important for us to have Legislature to provide remedies for such theft and even act as a deterrent.

Trade secret laws protect sensitive business information that acquires value from not revealing them to the public. These trade secrets remain "reasonably confidential" to the business. In the present digital era, businesses no longer believe in storing manual or tangible data. The world has changed, so as the manner of data storage and processing. Companies are now storing huge amounts of data as big data and these larger sets of data are becoming a critical asset in the economy, fostering new industries, processes, and products and generating significant competitive advantages, and one method for retaining this data as a competitive advantage is to protect it as a trade secret. At the same time, protecting big data in the form of a trade secret is not just an easy process. It comes with both advantages and disadvantages.

Advantage of big data being protected as a trade secret:

Many companies like the KFC, Google, Coco Cola, etc. protect their big data in the form of a trade secret. These companies usually deal with huge amounts of data because they have a global acclamation, larger set of audience and use varied marketing strategies, which all requires a lot of data to be worked upon.

Now, say there is a company producing a particular product which is unique in the market. If the said company cannot acquire patent over this product, the alternative remedy available for

[145] Mckinsey Achieving business impact with data A comprehensive perspective on the insights value chain Authors: Niko, Holger Hürtgen, Achieving business impact with data | McKinsey Accessed on 30.6.2022.
[146] ICAS article "10 companies that are using big data" (https://www.icas.com/ca-today-news/10- companies-using-big-data) Accessed on 30.6.2022.
[147] Intellectual Property (wipo.int) Accessed on 30.6.2022.
[148] Complain Filled at US court California (http://tsi.brooklaw.edu/cases/palantir-technologies-inc-v-marcabramowitz/filings/former-palantir-employee-sued-misappropria) Accessed on 30.06.2022.

the company is to get the product protected as a trade secret. So, this implies that what cannot be protected as a patent, maybe protected as a trade secret, i.e., to say that the individual data which cannot be protected as a patent, can be protected by the business as a trade secret.

Disadvantage of big data being protected as a trade secret:

Defining big data in terms of trade secret comes with certain limitations. A well-known case in this regard in the Canada's Federal Court is the case of *Doshi v. Canada*[149]. This case concerned section 21.1(3)(c)[150] of the *Food and Drugs Act* enacted pursuant to the *Protecting Canadians from Unsafe Drugs Act (Vanessa's Law).* In this context, *Dr. Peter Doshi*, an assistant professor at the University of Maryland applied to Health Canada to obtain unpublished information, which included clinical trial reports, related to Gardasil, Gardasil 9, and Cervarix in one application and Tamiflu and Relenza in another. Health Canada replied that in order to release this information to Dr. Doshi, he would be required to sign a confidentiality agreement, and a declaration of conflict of interest. Dr. Doshi refused to sign the confidentiality agreement. Consequently, his request for the clinical trial reports was rejected. Health Canada stated in its reasons for rejecting the application that it is Health Canada's policy to treat all regulatory data as (CBI). The Court drawing a distinction between language in *TRIPS* and *NAFTA* that differentiated between "undisclosed information," "trade secrets," and "data," *Justice Grammond* found that the data should be shared in light of the public interest exception. The dispute presented an interesting example of how the defense of trade secrets does not hold up against the needs and demands of the public interest.

Thus, although a business is protecting its big data in the form of a trade secret, it has been disclosed if it demands some sort of a public interest.

Moreover, even the big data is in the form of a trade secret, it cannot escape the escape the access of competitors by illegitimate means like bribery of the company's men itself, spying, hacking or even data theft.

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[149] (Attorney General), 2018 FC 710.

[150] *21.1 (3) The Minister may disclose confidential business information about a therapeutic product without notifying the person to whose business or affairs the information relates or obtaining their consent, if the purpose of the disclosure is related to the protection or promotion of human health or the safety of the public and the disclosure is to: (c) a person who carries out functions relating to the protection or promotion of human health or the safety of the public.*

Conclusion:

Both IP and big data are emerging fields. The legislature is trying its level best to bring the protection of big data under the umbrella of IP but this process does not seem to be as simple as that. Protecting big data as an IP is bringing up with a lot of limitations and concerns which require immediate attention. The biggest responsibility is now in the hands of the lawmakers to encourage more innovations in the big data analytics but at the same time, protect a creator's work. A new outlook with respect to the IP and big data has to be given for a better implementation of the rights available to a creator from any unauthorized use and distribution of his data.

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A Moral and Legal Dilemma Regarding the Status of Human Embryos in Stem Cell Research and Patenting

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ABSTRACT

Stem cell research has given hope to medical fraternities and patients too in finding remedies for such diseases till now considered incurable. This research gained momentum during the latter decades of the twentieth century. The year 1998 was a landmark in medical history when James Thomson of the USA got success in establishing a stem cell line from the human embryo. For such a new invention he got a patent too in the USA. But the fact of destruction of the human embryo in extracting stem cells raised the ethical and moral issues of the commodification of the human body. This issue gave rise to another issue in ascertaining first the moral as well as the legal status of the human embryo itself. Some people have argued that human embryos should not be used for any commercial purpose because it is a living things since fertilization. But many people say that till the time it is implanted in the uterus, it can be used as raw material for research purposes. And if something new is invented then a patent should also be granted due to the high cost involved in this research. Since there is uncertainty as to the extent of permissibility to use human embryos in stem cell research and the eligibility to get a patent for the resultant product, this paper is an attempt to analyze the legal and moral status of the human embryo.

Keywords: IVF, Stem cell, Patent, Fertilization, Human Embryo.

Introduction

Stem cells are undifferentiated cells that can divide to produce some offspring cells that continue as stem cells and some are destined to differentiate and become specialized. Thus,

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stem cells are an ongoing source of the differentiated cells that make up the tissues and organs of animals and plants.[152]

Stem cells contribute to the body's ability to renew and repair its tissues. Unlike mature cells, which are permanently committed to their fate, stem cells can do both i.e., renew themselves as well as create new cells of whatever tissues they belong to.[153]

In the human body, there are two types of stem cells – 1st an embryonic stem cell, and 2nd is an adult stem cell or somatic stem cell. The basic difference between the two is that adult stem cells can formulate only that type of stem cell, to which they belong-, whereas it is the unique characteristics of embryonic stem cells to differentiate into any type of cell in the human body. It is this uniqueness of embryonic stem cells that brings into the picture the legal and moral status of the 'human embryo' because while extracting stem cells the human embryo itself is destroyed. In comparison to 'adult stem cell research', the differentiation capacity of 'embryonic stem cells' is much better and therefore the scientific community's first choice is 'human embryo'.

The 'embryonic stem cells' are derived from 'spare embryos' that develop from eggs, fertilized in-vitro through in vitro fertilization(IVF), and then donated for research purposes with the informed consent of the donors. They are not derived from eggs fertilized in a woman's body as is a common perception.[154]

Since the 'human embryo' is the starting point of human life, so the moral, as well as the legal status of human embryos, obviously comes into question whenever used as raw material for stem cell research. Many people, opposing the use of human embryos for scientific research, say that it is immoral to destroy the human embryo, whereas the supporters of such scientific research have the view that the human embryo has no status at all till it's taking birth alive and therefore there is nothing wrong in the use of the human embryo in such research.

Further, in the light of growing use of the IVF technique by maternity clinics, the clandestine use or transfer of human embryos to the research institute for stem cell research cannot be ruled out. Therefore, in the background of the above facts and situation, this paper analyses the legal

[152] Jonathan M.W Slack, Stem cell | Definition, Types, Uses, Research, & Facts, Britannica (Jan. 20, 2022, 3:43 P.M.), https://www.britannica.com/science/stem-cell.
[153] Jay W. Marks, Medical Definition of Stem cell, Medicine Net (Jan. 20, 2022, 4: 10 P.M.), https://www.medicinenet.com/stem_cell/definition.htm.
[154] NIH STEM CELL INFORMATION, Stem Cell Basics, National Health Institute (Jan 23, 2022, 4:14 P.M.), https://stemcells.nih.gov/info/basics/stc-basics/#stc-II.

as well as the moral status of the 'human embryo' and also the ethical issues in human embryonic stem cell patenting.

Moral Status of human Embryo:

Human embryonic stem cells are of scientific and medical interest because of their ability to differentiate and to be used in the laboratory for therapeutic purposes. So, the potential of being beneficial to so many people, affected by a serious disease, is a strong argument for doing embryonic stem cell research.

But, this research is also opposed by many people on the ground that this research ultimately destroys the human embryo. So, the morality of embryonic stem cell research depends primarily on the morality of destroying the 'human embryo', raising the question of the moral status of the 'human embryo'. Now, is there any definition of 'human embryo'? According to *'National Guidelines for Stem Cell Research, 2017'*, 'the human embryo' has been defined as a developing stage from the time of fertilization till the time of the eighth week of gestation after that it is known as *'foetus'* till its birth. For stem cell research, the guidelines also define *'early embryo'* as the stage of development from the time of fertilization up to 14 days.[155]

The moral status of the 'human embryo' revolves around two fundamental principles, namely, the duty to prevent the suffering of human beings and the duty to respect the value of human life.

However, it is a very strange situation that in the light of the latest scientific knowledge, both the above-said principles cannot survive simultaneously, as, the fertilized human eggs at the pre-implantation (blastocyst) stage i.e., the early embryo must be destroyed to procure stem cell lines and resultantly, favoring the first principle.

Generally, there are three main propositions regarding the moral status of the 'human embryo':

1. *Full Moral Status*: The supporters of this position have a strong belief that the 'human embryos' deserve the same level of protection as adult human beings. Their argument is based upon the premise that since, a development point, at which personhood is acquired, cannot be pinpointed, so, a 'human embryo' deserves protection from the point of fertilization.

[155] Department of Biotechnology, Ministry of Science &Technology, Govt. of India, https://dbtindia.gov.in/sites/default/files/National_Guidelines_StemCellResearch-2017.pdf (last visited April 21, 2022).

If our lives are worthy of respect simply because we are human, it would be mistaken to think that at some younger age or earlier stage of development (for example, when we began our lives as fertilized eggs) we are not worthy of respect.[156]

They argue that the 'human embryo' differs from adult human being not in what they are, but only in their stage of development. So, if one permits the destruction of a fertilized egg or pre-implantation stage embryos, then, the same treatment should follow with foetus or infants or every human being missing certain cognitive faculties. Thus, since, the 'embryo' has the potential to develop into a complete human being, it must be awarded the moral respect and dignity that personhood requires.

A *'human embryo'* contains within itself the capacity to develop into a complete human being. Moreover, 'human embryos' are part of the human story because every human being begins life as an embryo. If the entire life of a human being has intrinsic value, then, it is very reasonable to accord value to the very beginning stage of that life.

Thus, the supporters of full moral status for the 'human embryo' say that the law and policy should proceed based on full moral respect for human beings irrespective of age, size, and stage of development or condition of dependency. Embryonic human beings should be treated as subjects of moral respect and not as an object that may be damaged or destroyed for the benefit of others.

So, embryonic human beings, whether brought into existence by the union of gametes, somatic cell nuclear transfer, or other techniques, should be accorded the status of inviolability recognized for human beings in other developmental stages. Public policy should protect embryonic human beings and certainly not mandate or encourage their destruction.[157]

2. *No Moral Status*: The supporters of this proposition have the opinion that a 'human embryo' is nothing but a bunch of cells. The 'human embryo' itself has no intrinsic value or status, until, at least birth, and therefore any research involving 'human embryo' resulting in its destruction does not involve any wrong.

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[156] Kristina Hug, *Therapeutic perspective of human embryonic stem cell research versus the moral status of a human embryo-does one has to be compromised for the other?*, 42, Medicina (kaunsas), 107, 108-109(2006).
[157] Robert P. George & Alfonso Gomez-Lobo, *The Moral Status of Human Embryo*, 48, Perspect. Biol. Med., 201, 208-209(2005).

According to these proponents, the traits that are most central to the concept of personhood are: the capacity to experience pleasure and pain, consciousness, the capacity for reasoning, self-motivated activity and the capacity to use language and the 'human embryos' have none of them. Since *'human embryos'* have none of the above-mentioned person-making characteristics, so, they cannot be members of the moral community and thus, may be used as an instrument for the benefit of others, who are persons. Ultimately, the embryos cannot have moral status at all and they are merely the property of the person from whose body they come out.[158]

3. *Limited Moral Status*: Between the two above-discussed extreme positions, the proponents of 'limited moral status' hold the opinion that the embryo has a status resting somewhere between full and none. This position is also called *the 'proportional status position'*, which holds that the moral status of the embryo increases with its development of it until it obtains full moral status at birth or beyond.

The 'proportional status position' also has one peculiarity: by taking a middle position, on the one hand, it neither prevents scientific research nor, on the other hand, gives a free hand to use the 'human embryo' at any stage of its development. So, the proportional status position is more specific. The closer to birth, the greater protection is granted to the embryo and the greater justificatory burden is placed on those who wish to destroy embryos.

The goal of granting "proportional moral status" to the "human embryo" and the resulting restrictions is to create a legal framework that discourages scientists from using large numbers of embryos solely to maximize their interests.[159]

Legal Status of Human Embryo:

The legal status of a 'human embryo' for stem cell research and patenting is closely connected with its moral status. Whenever we try to determine whether an 'embryo' is a legal person or not then always a question is raised whether, in the eyes of law, an embryo is capable of holding rights and also enforcing other's duties towards it.

Since an embryo is a unique organism, so, when we talk about its right, we can better understand it in terms of 'interest'. Here, the term 'interest' has a dual aspect, first, having an

[158] Bonnie Steinbock, *Moral Status and Human Embryos*, VI, Steinbock, 416, 427-428(2006).
[159] Shaun D Pattinson, Medical Law and Ethics, 359-360(Sweet and Maxwell 2013).

interest, and second, taking an interest. The first aspect is directed towards the state, society, and parents; whereas the second one is directed towards the 'human embryo'.

The reason for proposing the above interpretation is that in the current legal framework, particularly in the Indian context, there is surely confusion, about whether an embryo, being an unborn person, is having interest or not. Though, various statutes have fixed an upper age limit of 18 years while defining a child but have not fixed or defined the lower threshold to clarify whether to include 'an embryo' in these definitions. But in the context of the second meaning i.e. taking an interest, the state, society, and parents surely take interest in the embryo. Since the embryo develops in the mother's womb, society as a whole cares for the expectant woman because only a physically and psychologically healthy mother can give birth to a healthy child. But when the parent or society fails in their responsibility to "take an interest" in the embryo, the State steps in to fill the gap through law or legal precedent.

Since the entire biological process of embryological development takes place inside a woman, she has full autonomy and discretion over her body regarding whether to start a human life or not. This reproductive right has been recognized within the meaning of Article 21 of the Constitution of India. The Supreme Court of India in a *Case*: *Suchita Srivastava vs. Chandigarh Administration*[160] held that a woman's right to make a reproductive choice is a dimension of personal liberty under Article 21 of the Constitution of India. Here, the reproductive choice can be exercised to procreate as well as to abstain from procreating. It also includes that there is no restriction whatsoever on the exercise of reproductive choices a woman's right to refuse participation in sexual activity or the insistence on the use of contraceptive methods. She is also free to choose birth control methods such as undergoing sterilization procedures.

Further, in another *Case*: *Devika Biswas vs. Union of India and Ors,*[161] Supreme Court of India again observed that the right to health is an integral part of Article 21, which includes the right to reproductive health. Reproductive health means the capability to reproduce and the freedom to make informed, free and responsible decisions.

Thus, it can be said that a woman has full freedom and right as to whether and when to start another life, but such decision has to be very responsible. The reason is that once she decides to become pregnant and bears a child then there come many restrictions, in the form of laws

[160] Suchita Srivastava vs. Chandigarh Administration (2009)9 SCC 1 (India).
[161] Devika Biswas vs. Union of India and Ors (2016)10 SCC 726 (India).

and regulations; on her to behave responsibly as she is not now alone rather she is now carrying another life in the form of an embryo within her.

Two factors work here - (1st) once she decides to go ahead with the pregnancy, restrictions also come in the form that she cannot now fall back as per her wish alone, as no fundamental right is absolute and so the right of reproduction is also not. And, (2nd) after the pregnancy of a woman, apart from her and her family, the state also takes interest in her and her to-be child.

The compelling interest of the state comes in many forms, but, there are two prominent laws in this regard. The first law is the 'Medical Termination of Pregnancy Act, of 1971[162] that allows legal abortion in certain specified conditions such as a risk to the life of the pregnant woman or the possibility of serious abnormalities in the unborn child. The second one is the Preconception and Prenatal Diagnostic Techniques (Prohibition of Sex Selection) Act, of 1994[163] that is used by the state in protecting the interest of the prospective child. It ensures that the scientific technology useful in diagnosing the disease may not be used for sex determination leading to female foeticide.

The MTP Act, of 1970 has tilted the balance in favor of pregnant women up to 24 weeks as amended in 2021[164] although the opinion of two doctors is mandatory. So, it can be said that the compelling interest of the state in protecting the interest of the unborn person has been restricted in certain conditions.

Further, the Indian Penal code, of 1860[165] also protects the interest of the unborn child by criminalizing an act of miscarriage. Particularly, in Section 312 and Section 315, which provide that if any person (including a pregnant woman) has voluntarily caused a pregnant woman to miscarry in bad faith or an act to cause such child to be born dead or causes to die soon after its birth and does such act in bad faith then in the former case, such person is punishable with 3 years imprisonment or fine or both and if the woman was quick with the child then 7 years imprisonment or fine or both, and in the latter case, the punishment would be up to 10 years imprisonment or with fine or both.[166]

[162] The Medical Termination of Pregnancy Act, 1971, No. 34, Acts of Parliament, 1971 (India).
[163] The Pre-conception and Prenatal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994, No. 57, Acts of Parliament, 1994(India).
[164] The Medical Termination of Pregnancy (Amendment) Act, 2021, No. 8, Acts of Parliament, 2021(India).
[165] The Indian Penal Code, 1860, No. 45, Acts of Parliament, 1860.
[166] *Id*., ss.312, 315.

However, Section 299, Explanation 3 of the Code, 1860 has strengthened the State's compelling interest in the sense that causing the death of a child has been declared as culpable homicide irrespective of the fact that whether the such child had breathed or not any part of such child has come out of the body of the mother.[167] But, this provision also operates when any part of the unborn child has separated from his/her mother.

Further, Section 416 of the Criminal Procedure Code, 1973 is also relevant in the sense that if a woman sentenced to capital punishment is found to be pregnant then, the High Court shall commute the sentence to imprisonment for life.[168] Thus, this code directly protects the interest of the fetus.

So far as 'property rights' are concerned, though, an interest can not be transferred in favor of an embryo (unborn person) but, according to Section 13 of the Transfer of Property Act, 1882, an interest in any property can be transferred for the benefit of an unborn person provided prior interest is created and the remaining interest is transferred in favor of unborn person but subject to the condition of his taking birth alive before the expiration of last prior interest. And under Section 20 of the Act, 1882, such an unborn person takes a vested interest in such property only after his birth.[169]

Regarding succession, the relevant provision is section 20 of the 'Hindu Succession Act, 1956', which talks about the right of an unborn person to get a share in the property of the intestate, if he was in the womb at the time of death of the intestate. So, in such a situation, if he is born alive then, the inheritance shall be deemed to vest in such a case with effect from the date of the death of the intestate.[170]

Further, under Hindu law, the laws of partition also give a special right to an unborn child contingent upon his taking birth alive. A son/daughter, who was in his mother's womb at the time of partition, is entitled to a share, though born after partition and if no share is reserved then, he/she is entitled to have the partition reopened. A son/daughter, who is begotten and born alive after the partition is not entitled to reopen the partition if his /her father reserved a share to himself, but if not, then, he/she is entitled to have the partition reopened.[171]

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[167] *Supra* note 165, at 81, s.299, Explanation 3.
[168] The Criminal Procedure Code, 1973, s. 416, No. 2, Acts of Parliament, 1974 (India).
[169] Transfer of Property Act, 1882 ss. 13, 20, No. 04 Acts of Parliament, 1882 (India).
[170] Hindu Succession Act, 1956 s. 20, No. 30, Acts of Parliament, 1956(India).
[171] Prof. U. P. D. Kesari, Modern Hindu Law, 428 (Central Law Publications 2011).

If we talk about the situation in the U.S.A., it appears that its legal system has treated the 'embryo' only as an integral part of the woman bearing it and so, given no separate rights independent of such woman. However, in certain exceptional situations the courts have recognized the rights of foetus, similar to an adult person, but, it has ultimately created an adversarial relationship between the woman and the fetus by granting the State the power to regulate a woman's behavior during pregnancy.[172]

The U.S. Supreme Court in 1973 in a landmark *Case: Roe vs. Wade* observed that the unborn has never been recognized in the law and the law has been reluctant to afford any legal right to foetus except in narrowly defined situations and except when the rights are contingent upon live birth. This judgment had given abortion right to women before the unborn child is viable outside the womb of the woman or before 24 to 28 weeks. There is a common belief that a woman's rights can be distinguished from an unborn child's rights at the point of foetal viability but not before that. So, it can be said that even the law does not recognize an unborn person till the point it attains viability and that's why abortion was legally permitted.

But, recently in June 2022 the US Supreme Court overturned the above case in *Thomas Dobbs vs. Jackson Women's Health Organisation*. The effect of this judgment is that a woman's autonomy over her body has been curtailed and her right to have an abortion has to be decided by the laws of individual states.[173] So, the current position in the USA is that the balance has again tilted in favour of the unborn child to curtail woman's right to privacy but without declaring them as legal person.

The position in England is that a foetus is not a person until it is born alive. It was stated in a *Case: Paton vs. British Pregnancy Advisory Service Trustees* that the foetus cannot in English law have any right of its own until it is born and has a separate existence from the mother.[174]

As a result, when we examine the legal status of "an embryo" in the context of the aforementioned legal framework, we discover that no one has given "an embryo" a clear-cut legal status. Even in those areas of civil law where it has been granted some rights of action, it

[172] Siddtharth Singh Nehra & Abhay Singh Rajput, *The legal personality of an Unborn Child: A Comparative Analysis of USA & India*, 5, AIJJS, 95, 101-102(2019).
[173] Payal Shah, *The impact of the US Supreme Court's overturning of Roe v Wade will be felt acutely by marginalized people, including low-income women and women of colour, The Impact of US Supreme Court's overturning* (June 28, 2022, 9:00 A.M.) https://indianexpress.com/article/opinion/columns/us-supreme-court-roe-v-wade-abortion-rights-7992611/
[174] Paton vs. British Pregnancy Advisory Services Trustees [1978] 2 All ER 987, 989.

has been made subject to taking birth alive. By implication, it follows that 'an embryo' has no legal personality before birth and acquires legal status only upon being born alive.

The ethical aspect of Stem Cell Research and Patenting involving Human Embryo:

The area of 'stem cell research' is related to health issues. Due to the development of science and technology, many health's related technologies were developed by the scientific community. Such new products/processes got patents too after fulfilling the conditions of novelty, inventive step, and utility. However, in most of them, the remedy was found outside the human being.

When stem cell technology was developed, then, it found the remedy for many diseases in that stage of human development, where human life itself begins, i.e., the human embryo. However, this discovery itself is not problematic.

The real issue is that to keep the efficiency and differentiation potency of 'stem cells' at the maximum level, it is needed to be extracted from an early stage of the embryo, called a blastocyst. But, after such process, the embryo becomes useless, in other words, the embryo then cannot be developed into a human being. It is this problem, which creates an ethical barrier to the research and development of stem cell technology. Dramatically, it can be said that the cure of many diseases by giving a new life to one person by way of stem cell therapy is based on the destruction of another life having the potential to develop into a human being.

Now, the uncertainty regarding the moral as well as the legal status of human embryos appears to have given the State ample scope to allow the use of 'spare embryo' in stem cell research and also to claim a patent. Some examples are discussed below.

In India, the *'National Guideline for Stem Cell Research, 2017'*, in Section 8.3 clearly says that stem cell research regarding in vitro culture of intact human embryo, beyond 14 days of fertilization or formation of the primitive streak, whichever is earlier, is prohibited.[175] But, Section 4.1 of the guideline, 2017 clearly says that before using such 'spare embryos', it is mandatory to obtain informed consent from the voluntary donor including video consent as per the Central Drug Standard Control Organization guidelines for audio-visual recording dated 9th January 2014.

[175] *Supra* note 154 at 76, s.8.3

Since the donation of *'spare embryos'* raises ethical and moral concerns, therefore, it is necessary to ensure that the donors are neither exploited nor there commoditization of 'human embryos'. It also clearly says that if the use of 'spare embryos' bring any benefit, then, the effort has to be made to pass on the same to the donor but, the 'intellectual property rights' will not vest with the donor.[176]

Moreover, the issue of the availability of 'spare embryos' has also been taken care of under Section 8.2 of the guidelines, 2017, where the creation of a 'human embryo' by way of any method has been restricted to the extent that the researcher has to prove beforehand that the proposed research cannot be carried out with the existing Embryonic Stem Cell lines or can not be derived from 'spare embryos'. This limited permission to create human embryos is further absolutely restricted in the form of a complete prohibition on reproductive cloning.[177]

Further, under Section 15.2.4 of the guidelines, 2017, the commercialization of the 'spare embryo' has been diminished by providing that there has to be no inducement by way of payment or instead of medical expenses for such donations except for reimbursement of reasonable expenses for travel and loss of wages of the donor and that too to be determined by the Institutional Committee-Stem Cell Research/Institutional Ethics Committee.[178]

In Britain also, embryo research is permitted only up to 14 days after fertilization or the appearance of the primitive streak, whichever is earlier. The 14 days period is, to begin with, the day on which the process of creating the embryo began.[179]

Similarly, the 'National Institute of Health Guidelines for Human Stem cell Research, 2009, applicable in the United States of America, though, specifically does not point out the 14 days limit but does provide that any human embryonic stem cell research being eligible to get NIH funding, a such embryonic stem cell must have been derived from the inner cell mass of blastocyst stage of human embryos. Thus, by implication, the position in the USA is that the cut-off point has been further limited up to 5 to 6 days from the time of fertilization.[180]

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176. *Supra* note 154 at 76, s.4.1
177 *Id*., s.8.2
178 *Id*., s.15.2.4

179 Legislation.gov.uk, http://www.legislation.gov.uk/ukpga/1990/37/section/3 (last visited April 21, 2022).
180 National Institute of Health Guidelines for Human Stem cell Research, 2009, https://stemcells.nih.gov/research-policy/guidelines-for-human-stem-cell-research (last visited April 21, 2022).

Further, the *'Guidelines for Stem Cell Research and Clinical Translation, 2016'* prepared by the *'International Society of Stem Cell Research'* prohibits in vitro culture of any intact human pre-implantation embryo or organized embryo-like cellular structure with human organismal potential beyond 14 days or formation of the primitive streak, whichever occurs first.[181]

Here, it is important that in all the guidelines and legal frameworks discussed above, 14 days limit has been placed on stem cell research involving 'human embryos'. This position may be based on the fact that a 'human embryo' becomes worthy of protection at around 14 days after fertilization. Many reasons are given in support of that. It is shown under embryological studies that 'fertilization' itself is a process and not a moment and so, 'an embryo', in the earliest stage is not sufficiently individualized to have the moral weight of personhood. It is also argued that it is the implantation of the blastocyst in the uterus wall that is the best landmark for the definition of human life because after that twinning is not possible anymore. Also, it is from the 14th day that the formation of the central nervous system starts to develop, and only then the possibility of sensation can be said to exist in the human embryo.[182]

Thus, for stem cell research, it can be said that the 'human embryo' has *'proportional moral status'*, and the protection of the 'human embryo' increase with its gradual development. Its moral status of it also increases with its further development not only in the eyes of society but also in the law. As can be seen in India and other legal regimes mentioned above the use of spare embryos only is permitted under certain conditions for stem cell research and if a new product is invented then it may be granted a patent too subject to fulfillment of patentability criteria. Thus, the moral status of the 'human embryo' as well as the extent of the permissibility of stem cell research using it has been fixed up to 14 days.

Now, the extent of permissibility to use *'human embryo'* affects the patentability of a new stem cell product. Unlike in European Patent Organization, new stem cell product is patentable in India. Though, there is Section 3(b) of the *Patent Act, 1970* that excludes any invention from patent, the commercial exploitation of which is against morality.[183] But it appears that the morality aspect has been tiled in favor of scientific research in India.

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[181] International Society for Stem Cell Research, https://static1.squarespace.com/static/611faaa8fee682525ee16489/t/62ed69b184e2ed258e6eb7e4/1659726257773/isscr-guidelines-for-stem-cell-research-and-clinical-translation-2021.pdf (last visited April 21, 2022).

[182] *Supra* note 155, at 76.

[183] The Patents Act, 1970, s.3 (b), No.39, Acts of Parliament, 1970 (India).

However, in Europe, under Article 53(a) read with Rule 28 (c) of the *European Paten Convention, 1973,* a patent cannot be granted for an invention that necessarily involves the use and destruction of the human embryo. In other words, there cannot be patenting of claims directed to a product, which at the filling date could be prepared exclusively by a method, which necessarily involved the destruction of the human embryo from which the claimed product was derived, even if the said method is not part of the claim and also that grant of the patent would be contrary to public order or morality if the embryo has been destroyed. Moreover, the human embryo cannot be used for industrial or commercial purposes.[184]

The reason for such a prohibition in Europe is an interpretation given in a *Case*: *Oliver Brustle vs. Greenpeace*.[185] In this case, it was held that the term 'human embryo' includes any human ovum after fertilization, if that fertilization is such as to commence the process of development of a human being.

The same is the situation in Britain with certain modifications. In Britain, the use of human embryos for industrial or commercial purposes is not patentable. Since "human totipotent cells" can evolve into the full human body, they are also not patentable because the human body, in all of its developmental and morphological stages, is not subject to patent protection. Also that the use of cells derived from a procedure that necessitates the destruction of a "human embryo" in the course of putting an invention into practice prevents the patentability of such a process. The stage of destruction doesn't matter in this case. But, 'human stem cells' not derived from 'human embryo', like adult stem cells, induced pluripotent stem cells, will be granted patent protection subject to the condition that they fulfill other conditions of patentability, which also includes parthenogenic pluripotent stem cells.[186]

In the U.S.A., there is no barrier to patenting 'human embryonic stem cells, irrespective of the fact, whether in the process of extracting the stem cell, the embryo was destroyed or not. The morality restriction regarding stem cell research and patenting of the product derived from that research is very flexible. The only limitation is in the form of getting funds from the

[184] European Patent Convention, 1973 https://www.epo.org//law-practice/legal-texts/html/epc/2020/e/EPC_conv_20221101_en_20221101.pdf (last visited March 02, 2022).
[185] Oliver Brustle vs Greenpeace, https://eur-lex.europa.eu/legal-Content/EN/TXT/PDF/? Uri=CELEX: 62010CJ0034& from=EN (last visited March 06, 2022).
[186] Statutory guidance Inventions involving human embryonic stem cells: 25 March 2015, https://www.gov.uk/government/publications/inventions-involving-human-embryonic-stem-cells-25-march-2015/inventions-involving-human-embryonic-stem-cells-25-march-2015 (last visited March 8, 2022).

government and that too when the fund is needed for research using human embryonic stem cells (*hESC*) and certain use of induced pluripotent stem cells.

In the U.S.A. government fund is available only for stem cell research involving human embryonic stem cell, where such stem cell was derived from embryos created by IVF for reproductive purpose and are now no longer needed. Also that such spare embryo was donated for research purpose with informed consent. Thus, if the human embryo has been created for stem cell research by any method other than as mentioned above then it will not get funds from the government.

However, to get a patent on stem cell products there is no such restriction if the conditions of patentability are fulfilled. One other situation also emerges and that is there is no prohibition on private research on human embryonic stem cells, even if a human embryo was created specifically for research purposes except that this research will not get funds from the government. However, in all other respect, any new stem cell product is well qualified to get patent protection subject to the fulfilment of patent criteria.

In fact, in the USA the first 'human embryonic stem cell' patent was issued to 'James Thomson' from the 'Wisconsin Alumni Research Foundation' in 1998. After that two more patents were granted to him in 2001 and 2006 respectively, and the assignee of these patents was the 'Wisconsin Alumni Research foundation'.[187] Here, the field of the invention was primate embryonic stem cell cultures.

Conclusion

From the above discussions, it is clear that, so far as moral status is concerned, the human embryo has been conferred limited moral status. It appears that human beings have compromised their level of morality to some extent concerning stem cell research except in certain legal regimes such as Europe. But in the context of legal status, some discrepancies are found. In certain laws dealing with legal rights and liabilities, the upper limit is fixed for a child which is 18/21 years. But whether the embryo is included in that is not expressly mentioned. Though, some abortion laws have fixed upper limits ranging from 20 to 24 weeks for not disturbing the development of human embryos except in certain conditions. But that does not automatically confer legal personality on a human embryo till it takes birth alive. Perhaps, this

[187] U.S. Patent Nos. 5340740, 5656479, 5843780, https://patft.uspto.gov (last visited March 18, 2022).

is the gap in the law that has given scope for human embryonic stem cell research. But this again is opposed on the ground of commercialization and interference in the law of nature.

However, this ethical problem can be lessened by taking some positive steps. The lower threshold of definition of the child should be mentioned in the patent laws itself instead of guidelines/regulations. Further, due to the development of science and technology, many alternative sources are now available, e.g. induced pluripotent stem cells, adult stem cells, and umbilical cord blood. These resources can be used to break the ethical barrier. Moreover, since abortion is legally permitted in many countries including India so, the aborted foetus can also be used to extract stem cells. Though, the stem cells so extracted may not have a high level of potency as compared to embryonic stem cells. Still, this can be a great substitute for embryonic stem cells thereby lessening the ethical burden on the humanities.

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Copyright Infringement from Prism of Comparative Law: A Judicial Precedent and Statutory Perspective

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ABSTRACT

Intellectual Property Rights is increasingly becoming the tool and the fulcrum for differentiating rights of the owner for asserting the 'bundle of Intangible rights' in the Intellectual property law landscape. Enforcement of Copyright rights is essential to ensure compliance and enforcement of the rights of the copyright holders. Judicial enforcement may be used to ensure compensation for damages or seizure of infringement goods. This article is an attempt to delve into the multiple facets of 'Copyright Infringement' from Comparative Law perspective with special emphasis to statutory provisions in light of catena of cases which has surfaced in various jurisdictions in Hon'ble Courts of Law. It is fait accompli that concepts of primary and secondary infringement in the domain of Copyright have been a subject matter of judicial interpretation based on facts and circumstances of the cases. The need of the hour is to address the issues from the prism of ratio from judicial judgments which is the base to place reliance for future decision making process. This is in line with the 'ratio decidendi' as derived and alluded from judicial precedents in catena of cases and to be aware of the legislative intent from the perspective of statutory provisions of law.

Keywords: Subconscious Copying, Extrinsic and Intrinsic Test, Copyright Suit, Contributory Infringement, Vicarious Infringement.

Introduction

The quintessential aspect in relation to the realm of Copyright, is that Copyright law infringement is of the nature of 'absolute liability'. In vital to note that the real rights related to the 'Property law' are of the nature of '*rights in rem'*, that is the 'rights against the world as a

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whole'. The same holds good for 'Law of Torts' which is also '*rights in rem'*. A vital aspect with reference to adjudication in Hon'ble Courts of Law in India, as catena of cases surfacing before the Hon'ble Courts of Law alludes to the fact that the 'Copyright' is hitherto being restricted to issues of 'copying' in Indian scenario. The question garners traction with respect to analysis with the view of 'Copying in fact' and the issues involved in proving it. It is vital to look at the issue from '*Comparative Law'* dimension. The business ecosystem is dynamic and harnesses the latent potential of Intellectual Property Rights for the upliftment of business potential and for long term sustainability in the value of growth and development.

Subconscious Copying

Prof. David Nimmer has two interpretation which are relevant includes, firstly, that of comprehensive non-literal copying/similarity and secondly, that of fragmented literal copying. Another area which warrants analysis is the two vital aspects of 'Reasonable Access' and 'Inverse Pr[189]oportion Ratio' w.r.t 'Access'. It is vital to look at 'Reasonable Access' vis-a-vis 'Bare' Access. In United States (US), the question of reasonable access is of standard v. Rule. It is also vital to note the school of thought process that Hon'ble Judge belong to have a bearing on the analysis. The Two School of Thought that of Critical Legal Studies and American Realism is pertinent in that endeavour of analysis. In this context, in India the debate between Generalised vis-a-vis Specialised judge, becomes important to see. In India, because of the generalised approach, there are no biases which creeps in because of lack of any specific specialised view with subject matter of Copyright Act. Another vital dimension in this analysis is that of 'Inverse Proportion Ratio' with respect to 'Access' where there exists an inverse relationship between the chance of access and that of substantial copying. In United Kingdom (UK), the British law analysis alluding to the Copinger and Skone James on Copyright[190], has to be seen from two dimension, *firstly,* Sufficient Objective Similarity between the Plaintiff and Defendant's work and *secondly,* Causal connection between the Plaintiff and Defendant's work. The 'primary infringement' is of the nature of 'direct infringement' and can be analysed from 'subconscious copying'.

It is also pertinent to note that 'Secondary infringement' is of the nature of following:

[189] An American lawyer and author of "Copinger and Skone James on Copyright (1991)", "International Copyright Law and Practice (1989–1998)", "Cases and Materials on Copyright and Other Aspects of Entertainment Litigation (2002)"

[190] Nicholas Caddick QC, Gwilym Harbottle and Prof. Uma Suthersanen, "Copinger and Skone James on Copyright" (18 ed., 2021)

1. Contributory Copyright Infringement, where knowledge is required and is of the nature of 'fault liability'
2. Vicarious Copyright Infringement, where knowledge is immaterial and is of the nature of 'absolute liability'
3. Induced Copyright Infringement, where not much of the jurisprudence has evolved where its exact nature is yet to be deciphered or interpreted.
4. Authorised Copyright Infringement is applicable in UK and takes the shape of secondary liability.

In sequitur, it is vital to note that 'Joint feasors Liability' is also there which is of the form of secondary liability. Judge Learned Hans had opined that copying of 'core portion' is deemed fit case of 'Copyright Infringement'[191]. In *Three Boys Music Corp. v Bolton,*[192] Hon'ble Court held that it was fit case of sub-conscious copying as memory plays the trick and as Copyright infringement results in liability is a 'absolute' in nature.

Extrinsic and Intrinsic Test

It is vital to understand the difference between the Question of 'Fact' and 'Law'. In US (America), the issues of fact are addressed by people by Jurists and the question of law is the subject matter in the realm of judges. It is pertinent to note that at many a times, where it involves question of fact, a legal mind may not be necessary. At this juncture, it is important to understand the difference between 'Generalised' and 'Specialised' judges. In India, the position is that of the 'Generalised' judge, which has the inherent advantage of being 'bias-neutral' and is not influenced by any complexities involved in adjudication. In contrast to Intrinsic test, the extrinsic test is taking the vital 'extraneous experts opinion', who has the knowledge and who can tell whether there is any similarity on core copyrightable expression, which helps in reaching finality of the judgment. In India, the evidence law provides the judge power to determine and refer to the expert evidence which as per Section 45[193] takes the shape of 'expert testimony'. Practically, to exemplify for instance, the analysis of two software involving expert opinion giving testimony by Copyright expert to the Court, where the court looks at the scope and interoperability of software with regard to techno-legal opinion.

[191] Judge Learned Hans once in his interpretation of 'Subconscious Copying' has observed that, "If Memory plays its tricks, there is subconscious mind at play where if the core portion if copied, then it is Copyright Infringement..."
[192] Three Boys Music Corp. v Bolton 212 F.3d 477 (9 th Cir. 2000)
[193] Section 45 of the Indian Evidence Act 1872.

Copyright Suit

Some vital questions and answers which are ascertained before instituting a case on Copyright are *firstly,* Whether the Copyright suit is a suit of 'Civil nature'? The answer is yes with the interpretation of Section 9. *Secondly,* whether plaintiff is proper party to the suit? Here, the person who is directly affected by the 'cause of action' in case of Copyright infringement becomes important. *Thirdly,* who can file a suit? As per Section 54 of the Copyright Act 1957, only the 'Owner' or 'exclusive licensee' can file a Copyright suit. It is vital to see who the 'proper' are and 'necessary' parties to the suit being instituted. Suppose, 'K' provides a copyright work as 'exclusive license' to 'R'. Here, 'R' has come to know and requesting to consider as 'A' is allegedly infringing Copyright. In matter involving title, it is of the nature of 'title dispute' for conclusive determination, whereby joinder of owner is impleaded. So, in the instant case, 'R' is plaintiff, whereas the 'A' is defendant number 1 and 'K' (the owner) is defendant number 2 as prayed to the Hon'ble Court. Section 54 of Copyright Act 1957, enables in anonymous work, where publisher can file a suit. Thus, three persons, namely, the owner, the exclusive licensee and the publisher can file the suit.

Copyright Infringement

There are three categories of 'Copyright infringement', that is, *firstly,* Primary infringement of the nature of direct infringement, *secondly,* Secondary infringement, which is addressed by 'Case laws' in US, while in UK, by Section 22-26 of the Copyright, Designs and Patents Act 1988, whereas in India, by Section 51 of the statutory provision of Copyright Act 1957 and thirdly, Tertiary Infringement, which at present is 'academic' in nature. While analysing the 'Case Law Approach' of US, It is vital to note that in US, the case law based approach is of the following 3 models, that is *firstly,* Contributory Copyright Infringement, *secondly,* Vicarious Infringement and *thirdly,* Inducement Liability, as pertinent to social media and service providers bringing in its ambit the third paradigm.

Secondary Infringement

It is quintessential to note that it brings in its ambit 'who does not infringe, however helps primary infringer to infringe' is qualified to be 'secondary infringer'. The 'secondary infringer' supplies accessory and means and hence is liable. It is vital to study in that context, two important Copyright infringement categories as, *firstly,* Contributory Infringement: In this category, the alleged secondary infringer is having knowledge of the infringing activity and

substantially participates in infringing activity. *Secondly*, Vicarious Infringement: This category of Secondary Liability, involves the secondary infringer with two prong test, namely 'Right and ability to control' and 'Direct and Financial benefit' accruing to the infringer. Few more Observations become vital in this context. It is quintessential to note that in the first case, that is 'Contributory Copyright Infringement', profit is not necessary to establish the infringement. In 'Contributory Copyright Infringement', knowledge is required and hence is of the nature of 'fault liability'. In the second case, that is 'Vicarious Infringement', knowledge is not necessary as it is not fault based and hence, similar to 'absolute liability'. In sequitur, it is apt to mention that reliance is being placed on Case based approach in US. Secondary liability in US is case law based and hence the analysis has to be multidimensional where the 1st Generation 'Napster Case' and with P2P sharing models have to be analysed pertaining to 3rd Generation cases to make out the essential differences.

In US paradigm, it is pertinent to note that there has been no explicit statutory provision and the secondary liability law is developed through case laws. In most cases, it is based on the common law of torts. To understand the Contributory Infringement, which is fault based and where knowledge is necessary has a jurisprudence on its own, in contrast to 'Enterprise Liability' is based on 'Absolute Liability', which has to be analysed as Prof. Nimmer puts forth with the Ingredients as, *firstly,* Existence of a prior Direct Infringement, *secondly*, Secondary Infringer's prior knowledge, which can be 'Actual' or 'Constructive' (includes wilful blindness) of violation. *Thirdly*, Support, Participation and of the nature of Material contribution among other have a bearing. In this endeavour, to analyse the case of Gershwin Publishing Corporation v Columbia Artist Management Inc.[194], where it says, *"[o]ne who, with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another, may be held liable as a contributory infringer...*" Section 271 of US Patent Code talks about Contributory liability with two vital tests that is *firstly*, 'If the product/article has substantial non-infringing use' and *secondly,* whether the article is a staple article of commerce. The 'dual use of the staple articles of commerce' as imported from the Patent law in copyright paradigm as seen in *Sony Corporation of America v Universal City Studios, Inc*[195]., with regards to 'Contributory Liability', it says, "*[T]he sale of copying equipment, like the sale of other article of commerce, does not constitute contributory infringement if the product is*

[194] Gershwin Publishing Corporation v Columbia Artist Management Inc., 443 F. 2d 1159 at 1161 (2d Cir. 1971)
[195] Sony Corporation of America v Universal City Studios, Inc., 464 U.S. 417 at 435 (1984)

widely used for legitimate, unobjectionable purposes. It need merely be capable of substantial non-infringing use..." However, in case of vicarious secondary liability or the 'Vicarious Infringement' the economic analysis, involves creating a priori risk and the vital question is there any making of profit out of it? If the answer is yes, the alleged infringer has to be 'beware'. Seen with reference to 'Napster' case, where the 'Napster Protocol' worked on the 'Napster control index server' Model with Central Server with array of user computers, directing the request of the users to multiple connected user computers, making it challenging to apply the 'Vicarious Secondary Liability' with perfection. The aforementioned scenario became more complex and with application of 'Technology', the dichotomy of Law and Technology was conspicuous with the application of 'without dynamic directory'. *This led to P2P sharing community jumping in joy*. It has been seen in perspective of 'dynamic directory file'. The economic dimension of the analysis is another vital area which has to be studied in the context with respect to creation of '*a priori risk allocation'* and '*wilful blindness theory'* where the 'actual' or 'constructive knowledge' becomes quintessential in analysis.

Doctrine of Fair Use and Fair Dealing

Fair Use/Fair Dealing comes under 'Exceptions' to Copyright and is of the nature of 'Limitations and Exceptions to the exclusive rights'. It is pertinent to note that broader exceptions provide the mechanism or the provision where it is legally permissible under the law for 'copying' and which is 'not actionable'. *At the outset it is vital to understand, an infringement happens when someone without the permission of the Copyright owner 'copies' a copyrighted work as that right to make exclusive copies belongs to the copyright owner.* To understand the wider ambit and scope of the exceptions, it is quintessential to look at it from the perspective of exceptions in line with Article 13 of TRIPS and Article 9 of the Berne Convention. The 'Limitations and Exceptions to the exclusive rights' involves, firstly, Involuntary Licenses which are of two types Compulsory Licensing and Statutory Licensing. *Secondly*, Limited Protection for specific number of years, that is Lifetime plus 60 years for Copyright owner. *Thirdly*, First Sale/Exhaustion and *fourthly*, Fair Use/Fair Dealing. It is pertinent to note that Newton said, "*I am Newton because I could stand on the shoulders of the predecessors...*" It is quintessential to mention that society does not believe in wasteful repetition of the society's resources. The broader justifications for 'Fair Use' is based on following 'limbs of arguments', *firstly*, To strike a delicate balance for author's economic rights and the right of the public at large. *Secondly*, Fair Use as a vital tool to help maintain the delicate balance, *thirdly*, It is vital to understand that 'Standing on the shoulders of giants'-

reliance of the current artistic and scientific developments are incremental in nature and rely on pre-existing understanding and *fourthly,* the most vital analysis from the realm of Intellectual property rights that provides the situation to look from the prism of re-inventing the wheels resulting for 'wasteful repetition of society's resources', which the Society does not encourage. In *CCH Canadian Ltd. v Law Society of Upper Canada*,[196] it was deliberated as whether 'Fair Use' is an exception like other exceptions in Copyright Act and acquires the contours of user's right? The case mentioned that in order to maintain that delicate balance, the rights of the copyright owner and users interests, must not be interpreted restrictively.

Fair use/Fair Dealing is one of the categories of exception to Copyright owner's exclusive economic rights. This is normally advanced as a defence in a Copyright Infringement scenario for protecting the public domain. Section 52(1)(a) of Copyright Act 1957 mentions 'Fair Dealing' as a 'standard' and this has to be tested with the touchstone of '4 factor test', it is also equally important that all the tests has to be given equally weightage and never, over-emphasise or under-emphasise each test. The 'Four Factor Tests' are *firstly*, Purpose and Character of use, *secondly,* Nature of Copyright work, *thirdly,* Amount and Substantial portion of the use and *fourthly*, Effect of the potential market.

1. **Purpose and Character of Use** as the first factor test in the context involves the vital aspect to understand that 'focus is on defendant's work' and the Central Question is to satisfy the following ingredients which are tested further, firstly, whether it was 'Originally envisaged'? Secondly, whether the work is 'Sufficiently transformative' enough? Thirdly, whether the work is of the nature of furthering some new purpose/expression/message? Looking from the perspective of Judicial Precedents with Comparative law Perspective, the leading case in US was *Salinger v. Colting Inc.*[197], involving famed writer Mr J.D. Salinger where the question which surfaced was of 'substantial striking similarity' with protagonists of the novel written by Mr. Salinger 'The Catcher in the Rye' and Colting decided not to publish or distribute the book in US or Canada until falls in public domain. The similar case, which surfaced before the Indian Courts was that in the case before Hon'ble Delhi High Court of *Chancellor Masters and Scholars of the University of Oxford v. Narendra Publishing House and Ors,*[198] where it was a case of 'Fair Dealing'.

[196] CCH Canadian Ltd. v Law Society of Upper Canada, 2004 SCC 13
[197] Salinger v. Colting, Inc., 641 F. Supp. 2d 250 (S.D N.Y 2009)
[198] Chancellor Masters and Scholars of the University of Oxford v. Narendra Publishing House and Ors, 2008

2. **Nature of Copyrightable work** is a vital aspect to understand that the nature of Plaintiff's work can be of varied types, namely, Work of friction, which is highly 'creative' when it comes to 'likelihood for infringement', as to whether it is Published work, Unpublished work, Fact/Pamphlet and Law or Maths book. The above analysis warrants reviewing it from the prism of events/factual book where the scope of likelihood of Copyright protection is high. It also depends whether the original factual work is for dissemination of information as encouraged for larger public benefit, then chance for establishing 'fair use' is high. For unpublished one and that of 'creative work', the Hon'ble Courts have looked into the infringement of Copyright, even if it has not exploited the market. It is vital to note that 'Manuscripts' may be protected by 'Copyright', for instance, a piece of poem of the nature of 'unpublished work'. So, the chance of finding 'fair use' in published work is much higher than that of unpublished work. Looking from the prism of Judicial Precedents with Comparative law Perspective, In *Time Inc. v Bernard Geis Associates*,[199] video footage of former President of US by amateur photographer one named Mr Zapruder, where Time Inc suing the book publisher was not sustained as the Hon'ble Court opined that use of stills was fair in part because it assumes the character of factual and historical event.
3. **Amount and Substantial Portion taken** has to be analysed from two dimensions after comparing the plaintiff's work and the defendant's work that is *firstly*, whether the amount or the percentage of copying from Original Copyrighted work, has been incorporated in the new work and to what extent? To answer, such question, it depends less the use, the more the chances of 'Fair Use' and *secondly*, whether what is 'substantially taken' forms part of the core or heart of the 'original work' is another question which warrants analysis. In *Harper & Row v. Nation Enterprises*[200], where it was delved on understand whether it was 'sufficient and core nature of copying' for the defence of 'Fair use' and it was held by Hon'ble United States Supreme Court to be infringement.
4. **Potential Effect on Market** has two dimensions in analysis, firstly, that of Right to exploit immediate primary market and secondly, that of Right to exploit all possible secondary markets. This is exemplified as, say the 'Chota Bhim market' has umpteen number of markets available of the types of Toys, Serials and Comics. A vital question,

(38). PTC 385 (Del)

[199] Time Inc. v Bernard Geis Associates, 293 F. Supp 130 (S.D.N.Y 1968)

[200] Harper & Row v. Nation Enterprises, 471 U.S. 539

which is addressed by the 4th test 'Potential effect of market' is whether it comes in the ambit of 'fair use' which a moviemaker wants to exploit derivative market, where the market does include Primary visible market as well as Potential 'invisible market' which the Copyright owner may have not exploited yet, it is held by Courts in catena of judgments that 'it is infringement by 3rd party', whereby the protection on the grounds of 'Fair Use' may not be sustained. Leading cases in this perspective is that of *Rogers v Koons*[201], where the issue which surfaced was whether an artist making wood sculpture of Copyright work without his/owner's consent, that is consent of photographer. The defence of the artist was 'Fair Use' and contended for the owner's non-exploited secondary market for sculptures. The Hon'ble Court held that it was found to be infringement as it was 'immaterial' whether the photographer considered the sculpture market, but the important thing was there existed a 'potential market' for sculptures of the 'original copyrighted work', which cannot be disregarded. In *Hubbard v Vosper*,[202] which is cited by Indian Courts, while dealing with Copyright Infringement allegation by Church of Scientology against former member Vosper, who criticised Scientology in book 'Mind Benders', Lord Denning observed amount of long extract with small comment might be construed as 'unfair' in the realm of Copyright.[203] In *Authors Guild v. Google*,[204] the Google Inc. defence was 'how come it is infringement' when it is 'promotional activity rather than infringement' and defence was contended of the nature of 'promotion' of e-Commerce and resulting in reduction of 'Transaction Cost' for the buyers and for key promotional aspects, such 'mass digitization' was held not be an infringement.

Secondary Liability of Internet Service Providers

From the prism of Statutory provisions, in Copyright Act 1957, Section 52(1)(c) specifies categorically that compliance to 'due diligence' is absolute must for the service provider, where the three components to access, linked and integrated, whereby have to be analysed. If any data change happens, Copyright owner could very well send a 'notice' which has to be responded in the stipulated timeframe and Hon'ble Court could provide 'temporary injunction' if not

[201] Rogers v Koons, 960F.2d 301 (2d Cir. 1992)
[202] Hubbard v Vosper (1972) 2 Q.B 84
[203] Lord Denning observes, "where first the number and extent of quotations and extracts are considered and whether they convey the same meaning as that of the author's, where 'proportion plays a vital part, a long extract with small comment may be 'unfair', while a short extract with long comment may be 'fair', tribunal of fact may play a material role in deciding whether it is fit case of fair use or not..."
[204] Authors Guild v. Google 721 F.3d 132

complied with statutory provision. Another vital aspect is that of 'transient, incidental storage of the work' which has to be seen for electronic links, access and integration and this has to be read with another statutory Act in Section 79 and Section 81(2) of the Information Technology Act, 2000, where the intermediary for 'secondary infringement' is liable.[205] In *Super Cassettes Industries Ltd. v. Myspace Inc.& Another (2011) 47 PTC 49 (Del.)*[206] where the Hon'ble Delhi High Court considered three provisions of law including that of Section 79 and Section 81 of Information Technology Act, 2000 which was read and interpreted conjointly with Section 51(a)(ii) of the Copyright Act, 1957.

Conclusion

To conclude, there is economic dimension in line with the aforesaid analysis. First Dimension and perspective is that of there is always a 'Social Cost' of Copyright and because of 'monopoly pricing due to publisher's decision', whereby by the essence of such pricing, the individuals are 'barred' from the accessibility and where the rightful owner has the 'right' over the literal expression and underlying ideas. The second dimension is "Dead weight loss" in Economics. For the aforesaid dimensions of analysis which comes imperative in this context. It is vital to note that 'Infringement' of the nature of 'direct copying' can be construed as 'fragmented literal copying as infringer' or 'sufficient or substantial copying of copyrightable material'; however, the exception of Fair Use or Fair Dealing provides that permissible copying. Two different studies or Jurisprudence which are intrinsically related are as follows, which has to be analysed, as firstly, 'Critical Legal Studies' to essentially understand the difference between 'Fair Use' (applicable in US as embodied in Section 107 of the Copyright Act 1976 in US) and 'Fair Dealing' (applicable in India and as mentioned in Section 52(1) of Copyright Act 1957) and secondly that of the facet related to jurisprudential Hohfeldian Matrix Analysis with respect to 'Rights and Liabilities' via. Jural correlatives. The vital question which emerges as to how Fair Use/Fair Dealing provisos are incorporated in statutory enactment of Copyright? This has to be answered from two perspectives. *Firstly*, One of 'Standard based approach'- which is in the form of broad-based standards where it is the discretion of the Court to decide whether the use is of the nature of 'Fair Use' as in US. *Secondly*, another is of 'Rule based approach'- which lays down the well-defined bright-line rules indicating the precise situation when it constitutes

[205] Section 51(a)(ii) of the Copyright Act, 1957 has to be read with Section 18 and 29 of the Information Technology Act, 2000. Sec. 29 of IT Act, 2000 provides for, "power to access computers and their data on a reasonable cause to suspect contravention of Chapter VI of the Act"
[206] Super Cassettes Industries Ltd. vs Myspace Inc. & Another (2011) 47 PTC 49 (Del.)

'fair use'. Normally, it requires a meticulous and detailed analysis of the circumstances posited that may qualify it be a candidate to be deemed fit for 'Fair Use' or for instance, 'Fair dealing' as in India. It is quintessential to note that 'Fair Use' is ex-post determination by Court and no one knows the consequences and it's always a better strategy or decision to 'negotiate' as a precaution as devoid of any concrete determination by the Court as it is not known, it is better to 'negotiate' to avoid infringing issues. Another vital aspect which warrants attention is of 'Rational choice making' by individuals, where 'Fair Use/Fair Dealing' could be seen from two perspectives, firstly, assertion of rights by Copyright consumer and secondly, also a defence in such situations.

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Legal Regime of Patent Protection to Outer Space Activities in India and USA: A Comparative Study

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ABSTRACT

The above doctrinal research examined whether intellectual property combines with the two significant international norms in outer space treaties and how intellectual property protection operates in space. The paper divides into four sections. The initial section of the article discusses international space law regulations about outer space, including the Moon and other celestial bodies. It compares them with the territorial character of intellectual property protection regimes. The second part of the paper delves into the use of patent protection with linkages in outer space as establishing a practical framework for the protection of the phenomenon described as "outer space patenting," patent protection in outer space is guaranteed. Such an international framework expects to accelerate space activities and, in particular, fulfil the demand for patent protection by governments and private firms. Space activities are subject to national and international binding laws and regulations like any other human activity. The third section compares patent protection in the United States with India's outer space. Finally, proposals for increasing patent protection in space as Intellectual property rights (IPRs) continually present several key legal challenges for space operations, including intellectual owning property and IPR infringement, among others. The importance of intellectual property rights in space activities is rapidly increasing as private enterprise is recognized as a component in further space growth and as space applications become increasingly embedded in daily life on earth. In general, patent legislation requires issuing a patent since it promotes the creation of fresh ideas for the benefit of the general public. Throughout the future, there still are possibilities for the same set of rights to cite as a paradigm for intellectual property protection in space.

Keywords: Patent, Outer space, United States, Celestial Bodies, Satellite System.

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INTRODUCTION

1. Space Activities and Intellectual Property

Explorations conducted by scientists in space not only helped people understand the scientific and geographical territory of space but also helped in understanding the other sectors too, like aerospace and various other space technologies which are useful for humanity; therefore, it should be encouraged for a higher perspective. Space technologies perform the process of space exploration by collecting information from space debris, which is the process by which space exploration is conducted physically by sending spacecraft. Many reasons for space explorations are significant for the whole of the earth. So, such benefits are a boon for humanity. IP Law relates to protection for the creation of the human intellect. The role of IP in space is necessary so that the state is willing and equipped to protect creations inside their conventional geographical borders. Whenever their technology is used for economic purposes in space, the creators have the option of suing. Until now, one of the main struggles with IP law's protection of space innovations lies in the reality that they were formed during the Soviet Union. In contrast, space had been an issue of contention for states instead of private entities within that nation. So far, intellectual property laws aim to safeguard inventors' rights. An inherent conflict arises between the principles of space Law and Intellectual Property Laws. Irrespective of this fact, space technology is advancing more in today's technological arena. The activities carried out in outer space are, in fact, the fruitful results of the human intellect, which possesses a wider range over R&D. Overall, Intellectual Property gains incentive for facilitating innovation either by itself or by third parties.

2. Commercialization of Space Activities

The term "commercialization" is widely used to cover the private venture related to space activities with new private enterprises comprising four types.

- Privatization: - Here, the private sector controls all the government-owned spacecraft.
- Marketing of privately owned technology: Private companies have the upper hand in marketing goods and services owned by the government.
- Private companies of government companies: - Government agencies have funded private spacecraft companies for better development.
- Private development of new products without government help: - In this area, private companies involved in space products develop their products according to their category.

While private enterprise involvement in space technology is becoming more obvious presently, the ideals mentioned above of international collaboration and collaborative progress stay viable. "While also considering the role of the intellectual property again for investigations of outer space and the progression of science and technology, concerns have been voiced about if the safeguarding and regulation of intellectual property might very well disagreement with fundamental values established in the Outer Space Treaty,"[208] the underlying values of the Outer Space Treaty being, along with there's more to "investigation and utilization of outer space, which included the Lunar surface and all other celestial bodies." On only one hand, one might also argue that taking away commercial firms' return on investment or violating existing Intellectual Property rights under compulsory licensing could have a detrimental influence on the advancement of space-related technology. On the other hand, remotely sensed data and geodesy technologies, as well as internet connections, have become practically indispensable to the socio-economic advancement of developing countries. Some academics claim that patent regulations have kept out of the grasp of developing countries not solely the outer space technology and resources that might also assist geographical advancement but additionally the technology that may provide states the accessibility to outer space.

3. Background

- *Outer Space Activities are providing fruitful results for human intellect*

Using technological advances to investigate and explore the universe requires much time and money to invest in research and development (R&D).[209] Every domain is teeming with numerous intellectual achievements that will benefit humanity. To accelerate economic growth, non-governmental commercial enterprises are taking a proactive approach to this topic, a divergence from state-owned entities. Such entities' interests encompass but are not limited to, space-based remote sensing, direct broadcasting, and research and production in microgravity conditions. Given the significant expenditure needed for such operations and the substantial privatization of such organizations, the organizations are always concerned about their material and intangible property. Over here, mergers carried out between commercial and state-owned companies are witnesses because developing such technologies requires significant expenditure. Their contract clearly states technologies present will retrieve without misappropriation or wrongdoing in the future. Such safeguard motivates corporations to invest

[208] Outer Space Treaty, https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html (last visited Mar 22, 2023).
[209] Intellectual Property and Space Activities.pdf, https://www.wipo.int/export/sites/www/patent-law/en/developments/pdf/ip_space.pdf (last visited Mar 22, 2023).

more in the evolution of space technology. With globalization's emergence and communications technology improvements, existing companies want to collaborate in the outer space domain by sharing their knowledge and technology. When a disagreement emerges over protecting their property under this circumstance, no worldwide rules and institutions can address such conflicts. Also, the contractual duties are placed on the parties, not third-party players. As a result, a worldwide regulatory framework is necessary to handle global issues with ownership and rights of use, dissemination, privacy, and so on. Another argument for the necessity for IPR in outer space would be to encourage innovators, researchers, and scientists to create long-term commercial potential in space technological progress. If their intellectual property protects under adequate IP regulations, it will motivate more individuals to work in the field. For example, protection research provides a blueprint for a sustainably liveable habitat on Mars.

Summarizing all of these points, the following are the reasons that highlight the importance of having an International IPR system to deal with outer-space issues:

- The enormous time and financial investment in R&D in sophisticated space technology without intellectual property protection inhibit state and non-state organizations from engaging in such operations.
- Partnerships involving state and non-state enterprises in producing advanced space technology or undertaking studies in this area need the parties to exchange relevant information and technology. With regulatory frameworks, it is possible to guarantee proper protection for information and technology shared by a party or a third party.
- In this age of globalization, when information connects the entire world, numerous organizations collaborate internationally to develop outer-space technologies or undertake experiments. With a global regulatory system, participants' information and technology would be more secure, and legal provisions will be ineffectual in resolving conflicts worldwide.
- Suppose there is a thorough establishment of legislation. In that case, researchers, scientists, and entities have trust that the intellectual property generated will get protection, and they are motivated to spend more to advance the growth of this subject.

- *The current legal system of international space law and international intellectual property rights must be clarified about protecting intellectual property for outer space activities.*

The TRIPS Agreement provides a comprehensive international intellectual property rights framework, including copyright, trademark, patent, and trade secret. It widened the application of international treaties by including trade secrets and extended copyright protection to computer programs and data compilations. So far, the absence of any reference to intellectual property acquired in outer space within the TRIPS Agreement shows that there is no worldwide requirement that it incorporate or exclude such rights from national intellectual property laws of broad jurisdiction. With no international legislation governing intellectual property rights obtained from space, each government can decide whether to recognize legal rights in such data. Possession of intangible property in an expression or embodiment of geographical data does not violate the space law principles of collaboration & fair and equitable access. Even if one party claims exclusive data rights, the same data remains available for collection by others. The fears about the functioning of underdeveloped countries are justified. Thus, if developing countries need more technical capabilities to obtain data, non-discriminatory access to space is quite vexing.

- *Inadequate intellectual property protection for space activities and its consequence on domestic space market expansion and implementation in India*

It has been argued, just at risk of redundancy, that given the territorial character of Intellectual property right legislation, a state's sovereignty competence is a sine qua non in guaranteeing and executing IP rights; as a result, we confront with difficulties regarding IP in respect to space activities. For intellectual property protection, a distinction is carried out between:

- Outer space operations can occur throughout outer space, including the Moon and other celestial bodies.
- Outer space activities can be executed in a vehicle or object.
- Outer space activities and activities of outer space are capable of being conducted together within the state's regional regulatory limit values.

Outer space activities under the remit of the extremely concerned government's domestic intellectual property law methodology or through the multilateral treaty framework, depending on the need for a conventional or centralized global legal framework, mostly as much for outer space operations occurring beyond a state's jurisdictional bounds.[210] Although no state has the competence under international Law to repeal laws that could harm the interests of another

[210] 12927-Multilateral-Space-Space-Station-1.29.1998.pdf, https://www.state.gov/wp-content/uploads/2019/02/12927-Multilateral-Space-Space-Station-1.29.1998.pdf (last visited Mar 22, 2023).

state or its populations, regardless of the boundaries of the real issues, a state may exert influence and authority outside its boundaries in individual situations. Further, the concept of ship quasi-territoriality asserts that now the ship's board is a judicial nexus of its understanding and is subject to the sovereignty of the flag.[211] Domestic intellectual property legislation could apply to space objects registered in a state. Article 8 of the 1967[212] Outer Space Treaty[213] states that a Pact State Administration's main registration is a spacecraft launched into space that retains control and power over a certain thing and any personnel. The existence of items in outer space or within a celestial object does not affect outer space or solar bodies. On the other hand, quasi-territoriality generalizes beyond space objects and the state of registrations.[214]

4. Research Methodology

The Research is purely doctrinal, analytical and exploratory in nature. In this study, the researcher is trying to evaluate the various technologies that are linked with Spacecraft and linked with Patent Law. Over here, the researcher uses the doctrinal method of research where the authors collected all the information related to the first chapter from various articles, journals, e-books, and other secondary sources. Following the next, the researcher uses an analytical method to analyse the linkage of Space Law and Patent Law with spacecraft. Whether the Indian Patent Law is adequate in providing protection or not.

Lastly the researchers explore the comparative study of USA Patent Laws and Indian Patent Laws in space industries for safeguarding the inventions.

5. Objective of Study

The ultimate aim behind performing this research is to

- To get a vivid understanding of Patent Laws in Aerospace industries.
- To identify the lacunae of the legislation protecting the patentability of inventions in space industries.
- To comprehend the linkage between Space Laws and Indian Patent Laws under Intellectual Property protection in space industries.

[211] Larry M Eig, Statutory Interpretation: General Principles and Recent Trends.
[212] Convention Establishing the World Intellectual Property Organization, https://www.wipo.int/treaties/en/convention/ (last visited Mar 22, 2023).
[213] Space Treaty on Principles Governing the Activities of States in the Exploration and use of Outer Including the Moon and Other Celestial Bodies, 1967
[214] Harry m. Markowitz, the law of intellectual property in outer space, 17 ptc j. res. & ed. 88 (1975).

- Lastly the researcher constitutes the relation between US Patent and space Laws with Indian Patent and space Laws.

2. Space Law And Patent Law Linkages

1. Overview of Space Law and Patent Linkages

Patents are international, meaning they must file in each country where they will be protected. Human spacecraft raises serious challenges to patent law.[215] The Commercial Space Launch Act simplifies the process by which international firms can acquire commercial spacecraft incentives. Government-developed spacecraft enacts to encourage individual businesses to engage in the economic space of space. Laws regulating the use of space have a greater influence on society today than ever before. The role of the Patents in the "Space Act of 2001" enhances businesses' confidence that US patent laws extend to activities in outer space. It raised the authority of the United States to cover all celestial bodies possessed by the US, including satellites, and encompassed private sector involvement in space. It facilitates the promotion of research into new space-related industries, including space research output and the usage of government-owned companies. In addition, the Act established a Space Industry Transportation Agency within the Department of Transportation to monitor all corporate space launches.

2. Inadequate Outer Space Patent Enforcement

The patentability criteria of outer spacecrafts can be difficult to show or demonstrate. Determining jurisdiction and who is entitled to patent protection can be problematic if a patent grant is in outer space.[216] Prudence suggests that regulations and agreements, such as the International Space Station Agreement Reached, be developed before embarking on these collaborations. Patent prosecution becomes extremely challenging because of the geographic nature of patents and the concept that outer space is the domain of all individuals. Therefore, resistive to state appropriation by the claim of sovereignty. The concept of the temporary present is significant for space activities since it allows countries to obtain and execute patent rights regarding protecting intellectual property within their country's legal system. Given the extremely limited number of missile sites, many governments or businesses need to transfer the spacecraft to and past the borders of other countries to have it launched into space.[217]

[215] Elizabeth I. Winston, Patent Boundaries, SSRN JOURNAL (2014), http://www.ssrn.com/abstract=2411142 (last visited Mar 22, 2023).
[216] Emily Michiko Morris, Res or Rules - Patents and the (Uncertain) Rules of the Game, 18.
[217] Timothy R Holbrook, Extraterritoriality in U.S. Patent Law.

Businesses engaged in space operations that may result in patentable innovations may form contractual agreements and decide where protection is sought, resulting in issues due to 'forum shopping' or 'flags of concession' tactics. A comprehensive and international legal mechanism for further assurance of patentability in space innovation must be there for R&D.

3. Patent Rights Of Outer Space – Comparative Analysis Between The U.S.A And India

1. Overview of Legal issues on Patent in Space technology

International lawyers have yet to define what outer space is and how to determine the jurisdiction in outer space.[218] Who will have jurisdiction over patent infringement claims considering patents in outer space? Who is responsible for patent infringement actions relating to patents in outer space? Municipal laws can still regulate space activities conducted within the territory. However, there is a need for a uniform law for outer space activities beyond the state's territorial boundaries. Under International Law, no state is allowed to enact laws that can affect the rights of another state. However, exceptions can be like the Law of the flag principle[219] in *"Article 5 of High seas convention, 1958"*[220]. *Similar exceptions can be for domestic IP laws on space objects registered in the state. "Article 5ter of the Paris Convention, 1883"*[221] provides for the fortification of a business property which would limit the exclusive rights given by patent in the interests of the society for the freedom of transport called the Doctrine of Temporary presence. The language of the article does not protect the doctrine from spacing objects.[222]

Despite significant investments in spacecraft & research annually, we can all concur that the intellectual property value of space technology is enormous, and ownership belongs to the developer. It is challenging to determine the ownership & place of registration of patents jointly owned. In a first-to-file system, where too many applications claim the same thing, the patent's priority is determined by who filed the first application. The United States employs the first-to-invent system, which differs from the first-to-patent technique, in which the place of the invention is significant. Another important criterion for a patent is the non-obvious nature of

[218] Anne Uruegi Agi, AN EXPOSITION OF THE CONCEPT OF INTELLECTUAL PROPERTY PROTECTION IN OUTER SPACE, 1 LAW AND SOCIAL JUSTICE REVIEW (2022), https://www.nigerianjournalsonline.com/index.php/LASJURE/article/view/2553 (last visited Mar 22, 2023).
[219] Ritesh Mehra, INTELLECTUAL PROPERTY PROTECTION IN OUTER SPACE – AN OVERVIEW (2019).
[220] Arnold Pronto, Convention on the High Seas.
[221] Margaret Dowie-Whybrow, Paris Convention for the Protection of Industrial Property, in CORE STATUTES ON INTELLECTUAL PROPERTY 516 (2013), http://link.springer.com/10.1007/978-1-137-35471-6_5 (last visited Mar 22, 2023).
[222] *Id*.

the invention, which is difficult to determine in space. The invention of a spacecraft shields the public. It creates a restriction on the right of any individual or agency to know and inform about inventions in space.

2. A sneak peek into the historical development of US policy on Space activities

Experiments in outer space are undertaken only with the Sputnik spacecraft being launched. During the cold war against the United States, the Soviet Union successfully launched Sputnik, the first satellite into space. This launch was not for peaceful purposes but a cutthroat military and foreign policy competition between the superpowers. The US responded with the "National Aeronautics and Space Act, 1958,"[223] federal legislation to deal with space operations. Furthermore, it constituted NASA, a governmental organization that funds and supervises the United States'[224] outer space research & expeditions. For example, the United States led the General Assembly UN to establish a permanent commission on the peaceful uses of outer space in 1958. Previously to international legislation of the space treaty, the United States decided to establish a national policy on space activities dedicated to peaceful purposes only to benefit humanity. Furthermore, Congress declared that the government must encourage the highest economic use of spacecraft for the social purpose of the United States. The United States initially proposed to conduct space research solely through the government service via NASA. In 1984, Congress passed "the Commercial Space Launch Act,"[225] authorizing the commercial sector to launch spacecraft. By 2010, the US administration had expanded commercialization to space products,[226] activities, and activities by private firms,' making every launch a binding agreement. Annually, the launch services company flourished. Since technological companies want to secure their future investments, inventors opt for a patent. The holder of a US patent[227] can get legal protection within the US, and a patent has to be filed in every other country separately to enjoy protection. Therefore, this jurisdictional barrier is one of the many problems for protecting inventions in the space industry.

3. United States Patent law in the Space industry

[223] Liz Malmen, EXPLOITATION OF SPACE AND PATENT LAW: HOW THE CURRENT LEGAL SYSTEM INEFFECTIVELY PROTECTS PRIVATE COMPANIES IN THE COMMERCIAL SPACE INDUSTRY (2021).
[224] *Id*.
[225] 51 U.S. Code § 50901 - Findings and purposes, LII / LEGAL INFORMATION INSTITUTE, https://www.law.cornell.edu/uscode/text/51/50901 (last visited Mar 22, 2023).
[226] Anthony Farnesi, "The Intellectual Space Race: Applying Terrestrial Patent laws to Private Outer Space Activity" (2019) 28 S. CAL. INTERDISC.L.J. 713 at 716.
[227] Dowie-Whybrow, *Supra* note 17.

In the USA, the patent is granted for 20 years from the date of the application. For a patent, an invention must be new, non-obvious, useful, and not an invention that is known to the public. Patent law is territorial; therefore, US patent law limits the country's borders. However, innovative technologies are appearing on the international market, posing the issue of whether IP Law can be applied beyond borders. An applicant to get a patent in multiple jurisdictions can apply for the Patent Cooperation treaty. Even though WIPO has made several attempts to unify international patent laws, enforcing international patents is a financial burden.

In 1990, Congress enacted the patents in Space Act,[228] which extends the US patent law to all registered spacecraft. The Act states, *"Any invention made, used or sold in outer space on a space object or a component within the jurisdiction or control of US will consider being done within the US and for US patent laws subject to a few exceptions."*[229] The Space Act established precise, obvious, and understandable standards for deciding how the US patent law will apply to space. The Space Act supports private investment and commercial entities in space. There are a few exceptions under "§ 105 of the Space Act", which says that the jurisdiction will not be applied to space objects specifically identified by an international treaty or agreement to which the US is a party. The treaty on Intellectual property laws in outer space is called the ISS agreement. Article 21 of the ISS agreement can effectively regulate IP rights by deeming fiction that has extended the use of the doctrine of quasi-territoriality. Following the treaty, the countries of registration of the space station modules where the action takes place have patent jurisdiction.

The technical method for getting raw data from outer space using a remote sensing satellite has been granted a patent. Every remote-sensing satellite will employ a unique technology worthy of a patent. The primary issue is when can we consider an invention infringed or used? The major deciding point is the ownership and the fact that it occurs beyond territorial borders. Who would be made accountable, and to what extent? In the US, courts have primarily focused on the Act of use or use for extra-territorial reach. "It was decided in *Decca Limited v. United States*[230] the determining factors on whether the use of the patented system[231] would occur in the US depends on whether control of a system would occur on US territory and whether a US entity owns the system, and whether there is beneficial use within the US." Later, in "*NTP Inc*

[228] Malmen, *Supra* note 19.
[229] 35 U.S.C. § 105 (a).
[230] Decca, Ltd. v. United States | LexisNexis Case Opinion, https://www.lexisnexis.com/community/case-Opinion/b/case/posts/decca-ltd-v-united-states (last visited Mar 22, 2023).
[231] *Id.*

v. Research in Motion Ltd,[232] the court observed that using the procedure under the Law of the patent would be where the system as a whole has put to service." Under the extra-territorial issue, it clarifies that as long as space-based technology is concerned about the product on which the customer would exercise control and obtain the beneficial use of that product in the US to establish patent infringement cases in the USA.

However, "35 U.S.C. §105" has questioned the extra-territoriality principle. At present, only the control from the US territory decides a factor leaving the ownership and beneficial use factors. In such a scenario where the space object is not registered in the Registration convention and not controlled from the US can still be considered the space object is under "US jurisdiction as per § 105." Therefore, it concludes that private companies can apply extra-territorial reach under § 105. Applying the national patent law to registered space objects can limit the protection ability of space technologies. A country can own an infringing space object and yet avoid liability through registration in other countries. The outer space treaty has also created the flag of a convenience problem. Another exception of § 105 is that of the space object or the component carried on the foreign state registry by the registration convention. The registration agreement specifies the state of the registry as the launch state on whose registry a space object has been carried. According to the concept, a US court can still have authority across infringement space object that a US company controls if the launching occurs on the boundaries of another country.

From the public policy perspective, the ineffective patent system would harm the R &D of the space industry. It will reduce the incentive to innovate and develop more technologies. If Patent infringement avoids, many companies can avoid infringement claims and get a competitive advantage. It could culminate through registering celestial objects under utility flags, endangering personal protection, and inflicting damage to the ecosystem.

4. Indian Space Industry and Patents

Under the Atomic Energy Department (DEA), India launched its space industry in the 1950s. In 1963, India launched its first rocket. India built the Thumba satellite investigation & innovation center in 1965, and ISRO was constituted in 1969. In 1972, the Department of Space was founded. ISRO was established as a government body in 1975, and India launched its first

[232] NTP, Inc. v. Research In Motion, Ltd. | Case Brief for Law School | LexisNexis, https://www.lexisnexis.com/community/casebrief/p/casebrief-ntp-inc-v-research-in-motion-ltd (last visited Mar 22, 2023).

satellites, Bhaskara-1 and 2, in 1975. The Indian Remotely Sensed Space Network was established in 1988, and The *Antrix Corp limited* is a business approach of the department engaged in space product marketing.[233] India is a signatory to four UN space conventions. India, too has committed to the norms which regulate operations and utilization of space. Those laws start regulating the use of artificial satellites, remote sensing of the earth from outer space, how to utilize nuclear weapons in outer space, international collaboration in research, and using outer space for such advantage of states. Even though India has been part of the space industry for almost 75 years, we do not have a space law to fix liability and regulate the rapid growth of space and research. Unlike the US, where we have seen legislation to govern space operations since 1958 and judgements on this aspect, India has yet to establish a precedent or Law to deal with activities in outer space.[234] The modern Patent legislation in India was passed in 1970 under Justice Rajagopala Ayyangar Committee to support the commitments in Uruguay round and the TRIPS agreement. The Indian Patent Act complied with Article 27(1) of the TRIPS[235] agreement and adopted the same factors to decide the patentability of inventions. "Section 2(1)(j) of the Patents Act 1970[236] defines an 'invention' and lays down the factors of patentability: new invention, inventive step, capable of industrial application."[237] "Section 2(1)(l) defines a 'new invention' as an invention not anticipated by publication in any document or anywhere in the world. The patentability of a newly discovered substance in outer space has been a constitutional issue." "Section 2(1)(ja) provides the inventive step as a feature with technical advances compared to existing knowledge. India's patent law cannot protect even the discoveries made in space,[238] even if it's known, since the Act does not mention patents in outer space inventions." Therefore, India requires an exclusive space regime to deal with space activities and protection of the inventions made by astronauts in the future.

Conclusion and Suggestions

Space activities have become a tool for socio-economic development, and an Intellectual property regime is crucial for better research in the space industry. The intellectual property

[233] Raju - ISSUES IN PROTECTION OF INTELLECTUAL PROPERTY CREA.pdf, http://www.commonlii.org/in/journals/NLUDLRS/2012/37.pdf (last visited Mar 22, 2023)..
[234] Decoding the Legal Regime Governing Sub-Orbital Flights, INTERNATIONAL JOURNAL OF LEGAL SCIENCE AND INNOVATION, https://www.ijlsi.com/paper/decoding-the-legal-regime-governing-sub-orbital-flights/ (last visited Mar 22, 2023).
[235] Aboli Nimbalkar, TRIPS Agreement: India's Position over the years, 2 8 (2022).
[236] Patents Act, 1970, §2, No. 39, Acts of Parliament, 1970 (India).
[237] Sajal Sharma & Shashank Pathak, "Patenting of outer space inventions: In the crossroads of territorial and outer space law" 1 DNLU L. Rev 176 at 178.
[238] KD Raju, ISSUES IN PROTECTION OF INTELLECTUAL PROPERTY CREATED IN OUTER SPACE: AN INDIAN OUTLOOK.

utilizes international principles and the TRIPS agreement, where the exploration of outer space is done for the benefit of all humanity. Since the sovereignty of a state is crucial for protecting intellectual property, subsequently, the doctrine of quasi-territoriality needs enforcement. Therefore, the ISS agreement is a good initiative for cooperative space activities and intellectual property. Patent law cannot provide IP protection on subject matters of outer space. The patentability criteria have posed hurdles in patent protection on space technologies. Even the quasi-territoriality doctrine has ambiguities in its application. It suggests states adopt an International Patent regime for space activities and principles, considering innovation, exploitation, utilization, private and state interests, and socio-economic development. A coherent system to regulate IPR administration for outer space is needed and must consider space technology's moral and ethical use. Some good principles that can adopt are the doctrine of quasi-territoriality, dilution of the secrecy provisions and the eligibility criteria for patents in outer space inventions, and exception to the doctrine of temporary presence. It is necessary to provide incentives for future investments in Space research, allow private enterprises to collaborate in space activities, and give provisions for the fair and equitable sharing of remote sensing data and space technology products amongst countries. The patent regimes at a domestic level may sound similar, but when we apply patent regimes in space, there need to be more uniform principles. The question of jurisdiction, the liability of states on patent infringement, responsibility of the launch state remains a grey area. The substantial Law must solve jurisdiction issues to avoid forum shopping. Over here, the fundamental concepts of Proper Law Theory could be applied to resolve the problem. The spacecraft's owner's launching state could be considered a legitimate jurisdiction in IP infringement claims. However, the choice of law doctrine in international Humanitarian law might compel states to submit to jurisdictions in which they do not wish to be. It recommends that uniform jurisdiction be formed by WTO, which can work with other organizations. Harmonization with domestic legislation is mandatory to exercise proprietary rights in outer space. India must develop space activity provisions under the present IPR regime, avoid overlapping jurisdiction, and cover all aspects of space activities. It must consider the importance of IP protection for future investments in space research.

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Practical Aspects of Damages in Terms of IPR

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ABSTRACT

Intellectual property right are exclusive monopolistic rights of the creator or the owner, solely designed for the purpose of deriving economic interests out of the protected property and exploit it for commercial gain. To protect this exclusive interest, the law also outlines penalties or measures to prevent and deal with infringement i.e. any attempt at violating the exclusive rights of the owner so as to unlawfully gain monetary benefits out of the protected property. The dichotomy arises when the processes to determine the loss which has been incurred by the owner of the protected property, so as to apply principles of restitution and derive an accurate measure of compensation, is vague and varying across jurisdiction. This paper attempts to analyse different methods adopted to calculate the quantum of compensation in cases of infringement across multiple jurisdictions and forums. It attempts to outline the theories or reasoning behind adopting such practices. It also makes the case for the fact that different measures of compensation calculation will be applied for different types of intellectual property i.e. copyright, trademark, patent etc. There is also a need to apply different kinds of measures to different kinds of cases based on their individual unique facts, necessities and pecuniary interests.

Keywords:

1. Introduction

The biggest threat to any monopoly lies in the dilution of power – in the sense of economical control of the market's lion share as well as the exclusive control or rights over a product. At the core of its existence, Intellectual property rights create a monopolistic dichotomy wherein the owner enjoys an exclusive right in rem against the world for his creation but the said right puts an onus of protection against infringement, on the owner. Intellectual property disputes

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largely arise from matters of infringement of exclusive rights of the owner by acts or omissions which consequently dilute the value of the property or its exclusivity in the market. The question that has bothered jurists, legislators and experts is based on the appropriate method to ascertain that "value" so as to provide adequate justice to the owner and restore his monopolistic hold over the market. Experts are met with the issue of ascertaining in most cases the "lost profit" as a method of calculating the "monetary damages" or "compensation" in most cases of infringement. The law largely deals with the parts prior to damage calculation, encompassing methods to prove infringement and available defences but leaves the process of damage estimation to the wit of the jurists. Therefore, precedents become the most important source while analysing the methods for estimating the right way to calculate damages. At the outset of the matter, it's necessary to point out that there lie major differences between the methods of valuing an intellectual property for the purposes of sale and the process of calculating losses due to infringement for purposes of compensation. To throw some light on it, the expert would often rely on the future benefits accruing from an Intellectual Property to determine the sale price of it in the market or compare its value with the pricing of similar Intellectual property present in the market. The considerations for such a process would include the: "demand for the property in the market by the buyers" and "possibility of entrance of an alternate product in the market". Alternatively, the expert would focus not on the future but on the past while ascertaining damages or compensation value. Prior existing data becomes extremely relevant in such scenarios. Such data are used to calculate the amount of value which could have been generated from the property but for the infringement, such profit was lost.

Taxing is an important factor of consideration when it comes to analysing the market value of an Intellectual property but in the course of damage calculation they do not have a significant role to play. In compensation cases, damages are analysed on a "pre-tax basis" because in most foreign jurisdictions "damages from IP disputes are taxed under ordinary income".

Intellectual property cases are largely divided based on the "nature" of the disputed Intellectual property meaning the developed bodies of jurisprudence and precedents present for patents, copyrights, trademark etc. are all separate and distinct. However, certain laid out principles are applicable in uniform standards of cases covering all forms of intellectual property.

At the outset of any compensation measure, is the idea that it must fully recover the losses endured by the plaintiff and place him in a position that he would have been had the infringement not occurred. Restitution is at the core of such deliberations. "Market Value

Measure" is one of the most sought after concepts in the realm. It implies that the courts must take into consideration the difference between the pricing or worth of the property as it is present and as it would have been had the infringement not occurred to finally ascertain the value of compensation to be paid to the owner. The "Lost Opportunity Measure" also attempts to value the amount of compensation payable by calculating the money which the owner could have made by utilising the property to the fullest had he not been stopped by the infringement occurring.

The primary difference between the two lies in the fact that "market value" method assumes the "worth" of the property and replenishes the reduced worth but "lost opportunity" method calculates the "loss of income" and provides the same as damage payable. Even though both of these factors may seem to be similar, they are distinct in these above laid terms.

Another preferred alternative is the "unjust enrichment" theory wherein the courts do not focus largely on the loss of the plaintiff but rather on the gains made by the defendant based on the theory that such gains were availed through unlawful means and must be returned to the real owner of those gains i.e. the plaintiff.

Going forward in our discussion we shall look into all applicable methods in large detail and their suitable applicability in unique cases.

2. The Concept of Lost Profits and Its Availability

The right of the owner to retrieve lost profits in consequence to the behaviour of the infringer is a constant motif in the computation of damages for infringement. Although, if segments of the elements of the units were unprotected by the in-suit IP, the lost profits are determined on the basis of the owner's profits that he would have reaped from selling of the components, "but for" the infringing activity. One or more factors, such as lost sales figures, reduced unit sales costs, high marketing costs due to increased production, lost revenue from ancillary and convoyed goods usually sold alongside the stolen goods, additional costs being trademark advertising costs, may be used to calculate damages for lost profit. A plaintiff in order to make himself eligible to claim lost profits, "must demonstrate that there was reasonable probability that, but for the infringement, it would have made infringer's sales." The holder of the patent has to provide evidence showing that there would have been lost profits "but for" the infringing act. The Federal Court opined in *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*[240] that after

[240] Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152 (Sixth Cir. 1978).

the owner of the intellectual property shows the rationality and legitimacy of this inference, it is the onus of the offender to demonstrate that the act of interfering is unjustified for a portion or totality of the lost profits. There are two accepted techniques for demonstrating "but for" causation i.e., the "Panduit test" and the "Two-supplier market test". It has been made very evident by the Federal Circuit that there exists no one way for the patent owner to satisfy the burden and obligation of demonstrating lost profits. The ruling in *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc*. is a recognized expert on calculating lost earnings in patent cases.[241] The four-factor approach presented in this case has been recognized by the majority of courts as a practical, though non-exclusive, approach for a patent owner to demonstrate their right to lost revenues.[242] Under Panduit, in order to entitle himself to lose profits, the patent holder must establish and justify the criteria i.e. during the infringement, there was demand of the infringing product; in the course of infringement, competent replacement products that are non-infringing were not readily accessible to meet the needs; the owner of the patent had the production and advertising resources to have given the item patented to the buyers purchasing the infringing item and the sum total that the owner of the patent would have obtained.

Earlier, the patent owner was not able to recoup lost revenues if any one of the four elements of the "Panduit test" was not demonstrated. These restrictions have been improved upon and in some ways reduced in later decisions. The first factor of Panduit test, for example, has been modified by case law to now necessitate requirement for the patented characteristics instead of the product itself. Regarding the second component, a patent holder does not have to completely rule out the likelihood that, in the absence of the infringement, the customer would not have bought any other product. The patent owner just needs to demonstrate that there existed a "reasonable probability" that it would have generated the sales "but for" the violation. The burden of establishing right to lost profits as a result of the unauthorized sales has been satisfied if the patent owner proves the rationality of this assumption by passing all four components of the Panduit test.

Establishing demand can be simple if the product has been sold regularly to informed buyers by the owner of the patent as well as the patent infringer. The patent owner should make an effort to demonstrate a linkage relating to the patented component and the business record sales of the product in order to demonstrate that there is market for the product and feature that is

[241] *Id*.

[242] State Indus., Inc. v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1577 (Fed. Cir. 1989).

patented. For instance, *Gyromat Corp. v. Champion Spark Plug, Co*[243], it was opined that "the patented control features were advertised by Champion and while Champion has shown that painting systems could be made and sold without the patented features, the patented control system was obviously important enough to keep for 15 years on all of its short stroke reciprocating painting systems. If there was no demand for the patented system, Champion would not have run the risk of infringement." Evaluating the rates and increase in sales of the product that is patented for owner of the patent as well as the infringer of the IP; mapping and analysing the differences in sales relating the patented commodity and its forerunner; examining the product literature and business strategies of the patent infringer which can provide evidence of the worth of the patented characteristic; displaying the sales of the alleged offender before and after the infraction and demonstrating how long the patent infringement has been occurring, are various facets that aid in showing the success which the patented feature has achieved in the commercial market.

Taking into account the requirement for the infringing product, an infringer of the patent may argue that their presence into the marketplace increased that size of the market to a level what it would have been in the absence of the entry of the infringer in relation to a patent owner proving and establishing the demand and need for the patented goods or feature. The patentee will also have trouble satisfying the primary prong of the "Panduit test" if the infringer of the patent is successful in demonstrating that there is no market for the patented component or that buyers who bought the infringing goods either were oblivious of the patent-protected attribute or that there is no significant factor in their decision to purchase.

Regarding non- infringing substitutes, the existence of suitable, non-infringing alternatives to the product which was patented in the course of the time of infringement, or the second Panduit element, is a highly contested issue. The fundamental justification for this condition is that even though the infringement had not been active in the marketplace, customers might have selected the acceptable non-infringing alternatives over the patent owner's goods.[244] The patentee typically has a limited understanding of what a buyer considers to be an acceptable alternative when striving to demonstrate the existence none or few suitable equivalents that are non-infringing within the subsequent Panduit criteria. The patentee may specifically try to demonstrate that any competing products are significantly inferior and lack the unique qualities and advantages of the product that is patented. The suspected infringer, on the other hand,

[243] Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 552 (Fed. Cir. 1984) .
[244] Scripto-Tokai Corp. v. Gillette Co., 788 F. Supp. 439, 455 (C.D. Cal. 1992).

frequently has a wider perspective of the market. For instance, the suspected infringer can make an effort to establish that there exist various acceptable substitutes in the marketplace, rendering it unfeasible to prove with any rational level of certainty and reliability that the patent owner would have realized sales of additional units if the alleged infringer was from such marketplace.

The third Panduit criteria, which concerns manufacturing and advertising ability and capacity calls for the patentee to demonstrate that infringing sales might have been generated by the patentee during the pertinent time span. Numerous methods can be used to demonstrate this factor. For instance, the patentee could prove manufacturing capacity by demonstrating that its infrastructures were capable of generating the required number of patented good and inventions or that they could also have been rendered capable of doing so, or by demonstrating that the production may have been outsourced to some other production facility.[245] Usually, the patent holder will make an effort to show that they have the resources and managerial skills required to accomplish the extra units.

As far as quantifying and evaluating lost profits is concerned, the computation of lost profits is not required to be done with complete precision and accuracy, but instead with an acceptable degree of probability. In other terms, lost profits are an estimate rather than pure guesswork or unsupported speculative assertion. A patent owner typically has the right to recoup incremental profits that have been lost, which are calculated as the difference between gross earnings from recovering sales that were lost as a result to infringing activity and the additional cost of generating those sales. When the patent owner's "fixed costs" do not expand or only barely grow in relation to the rise in manufacture, this method of measuring profit loss is suitable. The profit that remains after deducting the costs involved in producing and selling the extra units that fall within the scope of an incremental spectrum is often referred to as the "incremental profit margin". According to the case of *Micro Motion, Inc. v. Exac Corp*, "incremental costs are distinct from marginal costs in that marginal costs include only those costs that vary when producing one more unit, whereas incremental costs include any costs that increase as production expands over a relevant range".[246]

[245] Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 554 (Fed. Cir. 1984).
[246] Micro Motion, Inc. v. Exac Corp., 761 F. Supp. 1420, 1429 (N.D. Cal. 1991).

3. Reasonable Royalty

In patent lawsuits, once an infringement is confirmed, the patent holder is entitled to "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty".[247] If lost profit damages for all alleged infringing sales cannot be demonstrated, the patent holder is entitled to fair royalties from the "use of the patented technology for the remaining units sold by the infringement". In other words, "the patent holder is entitled to compensation for every infringing sale".

A reasonable royalty is neither the basic case nor the minimal award in non-patent intellectual property disputes. It is, however, an alternate measure of damage that is available in proper circumstances. The Uniform Trade Secrets Act (as amended in 1985), for example, provides that "in lieu of damages measured by any other methods, the damages caused by misappropriation may be measured by imposition of liability for a reasonable royalty for a misappropriation's unauthorized disclosure or use of a trade secret".[248]

The cases on reasonable royalty for non-patent intellectual property litigation draws on a larger number of case law from patent disputes. As a consequence, unless otherwise specified, the discussion below relates to "the parameters and principles offered for appropriate royalties in the context of patent disputes and is generally applicable to other types of intellectual property infringement, unless otherwise stated". Of course, the reasonable royalty to be compensated to the plaintiff by the defendant in all intellectual property disputes is regulated by the facts of the case.

An established royalty, the "amount paid by the parties for the intellectual property in a suit, is a starting point in assessing a reasonable royalty because it is based on the voluntary agreement of a licensor and a licensee". When a pre-existing royalty does not exist or cannot be shown in sufficient detail, the analyst may "need to calculate a royalty based on a hypothetical negotiation between the parties". These alternatives are covered in the sections that follow.

3.1 Established Royalty

To obtain an award for damages settled on an agreed royalty rate, the patent holder must show that "a licensing agreement covering the property was entered into with another party, often prior to the filing of a lawsuit or threat of a lawsuit".[249] The patent owner may be required to

[247] 35 USC § 284.
[248] Uniform Trade Secrets Act with the 1985 Amendments, p. 11.
[249] Sudiengesell.schaft Kohle, m.b.h. v. Dart Indus., 862 F. 2d 1564, 1572 (Fed. Cir. 1988).

prove that the royalty rate was considered to be acceptable by numerous parties.[250] Some courts have ruled that "a single licensing agreement may be insufficient and untrustworthy for establishing a royalty rate".[251] In general, the analyst should assess whether the royalty rate was accepted by a sufficient number of industry participants to be regarded as reasonable. Furthermore, the analyst should assess if existing licenses are actually comparable to the patent holder-infringer dispute.

When evaluating established or otherwise existing royalty rates to determine the reasonable royalty that "an infringer should pay the patent holder, it frequently appears appropriate to suggest royalty adjustments to account for inherent differences between the existing agreement and the hypothetical negotiation (for example, the certainty regarding infringement and validity, or the perceived threat of litigation)". Although such disparities may be significant and indicate the need for a change, the analyst should not overlook all of the inherent variations between actual and hypothetical discussions. Actual negotiations, for example, frequently include "the transfer of expertise and know-how, as well as documentation and, in certain cases, ongoing support". These things, which are frequently valuable, are not usually transferred to infringers. When determining how to accurately measure the overall royalty adjustment, the analyst should use prudence.

3.2 Hypothetical Negotiation

A reasonable royalty analysis "attempts to calculate the royalty that the patent owner would have received in an arm's-length "hypothetical negotiation" between the patent owner (as a willing licensor) and the infringer (as a willing licensee) just prior to the infringement's beginning". "This hypothetical negotiation analysis differs from a real-world negotiation in that it assumes both parties believe the patent is valid and the infringer's use of the invention is infringement. Because the hypothetical agreement is artificial, a patent owner is not required to establish the fair royalty and associated damages with absolute certainty, but rather as a matter of just and reasonable inference."

The hypothetical negotiation implies that "both parties were willing and able to negotiate a licence agreement at the time of the first infringement, and that the negotiation took place at the time of the first infringement". While the "hypothetical negotiation" is considered to take

[250] Trell vs. Marlee Electronics Corp., 912 F. 2d 1443, 1446 (Fed. Cir. 1990).
[251] Hanson vs. Alpine Valley Ski Area, 718 F. 2d 1075, 1078 (Fed. Cir. 1983); Wang Laboratories, Inc. vs. Mitsubishi Elec America, Inc., 860 F. Supp. 1448, 1452 (C.D. Cal. 1993).

place “at the time of the first infringement”, it would be incorrect to imply that this timing should result in a “last-minute premium” being applied to the reasonable fee. “It may appear that, as with a valuation, the only facts available at the time of the alleged hypothetical agreement may be used to assess the royalty's value. Despite the fact that the hypothetical negotiation should be as of the date of the first violation, courts have used facts after the hypothetical negotiation date when assessing the damage judgement.”[252] This information is commonly known as the “Book of Wisdom”.

The analyst recognizes that “in an actual negotiation between a willing buyer and a willing seller, neither party is obligated to complete the transaction”. In a hypothetical negotiation, however, both sides must complete the transaction. As a result, the hypothetical negotiation must take into account the individual conditions of both sides, such as financial status, competitive strategies, and market position. “Georgia-Pacific Corp. v. US Plywood Corp.”[253] is an important decision for deciding a reasonable royalty rate, identifying 15 factors that must be examined in calculating a reasonable royalty rate. Courts have commonly accepted these factors for use in determining a reasonable royalty rate in a patent dispute. Not all of the criteria will be examined in every case, nor will they all be of equal importance in every circumstance.

4. Other Damage Calculations

In addition along with the “compensatory damages” within the size of the shape of misplaced profits, “affordable royalties or unjust enrichment, augmented damages in extra of the compensatory degree of healing might also additionally be presented in suitable cases”. Augmented damages might also additionally encompass more “advantageous statutory damages and punitive damages. Certain laws regarding intellectual property actually enable the judge to impose higher fines”. For instance, if a patent case is found to implicate “intentional infringement, the court may grant up to treble damages in addition to attorneys' costs and expenses”. In trademark disputes, a court may award any proportion greater than the sum determined as actual damage, i.e. three times that amount to the maximum amount, depending on the specifics of the case. “If at all the court determines the portion of the relay protection on lost profits seems to be either insufficient or extreme, “the jury may enter judgement on the matter for any amount it deems just, relying on the facts of the case. In a

[252] Fromson vs. Western Litho Plate & Supply Co., 853 F.2d 1568 (Fed. Cir. 1988).
[253] Georgia-Pacific Corp. vs. United States Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970), modified, 446 F.2d 295 (Second Cir. 1970), cert. denied, 404 U.S. 870 (1971).

copyright lawsuit, the dominating defendant may be awarded lawyer's fees and expenses against the plaintiff."

4.1 Market Value (M.V.)

An infringing owner of the copyright may use the M.V. Test as a substitute method for determining actual damages if lost sales or a sensible royalty have had no evidential support. The market value test helps to calculate the proper price that a wanting seller would have received from a prospective buyer in exchange for the utilization of a work. A number of court system use the market value test to assess the valuation to the infringer for using the copyrighted work, as compared to the "value that a prospective buyer and wanting seller would've have negotiated. Even though this distinction may appear to be conceptual at first glance", it can significantly affect how value is determined.

The M.V. indicator of the owner's damage done which is typically used in one of two situations: "(1) when the defendant infringer or defendant's violation has negatively impacted the reputation or valuation of the protected content for a specific market; or (2) when (a) the defendant has managed to make no profits from the infringing activity (b) the owner of the copyright has not established any lost sales, and (c) the market conditions make the likelihood of a negotiated licence likely". The scope in which the valuation of the copyright protected work at the point of infringement has been harmed or severely damaged by the violation may be taken in account during calculation of the owner of the copyright's actual monetary damages. This present concept was applied as in the case of Montgomery v. Noga where, "based on the effect of the violation on the value of an unregistered version of the programme that had been derived from the copyrighted programme", actual damages for infringement of a copyright protected computer programme have been awarded. The court decided that the "valuation of the protected programme could not be entirely determined by reference to the market value of the subject to copyright programme as a standalone product in determining the extent of the damage to the value of the registered copyright at the time of infringement".

4.2 Statutory Damages for Counterfeit Trademarks

Prior to the court deeming final judgement in lawsuits alleging the "use of a counterfeit trademark, the plaintiff may choose to retrieve not less than $500 nor more than $100,000 per fraudulent mark for every type of products or services marketed, provided for sale, or distributed, as the court deems just". Likewise, if the Hon'ble court determines that "the usage of the counterfeit mark was deliberate, the plaintiff may elect to recover approximately to $1

million per counterfeit mark for every type of products or services marketed, provided for sale, distributed, as the court deems just". The definition of counterfeit mark is: "(1) counterfeiting of a mark registered on the principal record of the United States Patent and Trademark Office for any such products or services being sold, available for sale or distributed "and being used irrespective of whether the person seeking relief was aware that the mark was "registered and protected"; or, "(2)a fictitious designation" that is the same as, or nearly identical to, a designation for which the remedies are presented under the statute.

In the case of domain names, the plaintiff may choose to, "even before to the court's arrival of final verdict, to recover statutory damages in lieu of actual damages or profits made, in the amount of not below $1.000 and not exceeding than $100,000 per domain name, as the court deems just".

4.3 Statutory Damages for Copyrights

If the "copyright holder" is unable to showcase his "actual loss" or "the defendant's profits", the plaintiff may be able to seek "statutory damages under the Copyright Act". The statutory minimum for damages is $750, and the maximum is $30,000, depending on what the court determines to be reasonable. If the owner of the copyright successfully needs to meet "the burden of proving intentional infringement and the court so finds, then the court may, at its discretion, increase the grant of statutory damages to a maximum of $150,000". The court at its discretion may, "lower the award of statutory damages to an amount of not less than $200.248 in case scenarios where the infringer successfully meets the obligation to demonstrate that such Contributory infringement happened because infringer was not aware and didn't have any reason to believe that that his or her actions constituted a copyright infringement".

5. Methods of Calculating Adducing Evidence

Many businesses international claim that it is impossible to enforce intellectual property rights, particularly patent rights, in China. This belief could be supported by the observation that compensation is not as high as anticipated. In China, there are now close to 10,000 patent infringement cases every year, and there are close to 100,000 IP infringement lawsuits per year. In reality, more cases are being filed with significant financial penalties.

It is possible to learn how China calculates compensation for damages and how to present evidence in court to win comparatively substantial damages by using real-world examples of litigation situations.[254]

5.1 Damages Calculation Techniques

The core values of civil law, the major laws safeguarding intellectual property rights, and the relevant court interpretations are all Those were equal to both the actual quantity of offending devices offered for sale where it is challenging to calculate the overall reduction in the IP customer's units sold or the drastic reduction in the IP supervisor's units sold as a factor of the infringed.

5.2 Legitimate Costs

The owner may further request recompense for reasonable costs involved in enforcing the relevant right in addition to damages computed in the procedure outlined earlier. Regardless of how the law requirements establish the range of such statutory damages in order to avoid overly broad prosecutorial independence, it is possible to go over the limit for statutory damages in some cases based on the facts.

The maximum amount for statutory damages in patent disputes has increased from RMB 500,000 (US$76050) under the 2000 Patent Law to RMB 1,000,000 (US$152,100) under the 2008-2009 Patent Infringement Law. Additionally, the Establishment Clause of the Chinese Patent Law's recently released Document for Review incorporates the following.

5.3 Providing Evidence

The above-mentioned algorithms are utilized sequentially to determine damages compensation. In other words, the amount of damages to be paid out will depend on the owner's real losses. When determining real losses is challenging, damages must be assessed based on the infringer's earnings. When deciding both is challenging

Nonetheless, as it is the owners' obligation to provide evidence to support a claim for damages compensation, businesses often choose for a computation technique that is backed up by facts.

[254] The sales statistics of account if the allegedly infringing products are available online. In this circumstance, It's also a good idea to keep track of the internet business sales statistics and make notes on the supporting documentation.

5.4 Damages under the Law

The specific type of right, as well as the details surrounding the violation, may have a considerable effect on the amount of reimbursement even when statutory damages are implemented.

The legal consequences an audit of the eight specific sorts of multi-parameter monitor merchandise available by the defendant all across the trial. The auditing agency conducted the audit using information such as the defendant's prospectus, the defendant's 2011 Annual Report, brought to light on the defendant's official website since the defendant refused to provide the necessary account book materials. The audit found that the defendant in total gross profits from April 2009 to April 2011 from eleven specific sorts of monitor products, including the eight types of infringing products that were the subject of the audit. The average gross profit per type. The overall operating profit and the ordinary operating profit was the excessive of first instance ordered the plaintiff costs for the misappropriation of trade secrets for something like the patent infringement.[255]

5.5 Costs

In most scenarios, a total sum is established after factoring in both compensation and justifiable expenditures. Therefore, the court has more often decided on the amount of damages compensation and reasonable costs independently.

For instance, danger to the company's respect based on the "reasonable profits Haitian Company should make within 16 days in the trade mark infringement and unfair competition dispute with both Foshan Haitian Haitian and Gaoming Weiji Weiji - 2012 For Preparatory Court IP Civil First No 352".

6. Advice on Collecting Evidence

6.1 Duration and Scope of Infringement

The defendant's webpage frequently includes details about the product's sales area and occasionally also includes the date the product debuted on the market. We advise having the publicly accessible data on the defendant's homepage or other websites thoroughly notarized.

[255] By showing that the plaintiff was fully aware of the infringement, the ill faith of the defendant can be demonstrated. The court will take into account various factors, such as whether the defendant engaged in additional infringements or whether the owner sent the defendant a cease and desist notice or other warning. It will also look at whether the appellant took any actions that implied full awareness of the complainant's intellectual property.

Buying infringing goods at various times, locations, and by various means might also be helpful.

6.2 Product Information and Financial Information

It is vital to utilise additional information since it is typically difficult to gather data such being the amount of money sold of the counterfeit goods. For instance, in the case of Mindray v. Edan, In order to calculate the average profits of each type of monitor, the total profits of the monitors were divided by the variety of monitors. The total profits of the monitors were determined in accordance with the data regarding profits recorded in the annual report. This indicates that utilising a notary is advised to preserve the defendant's financial information and publicly available product information.

For some specialised sectors, the production of goods must be documented at the pertinent government agencies, and the annual report of the sector may include data on the yearly sales of the major corporations. In a lawsuit concerning patent infringement between Honda Company and Lifan Industry, the court of first instance endorsed the China Automobile Industry Yearbook and other industry yearbooks provided by the plaintiff.

The sales statistics of the online company can be taken into account if the allegedly infringing items are offered online. In this case, it's also a good idea to keep track of the internet business's sales statistics and make notes on the supporting documentation. We gathered sales information from the most well-known Chinese online marketplaces, T-mall, Alibaba, Taobao, and Jingdong, to demonstrate the defendant's substantial profits in the design patent case Panasonic v. Jindao (2015) Jing IP Civil First No 266, in which we represented Panasonic. The court of first instance upheld our allegations, and it granted our client Rmb3, 000,000 ($456.300) in compensation as well as Rmb200, 000 ($30,420) in reasonable expenditures.

6.3 Profit Margin

There are several ways to calculate profit margin, including using the correct owner's annual report to calculate the owner's profit margin, using industry average profit margins to calculate the defendant's total profit margin, and using the defendant's annual report to calculate the owner's profit margin. One way to introduce evidence is to present the annual summary of the defendants or plaintiff's case, as well as newspapers or periodicals that detail the typical industry profit margin.

6.4 Bad Faith

Whether or whether the defendant has shown ill faith has no bearing on assessments of the validity of the claim or the computation of real damages or gains attributable to the infringement. However, it does relate to the type of violation, and the courts take it into account when assessing the appropriate amount of statutory damages.

By demonstrating the defendant's knowledge of the violation, the defendant's ill faith can be established. The court will take various factors into account, such whether or not the defendant acted in a way that indicated full awareness of the plaintiff's IP, whether or not the defendant committed additional acts of infringement or unfair competition in an effort to mislead the public, or whether the owner sent the defendant a cease and desist letter or other warning.

6.5 Value of IP

Another aspect that can affect the court's decision about statutory damages is the IP's worth. It is crucial to demonstrate the brand's worth and reputation in situations involving trademark infringement. The judge's assessment in patent infringement proceedings may be influenced by the level of invention, prizes received, and popularity of the patented items. The costs associated with the creation of the copyrighted technology and the associated royalties may be considered as well.

6.6 Reasonable Expenses

The court will often provide costs for the acquisition of infringing goods, costs for the notary's use in the preservation of evidence, and costs in order to translate court papers if legitimate invoices can be produced. The court normally grants a percentage of the attorney costs, based on the particulars of the case and the going rate. In order to demonstrate the costs incurred and support a request for reimbursement of legal fees, supporting documentation should be provided additionally to the pertinent invoices, includes the trust agreement and industry standards and comprehensive guidelines regulating the attorney fees.

6.7 Advice on Evidence Preservation

The aforementioned information, which the owner independently gathered, can be used to determine the defendant's profits from the infringement as well as to establish the facts and circumstances surrounding it. As a result, the court's decision regarding the amount of statutory

damages will be influenced. Another practical method of acquiring evidence to achieve substantial compensation is to request evidence preservation from the court.

It is nevertheless worthwhile to apply for evidence preservation even though it might not be accepted. Applying for evidence preservation should be done in the following ways:

-Investigate the defendant's operating status in advance and make an effort to obtain and discover the specifics of any pertinent financial documents. Engage in open dialogue with the court, outlining the specifics of the case, the need to preserve the evidence, and the possibility of infringement.

-The owner may think about asking for the extraction of evidence held in state agencies, such tax departments, in addition to asking the court to preserve the financial records preserved on the defendant's property. However, there is a minimal likelihood that the court will approve this method of evidence gathering, and even if it does, getting this evidence will not be simple. In case the financial records of the defendant can be effectively maintain, a court audit should be conducted.

Owners of intellectual property may rely that China will uphold such rights. The owner could gather proof from all sources and attempt to maintain their own legal rights under the current court system in order to safeguard respecting the parties' legal rights and interest's fullest degree possible. The owners and their attorneys must work together to achieve a favourable lawsuit outcome, and they must have the attitude that infringement will not be allowed.

7. Compensation for Damages in Counterfeiting Cases: A Moroccan Perspective

According to Moroccan law and case law, including the majority of judgments rendered by commercial courts, a trademark owner may elect to seek "full compensation" for genuine losses experienced and profits made as a result of the illegal action. Even if the judge calls in a technical expert, the trademark owner will still need to prove the validity of their claim, which might be quite challenging. As a result, plaintiffs typically opt to assert the statutorily "pre-established damages"[256] in order to avoid having to demonstrate the full degree of their losses. The quantity of counterfeit items confiscated from the infringer's business is taken into consideration when a court determines the amount of compensation to be paid within the predetermined range for pre-established damages. Only where the infringement is a small "non-

[256] S. A. Edelman and Terence P. Ross. Intellectual Property Law Damages and Remedies: Updated through Release 4, New York: Law Journal Press, p. 2-25, 2003.

manufacturing" dealer can the judge consider the question of good and bad faith. On the other hand, regardless of their good intention, a manufacturing infringer is considered to be a counterfeiter and is subject to compensation. Last but not least, the Moroccan judicial system does not determine the conditions of compensation based on the worth of fictitious licencing agreements.[257]

7.1 Legal Framework for Compensation

From its first law on industrial property (June 23, 1916), which only provided for minor financial penalties, to Law No. 17-97 on the Protection of Industrial Property (IP Law), which grants the right to seek full compensation for damages incurred or to seek the pre-established damages set by the legislator, Morocco has made significant progress in addressing the issue of civil compensation in counterfeiting cases. Later, provisions under Laws Nos. 23-13 and 31-05 were added to and altered the pre-established damages clause in Article 224 of IP Law No. 17-97, raising the minimum and maximum pre-established damages, respectively, from MAD 5,000 and MAD 25,000 to MAD 50,000 and MAD 500,000.

Morocco has ratified a number of international agreements, including agreements with the World Trade Organization (WTO), such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), and treaties run by the World Intellectual Property Organization, such as the Trademark Law Treaty, which are in line with international standards.

7.2 Legal Basis for Assessing Compensation

The Moroccan IP Legislation No. 17-97's Article 224 sets a singular compensation provision that is unmatched by any other national law, namely that the trademark owner may select between two possibilities when they begin their proceedings:

- FULL DAMAGES: Subject to the court's discretion, the owner of the trademark may seek full compensation for losses brought on by the act of counterfeiting. This choice is subject to normal legal principles. The burden of evidence rests with the plaintiff, who must demonstrate the validity of his or her claim and show that the infringement caused genuine losses and a loss of profits. Although it would be quite simple to demonstrate a decline in sales volume by providing financial documents, this responsibility can be very tough. Given the low amount of fake products most infringers offer for sale owing to the

[257] Montgomery v. Noga, 168 F.3d 1282 (Eleventh Cir. 1999).

possibility of "descriptive seizures,"[258] it is really still hard to prove that such a decline was caused by the infringement. Furthermore, it is difficult to estimate the number of fake items sold and the illegal earnings made because the majority of dealers who deal in counterfeit goods do not keep regular books of accounts.[259]

- PRE-ESTABLISHED DAMAGES: Alternately, the owner of the trademark may demand pre-determined damages for imitation specified by the legislature. Owners of trademarks who lack the resources to demonstrate the full extent of their losses and/or knowledge of the amount of lost income the infringement diverted will benefit from this privilege. It is a defined sum of money intended to make up for losses suffered by the trademark owner even in situations when there are no actual losses, such as when fake products are intercepted at a port before reaching the domestic market. Case law has shown that importers of fake products are accountable for significant damages even if the fake items in question were not offered for sale or distribution to the general public. The trademark holder is not required to provide evidence of damage under this option. The Casablanca Commercial Court of Appeal determined that the appellant's claim that the trial court failed to establish the extent of the loss suffered or the necessary reparation costs incurred by the trademark owner lacked merit in its decision no. 3280 of May 31, 2017, issued in case file no. 2017 8211-18450, given that pre-established damages are awarded as presumptive compensation without requiring the plaintiff to establish the extent of the damage. As a result, the Court rejected the case and upheld the trial judge's decision.

7.3 Criteria for Assessing Compensation

Numerous decisions made by Moroccan commercial courts, most notably the Casablanca Commercial Court of Appeal, have included the quantity of counterfeit goods seized or sampled in the calculation of damages due to the wide range set for pre-established damages, i.e. between MAD 50,000 and MAD 500,000. Additionally, while determining compensation, the sort of dealer selling counterfeit items is also taken into consideration. In fact, the amount of compensation may differ depending on whether the defendant is a major professional dealer who sells big amounts of these counterfeit items or a small trader who only sells a little quantity. The majority of decisions in these situations have provided the MAD 50,000 in minimum pre-

[258] Integra Lifesciences I, Ltd. v. Merck KGaA, 331 F.3d 860 (Fed. Cir. 2003) and Integra Lifesciences I, Ltd. v. Merck KGaA, 2004 WL 2284001 (S.D.Cal. 2004).
[259] Nintendo of America. Inc. v. Dragon Pac. Int'l, 40 F.3d 1007, 1010 (Ninth Cir. 1994), cert. denied, 515 U.S. 1107 (1995).

established compensation. In this context, it is important to remember that a court cannot grant a settlement below MAD 50,000 even if it does not deem it appropriate given the defendant's financial situation. This applies, for instance, when only a small number of fake goods were seized from the defendant's shop, which generated annual sales of no more than MAD 50,000.

8. Conclusion

In the modern world, IPR is a field of work that is continually expanding. The range of intellectual property rights (IPR) has significantly expanded since India became one of the principal signatories to the Trade-Related Aspects of Intellectual Property Rights (TRIPS). As a result of the cases' quick escalation, it is believed that IPR conflicts are numerous in number, as evidenced by the backlog analysis of the ongoing IPR litigation. When damages are fundamentally estimated incorrectly and result in an appeal to a higher court and ultimately the Supreme Court of India, they advance the IPR litigation. Given the current situation, every layperson today should spend some time investigating any prior registration of the aforementioned intellectual property rights before starting a business, patenting an invention, copyrighting an artistic creation, or registering a trademark or logo to avoid dealing with a lawsuit for infringement and ultimately having to pay the other party for the infringement. Therefore, damages are essential in IPR to resolve IPR disputes. The natural and direct repercussions of the infringement as well as any subsequent loss of goodwill and reputation are some of the factors to be considered when calculating damages in infringement cases. To seek punitive/monetary damages from the opposing party, it is crucial to present the proper legal proof of the damage and a valuation of it. Courts usually employ the more straightforward way when determining the harm caused by a loss of goodwill and reputation, even though it is easy to quantify the real loss caused by a loss of business and a loss of profit.

When determining damages in infringement situations, it is important to take into account the natural and immediate effects of the infringement as well as any eventual loss of goodwill and reputation. It is essential to provide the appropriate legal evidence of the damage and an assessment of it in order to demand punitive/monetary damages from the opposing party. Even while it is simple to calculate the actual damage caused by a loss of business and a loss of profit, courts typically choose the simpler approach when establishing the harm caused by a loss of goodwill and reputation. It has been highlighted that, in some instances, damages for reputational or goodwill injury are not usually given, even when the court recognises an act of infringement and takes proper action to cease the violation of another person's rights. The only

formula used by the court to determine damages for a loss of reputation or goodwill is known as the "Double and Treble Formula." For instance, in Time Incorporated v. Lokesh Srivastava and Anr.[260] the High Court of Delhi just increased the punitive damages to reflect the loss of reputation and goodwill. However, not all situations need using this formula. It is essential that we have more nuanced and specific guiding principles or elements in order to evaluate the level of harm caused by a loss of reputation and goodwill. Currently, there is no system of accepted guidelines for determining damages in a wide range of difficult instances, particularly those including reputational and goodwill loss. What types of evidence must be shown in order for the court to determine the monetary damages to make up for the loss of reputation or goodwill is unclear from the standpoint of a practitioner? It might not be wise or suitable to simply multiply punitive damages by two or three times the real loss. It may take less, more, or even much less time, money, and effort to develop a reputation and goodwill than the assets are worth. Infringement or passing off can harm reputation and goodwill in a way that is proportional to their value. It is necessary to take these nuances into account in order to calculate damages correctly. This jurisprudence must develop, evolve, and meet the needs of the economy and society by applying intelligence to these varied difficulties. This area of law is still relatively undeveloped. A stringent set of criteria for estimating damages for reputational and goodwill loss should be established.

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[260] [1] 2006 131 CompCas 198 Delhi. https://indiankanoon.org/doc/1152738/