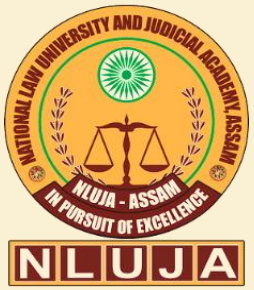


# NLUA Journal of Intellectual Property Rights

*Peer Reviewed Bi-Annual Online Journal*

VOLUME 1 ISSUE 1



DPIIT-IPR Chair

National Law University and Judicial Academy

Assam

July 2022

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## *Editor's Note*

It gives me immense joy to present Volume I of the NLUA Journal of Intellectual Property Rights, 2022. The Journal is a Peer Reviewed Bi-Annual Online Journal. In recent times, the discussions around the law of intellectual property rights have taken great momentum. It is a known fact that the development of humankind depends on new creations and inventions. These creations and inventions require a lot of effort, time, energy etc. To recognise and encourage such further developments, it is important to give these creators, rights in the form of IPR to exploit their creations. Also, IPR has become an important component of national economic policies. The governments are under pressure to design an IP system that best serves the interest of the country. Thus, it is important to understand the implications of different IP policies. Keeping these in mind, the journal aims to serve the purpose of promoting research in legal, economic, socio-legal, technological and entrepreneurial aspects of new and emerging areas of IPR. The contributions for this issue have been made by leading academicians, lawyers, researchers and students. This issue covers articles on AI in IP; the Conflict of Copyrights in Sound Recordings; Cryptocurrency, IPR and Competition Law; Economic Analysis of IPR Markets; Protection of Trade Dress; Managing IP in Utilising Robotic Process Automation in Healthcare during Covid-19; GI and Impact on Agriculture; Copyright and Competition Laws and Traditional Knowledge in North East India. I am thankful to Prof. (Dr.). V.K. Ahuja, Hon'ble Vice-Chancellor of NLUJA, Assam for entrusting me the responsibility of editing the first volume of the Journal and I am extremely thankful to the Editorial Members of this issue, Ms. Sharmistha Baruah and Ms. Dolly Kumar for their dedicated and sincere work. I also thank Dr. Kankana Baishya for her support in bringing out this issue.

Dr. Jupi Gogoi
**Editor**

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# AI TRENDS IN IP: ARE MACHINES THE NEW AUTHORS?

*Ambika Aggarwal*[*]

*Anindya Sircar*[**]

**Abstract**

*GAN and related ML systems have branched out from brute force computation to cultural productions like the Next Rembrandt. Scepticism is rife about possible consequences of AI transforming into an automated artisan. This apprehension ignites cross-sectoral debates on the emergence of 'machine autonomy'. Until AI's status as conscientious participant in human society remains muddled, AI-generated works may not clearly fall into a protectable copyright niche. This paper provides a harmonised view amongst a scholarship polarised between choosing 'humans or machines'. We argue that the correct perspective is 'humans behind the machines'. Human contribution, as much as is required by copyright law, is not difficult to identify in complex generative works. The upstream and downstream uses are not infringements ipso facto. Concerns for rights violation in data use and allocation of ownership can be resolved by adopting more legislative clarity. The benefits of permitting and protecting emergent works outweigh the mistrust and assumptions, that borne from the AI Knowledge Gap, caution against facilitation of AI-assisted creativity. AI is helping professionals amplify their creative expression and is steadily becoming more accessible for common use. A pragmatic, technologically-agnostic interdisciplinary approach can pave the way for pluralistic dimensions of authorship, originality and ownership in place of existing procrustean standards.*

**Keywords:** Artificial Intelligence, Automation, Ownership, Balance of Rights, AI-assisted Works.

## 1. Introduction

In ancient times, Aristotle envisaged new instruments of production that would, of their own accord, compose and perform music and weave new textiles.[1] Roald Dahl created a similar idea with his elaborate typewriters in "The Great Automatic

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[1] C. Craig and I. Kerr, "The Death of the AI Author", Osgoode Legal Studies Research Paper (March 25, 2019), *available at*: https://ssrn.com/abstract=3374951 (last visited on March 30, 2022).

Grammatizator".[2] Fictional laws governing artificial intelligence premise the works of Isaac Asimov.[3] While the storied ambit of science fiction continues to evolve, scientists working on artificial intelligence (AI) are transmuting theoretical concepts into practical applications.

One might expect that visual arts would be the last thing computers could be good at, as they are abstract, expressive of one's personality, and tied to an individual culture and psychology.[4] However, a collaborative project between ING, TU Delft, Mauritshuis Museum & Microsoft has produced 'The Next Rembrandt'[5]. We look at the story behind the painting that has won over 60 advertising awards.[6]

The team designed deep learning algorithms to upscale 346 high-resolution scans of Rembrandt paintings. This followed a tedious demographic and anatomical study to arrange final selections as "a portrait of a Caucasian male with facial hair, between the ages of thirty and forty, wearing black clothes with a white collar and a hat, facing to the right."[7] "An algorithm measured the distances between the facial features in Rembrandt's paintings and calculated them based on percentages. Next, the features were transformed, rotated, and scaled, then accurately placed within the frame of the face. Finally, we rendered the light based on gathered data in order to cast authentic shadows on each feature."[8] Same procedure was followed to calculate and create height maps from UV-based paint that gave the painting a 3-D effect. Over 500 hours of processing rendered 150 gigabytes of data that resulted in a new painting bearing resemblance to the works of the old master.

This was unique for not only the output that was generated but also because of how clearly it highlighted the human-machine link. The non-human creator is created by human creators, but the work created by the non-human agent is not directly created by

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2 R. Dahl, *The Great Automatic Grammatizator and Other Stories* (Viking, London, 1996).
3 I. Asimov, *I. Robot* (Fawcett Publications, Greenwich,1950).
4 K. Hristov, "Artificial Intelligence and the Copyright Dilemma", 57 (3) *IDEA The Journal of the Franklin Pierce Center for Intellectual Property* 431 (2017).
5 Superhero Cheesecake, "The Next Rembrandt", *available at*: https://www.nextrembrandt.com/ (last visited on February 22, 2022).
6 Dutch Digital Design, "The Next Rembrandt: Bringing the Old Master Back to Life", *Medium*, Jan. 24, 2018 *available at*: https://medium.com/@DutchDigital/the-next-rembrandt-bringing-the-old-master-back-to-life-35dfb1653597 (last visited on February 22, 2022).
7 *Supra* note 5.
8 *Ibid.*

the humans.[9] Albeit, the AI software (even though a self-learning algorithm) would not have produced an output without constant human inputs.

One scathing criticism of the Next Rembrandt project calls it "a horrible, tasteless, insensitive and soulless travesty of all that is creative in human nature", lacking "the emotional heft of a human original."[10] Perhaps we digress, but, Rembrandt may himself have appreciated "the mingled passion and haplessness of the ginned-up painting"[11]; given his own application of instruments like camera obscuras – nascent technologies at the time.[12]

Nevertheless, such critique opens us to pertinent questions in copyright's sphere. Is mapping data points from a large pool of public domain works a sufficiently creative endeavour? Can *substance* produced using AI technologies which can only mimic existing authorial *styles* be considered original? Are AI practitioners legally protected under fair use/fair dealing provisions to use other authors' works as training data corpus? Most pertinently, with the human link with work's creation now disturbed, who is the true author?

We map the effect of 'AI Knowledge Gap' on recent copyright scholarship and argue that legal perceptions are prematurely giving in to the provoked intrigue of pop-culture and publicised conceptions of the potential of Generative AI. To this effect, Part II contains a detailed exposition of AI and ML as relevant to copyright law. Part III delineates prevailing contradictions on machine authorship and offers a new theoretical basis grounded in post-structuralism. Part IV deals with issues of originality, creativity, copying and alleged market disruptions purported to be caused by AI-based works. Part V identifies probable owners to affix legal liability. Part VI is the conclusion. This study is restricted to current and expected state-of-the-art of AI; bearing in mind the incremental, not exponential, progress predicted by AI practitioners. The terms 'AI-based' and 'emergent works' are used interchangeably.

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[9] M. Coeckelbergh, "Can Machines Create Art?", 30 *Philosophy & Technology* 285 (2016).

[10] J. Jones, "The digital Rembrandt: a new way to mock art, made by fools", *The Guardian,* Apr. 6, 2016, *available at*: https://www.theguardian.com/artanddesign/jonathanjonesblog/2016/apr/06/digital-rembrandt-mock-art-fools (last visited on March 23, 2022)

[11] P. Schjeldahl, "A Few Words about the Faux Rembrandt", *The New Yorker,* Apr. 8, 2016, *available at*: https://www.newyorker.com/culture/culture-desk/a-few-words-about-the-faux-rembrandt (last visited on March 23, 2022)

[12] F. O'Neill and S. P. Corner, "Rembrandt's self-portraits", 18 *Journal of Optics* 6 (2016).

## 2. A Brief History of Automation

The co-inventor of telegraph, Charles Wheatstone, prompted Lady Ada King, Countess of Lovelace[13] and daughter of British poet Lord Byron to translate Luigi Menabrea's prior research on Babbage's Engines. In this anonymously published translation,[14] she added 7 new appendices proposing that beyond mathematical calculations, "the engine might compose elaborate and scientific pieces of music of any degree of complexity or extent".[15] This ingenuity made her the first computer programmer. Lovelace also possessed a keen forethought on public perception of machine automation:[16]

> It is desirable to guard against the possibility of exaggerated ideas that might arise as to the powers of the Analytical Engine… The Analytical Engine has no pretensions whatever to originate anything. It can do whatever we know how to order it to perform.

Nearly a century later, Alan Turing in his exceptionally celebrated paper[17], disagreed with "Lady Lovelace's Objection". He initiated the thought-process that would evolve into key concepts of AI; beginning with the most pertinent of questions, "Can machines think?" Turing's "thinking machine" does not possess any biological intelligence capabilities. We can map its *appearance* of intelligence through the 'Imitation Game', also known as the 'Turing Test'. If the interrogator who receives typewritten responses for same questions asked to a human and a machine cannot tell them apart for a majority of time, then the machine can be said to think like a human. Several watered-down versions of the test accommodate randomly surveyed public

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13 Computer History Museum, "A Brief History: Age of Machinery" in C. D. Green and C. Babbage, "The Analytical Engine, and the Possibility of a 19th Century Cognitive Science", in C.D. Green, M. Shore, *et.al.*, (Eds.) *The Transformation of Psychology: Influences of 19th-Century Philosophy, Technology, and Natural Science* (American Psychological Association, Washington, 2001), *available at*: https://www.computerhistory.org/babbage/history/ (last visited on Feb. 6, 2022).

14 L.F. Menabrea, "Article XXIX: Sketch of the Analytical Engine Invented by Charles Babbage Esquire", 3 *Scientific Memoirs* (1843), *available at*: https://repository.ou.edu/uuid/6235e086-c11a-56f6-b50d-1b1f5aaa3f5e#page/4/mode/2up (last visited on March 16, 2022).

15 *Ibid.*

16 *Ibid.* (emphasis in original).

17 A. M. Turing, "Computing Machinery and Intelligence", 49 *Mind* 433, 460 (1950).

opinion in place of the interrogator.[18] The general consensus is that the Turing Test still remains an elusive standard for AI experts to achieve.[19]

### 2.1. The Dartmouth Conference

At around the same time as Turing, certain scientists were contemplating a different but related question - can machines be creative? In the summer of 1956, the term "Artificial Intelligence" was officially framed at the 'Dartmouth Summer Research Project on Artificial Intelligence' (Dartmouth Conference). The proverbial 'father of AI', John McCarthy, described it as, "The science and engineering of making intelligent machines."[20] This Conference adopted the central aim, "…to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it."[21]

This formally established AI as an interdisciplinary research area, attracting attention from avenues of psychology, art, computer science and neuroscience. Attention was called to increase computational power, develop natural language processing (NLP) and neural nets, cause computers to practice self-improvement, abstraction, randomness and creativity.

### 2.2. Neural Networks

Newell, Shaw and Simon;[22] also participants at Dartmouth and later recipients of the Turing Award in 1975 for their contributions to "artificial intelligence and the psychology of human cognition", expounded on new frontiers of neuropsychological 'emergent behaviour'. 'Emergence' is the "behaviour of an adaptive system which is a result of interaction of all its parts but cannot be displayed by any of the parts individually".

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18 S. Cascone, "AI-Generated Art Now Looks More Convincingly Human Than Work at Art Basel, Study Says", *Artnet*, July 11, 2017, *available at*: https://news.artnet.com/art-world/rutgers-artificial-intelligence-art-1019066 (last visited on Feb. 4, 2022).

19 "The Loebner Prize", *available at*: https://www.ocf.berkeley.edu/~arihuang/academic/research/loebner.html. (The Loebner Prize was designed to be granted to the first bot that broke the Test. It has since reduced its standards of entry and been analogised to a competition for "newspaper horoscopes and roadside psychics.")

20 J. McCarthy, "What is Artificial Intelligence?" *Stanford Law*, Nov. 12, 2007, *available at*: http://www-formal. stanford.edu/jmc/whatisai/ (last visited on Feb. 6, 2022).

21 J. McCarthy, M. Minsky, *et.al*., "A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence", 27 *AI Magazine* 12–14 (1955).

22 A. Newell and H. A. Simon, "Computer Science as Emperical Inquiry: Symbols & Research", in M. Boden, *The Philosophy of Artificial Intelligence* (Oxford Press, New York, 1990).

The general notion of emergence is meant to conjoin these twin characteristics of dependence and autonomy.[23] For AI this "describes programs that produce outputs their programmers and users could not predict."[24] This focus on emergent behaviour and reducing areas of human intelligence to formal logic systems led directly to most of AI research for the next fifteen to twenty years.[25]

In the late-90s, following an AI-winter, computer science was prompted by the push of 'knowledge economy'. The next development of AI was influenced by advancements in neurobiology, notably theories of "connectionism"[26] from D.O. Hebb's "Hebbian theory"[27] which proved a directly proportional relation between increase in cognitive powers and number of synchronized neurons. Also influential was J.S. Bruner's work on "cognitivism"[28] that elaborated on adaptive neural models of learning and behavior. Frank Rosenblatt then constructed the first functioning single-layer neural network, "Perceptron"[29] that could classify basic inputs into two categories.

### 2.3. Machine Learning

Present-day AI research aims to construct "artificial neurons" designed after and to be as competent as their biological counterparts. This is most evident in AI sub-sets of machine learning (ML) and deep learning. ML was popularized in 1959 by Arthur Lee Samuel's brainchild, the 'Samuel Checkers-playing Program', world's first self-learning algorithm. He envisioned a field of study where, "Programming computers to learn from experience should eventually eliminate the need for much of this detailed programming effort."[30]

ML is conducted through multi-layered algorithms that comprise 'Artificial Neural Networks (ANNs)'. These networks are programmed to perform specific

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[23] "Emergent Properties", Stanford Encyclopedia of Philosophy (Aug. 10, 2020), *available at*: https://plato.stanford.edu/entries/properties-emergent/ (last visited on March 16, 2022).

[24] B. Boyden, "Emergent Works", 39 *The Columbia Journal of Law and the Arts* 377 (2016).

[25] "Killer Robots: AI & Ethics", *available at*: https://www.cs.swarthmore.edu/~eroberts/cs91/projects/ethics-of-ai/sec1_2.html (last visited on March 5, 2022).

[26] *Ibid*.

[27] D. Hebb, *The Organization of Behavior: A Neuropsychological Theory* (Wiley, New York, 1949).

[28] M. Boden, *Mind as a Machine: History of Cognitive Science* (Clarendon Press, Sussex, 2006).

[29] M. Leftkowitz, "Professor's perceptron paved the way for AI – 60 years too soon", *Cornell Chronicle* (Sept. 25, 2019), *available at*: https://news.cornell.edu/stories/2019/09/professors-perceptron-paved-way-ai-60-years-too-soon (last visited on Feb. 26, 2022).

[30] A.L. Samuel, "Some studies in machine learning using the game of checkers", 3(3) *IBM Journal of Research and Development*, 210-229 (1959).

functions on a corpus of input data to generate a desired output. Feedback mechanisms enable better predictions with increased use. Once these learning algorithms are fine-tuned for accuracy, they are powerful tools in computer science and artificial intelligence, allowing us to classify and cluster data at a high velocity.[31]

The initially successful models of AI to parameterize human cognitive methodology were knowledge-based systems (KBS) and expert systems. The two components i.e. a knowledge base which is a collection of facts and an inference engine which deduces information through if-then rules, are employed for high-scale problem solving. While expert systems, which are a subset within the broader genus of KBS rely on fetching pre-stored human expertise; KBS have become adept at harnessing Big Data and statistical pattern-finding in raw data.

Tom Mitchell's formula remains instructive to this day, "A computer program is said to learn from experience E with respect to some class of tasks T and performance measure P, if its performance at tasks in T, as measured by P, improves with experience E."[32] This learning occurs via three modes. 'Supervised learning' entails training ML algorithms to recognise patterns among pre-identified/labelled raw data. 'Unsupervised learning' or 'self-learning' occurs when raw data can be categorized without human intervention. 'Reinforcement learning' is initiated through feedback loops that ensure repetition of the learning processes until the required output is transmitted.

### 2.4. AI Applications

KBS systems have found a vast market in diagnostics, data interpretations, modelling painting methodologies, debugging and repairing computer systems. AI application has become imperative to development of self-driving cars, litigation prediction and legal search, predicting protein folding structures and generating graphics softwares. ML algorithms may also be trained specifically to generate cultural productions and participate in multi-player games. It is this interface that has motivated the conception of creative intelligence as an automated property of advanced algorithms.

When IBM's AI Watson defeated long-time 'Jeopardy!' champion Ken Jennings, many heralded it as AI's entry into advanced NLP. AlphaGo Zero defeated Lee

[31] IBM, Neural Networks, *available at*: https://www.ibm.com/cloud/learn/neural-networks (last visited on Feb. 17, 2022).

[32] T. M. Mitchell, *Machine learning* 870-877 (Burr Ridge, McGraw Hill, 1997).

Sedol, 18-time world champion by four rounds to one.[33] It was as Turing had predicted, "By observing the results of its own behaviour it can modify its own programmes so as to achieve some purpose more effectively."[34]

Motivated by Rosalind Pickard's work on Affective Computing,[35] more scientists are training AI to produce works that require emotional intelligence like poetry,[36] metaphors[37] and jokes.[38] Major attention is now on Open AI's new GPT-3,[39] an unsupervised GAN network which once stated among its hoard of outputs, "This is because I will be programmed by humans to pursue misguided human goals."

### 3. Mystic Authors and Mere Machines

Generative Adversarial Networks (GAN), developed by Ian Goodfellow *et.al.*,[40] is "a new framework for estimating generative models via an adversarial process, in which we simultaneously train two models: a generative model G that captures the data distribution, and a discriminative model D that estimates the probability that a sample came from the training data rather than G. The training procedure for G is to maximize the probability of D making a mistake." Once D stops making mistakes, it can combine data corpus to make new works.

Auction house Christie's sold GAN-artwork titled 'Portrait of Edmond Belamy' for $432,500.[41] AIVA is an AI music composer assistant trained on works of baroque masters and aids in creating emotional soundtracks.[42] In an unofficial Eurovision spin-off, the AI Song Contest, participants from across EU compete with AI-authored songs.[43]

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33 "AlphaGo", *available at*: https://deepmind.com/research/case-studies/alphago-the-story-so-far#alphago_zero (last visited on March 26, 2022).

34 *Supra* note 17.

35 R. Pickard, *Affective Computing* (MIT, MIT Press, 2000).

36 A. I. Miller, *The Artist in The Machine: The World of AI Powered Creativity* (the MIT Press, London, 2019).

37 *Ibid.*

38 "The Joking Computer", *available at*: http://joking.abdn.ac.uk/home.shtml (last visited on March 6, 2022).

39 "GPT-3 Powers the Next Generation of Apps", Open AI, *available at*: https://openai.com/blog/gpt-3-apps/ (last visited on Feb. 20, 2022).

40 I. Goodfellow, J. Pouget-Abadie, *et al.*, "Generative Adversarial Networks", *Neural Information Processing Systems* 2672 (2014).

41 Auction Review, "Is artificial intelligence set to become art's next medium?" *Christie's*, Dec. 12, 2018, *available at*: https://www.christies.com/features/A-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx (last visited on March 14, 2022).

42 "AIVA", *available at*: https://www.aiva.ai/ (last visited on March 6, 2022).

43 "AI Song Contest 2021", *available at*: https://www.aisongcontest.com/ (last visited on March 14, 2022).

Ross Goodwin, former ghost-writer for President Obama, in a project sponsored by Google, fed his Char-RNN AI 20 million words in text corpora composed of fiction and poetry. He then ran the software on his laptop, constantly feeding it with images via webcam on a journey from New York to New Orleans. The AI translated that data into words and produced the first AI novel, '1 The Road'. Later, Goodwin collaborated with BAFTA-nominated filmmaker Oscar Sharp to make experimental sci-fi short films, 'Sunspring' and 'It's no Game'.[44]

Michael Mateas describes this as "expressive AI" which is "a new inter-discipline of Al-based cultural production, combining art practice and AI-research."[45] Philip Galanter has defined it as "generative art" which refers to "any art practice where the artist cedes control to a system that operates with a degree of relative autonomy, and contributes to or results in a completed work of art."[46] He further says, "The key element in generative art is then the system to which the artist cedes partial or total subsequent control." [47]

The element of control is evident in copyright law's conception of authorship which is tightly bound to and often presumes the presence of a subjective authorial intention. Copyright law is concerned that this authoritative control is not too evident in the case of emergent works. This part explores the theoretical justifications for authorship and argues that post-structuralist critique offers ample ground to include emergent works within copyrightable subject-matter. We will also review the events surrounding the auction of 'Portrait of Edmond Bellamy' to highlight romantic-anthropomorphic terminology's negative impact on legal scholarship.

### 3.1. Romanticism

The skill of an author in the beginning of Augustan literature till the mid-18th century, was to study and emulate semantics proffered by the likes of Ovid, Virgil, Horace, Homer and Socrates. The sentiment is expressed adequately by Alexander Pope, "Be Homer's works your study, and delight; Read them by day, and meditate by night"[48]

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44 "Ross Goodwin", *available at*: https://rossgoodwin.com/ (last visited on March 14, 2022).

45 M. Mateas, "Expressive AI: A Hybrid Art and Science Practice", 34 *Leonardo* 147 (2001).

46 P. Galanter, *Thoughts on Computational Creativity*, 6th Generative Art Conference (2003) *available at*: https://drops.dagstuhl.de/opus/volltexte/2009/2193/pdf/09291.GalanterPhilip.Paper.2193.pdf (last visited on March 18, 2022).

47 *Ibid.*

48 A. Pope, *An Essay On Criticism* 7 (W. Lewis, London, 1711).

and further, "Learn hence for ancient rules a just esteem; to copy nature is to copy them." Towards the end of the 18th century, romantics' emphasis on spontaneous personality overtook the systemic order of classical imitation.

For authors such as Keats, Shelley, Lord Byron and Wordsworth an ability to express horror, solitude, loss, melancholy and desire became paramount; not only as syntax but as a reflection of personal anguish with an emphasis on 'divine inspiration'. For creation of works, Wordsworth stressed the importance of imagination, "governed by, a sublime consciousness of *the soul* in her own mighty and almost *divine powers*"[49]. Herder expressed that true understanding of texts could only be gained through a study of the author himself, "The more one knows the author from life and has lived with him, the livelier this intercourse becomes."[50] Authors took on "the natural world as a living mirror to the soul."[51]

Simultaneously, the legal understanding of authorship began to evolve. *Pope* v. *Curll*[52] and *Gay* v. *Read*[53] represent landmark events noting transformation in status of literature as 'property'. Though the Statute of Anne was still "essentially a book seller's bill",[54] the dimension of author's ownership over the written word began to get credence in courts of law in subsequent cases like *Tonson* v. *Collins.*[55]

Mark Rose[56] notes the impact of *Donaldson* v. *Beckett,*[57] on propagation of Martha Woodmansee's[58] "author-genius". Booksellers view this as an opportunity to create a distinction between protections of works under copyright from those under patents. As the "writer" transmogrified into "an *author* (Lat. *Auctor*, originator, founder,

[49] W. Wordsworth, "Preface to Poems" (1815), Bartleby.com, *available at*: https://www.bartleby.com/39/38.html (last visited on March 14, 2022).
[50] J. G. V. Herder, "On the Cognition and Sensation of the Human Soul", in M. Forster (Ed.), *Herder: Philosophical Writings* (Cambridge University Press, Cambridge, 2002).
[51] M. Drabble, *The Oxford Companion to English Literature* 1228 (OUP, Oxford, 2000).
[52] (1741) 2 Atk. 342.
[53] (1729) NA 351/305.
[54] M. Rose, "The Author in Court: Pope v. Curll (1741)", 10 *Cardozo Arts & Entertainment Law Journal* 475 (1991).
[55] 96 ER 169 (1761).
[56] M. Rose, "The Author as Proprietor: Donaldson v. Becket and the Genealogy of Modern Authorship", 23 *Representations* 51 (1988).
[57] 1 ER 837 (1774).
[58] M. Woodmansee, "The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the 'Author'", 17 *Eighteenth-Century Studies* 425, 429 (1984).

creator),"[59] the claim to property seemed naturally to follow.[60] The new dynamic permitted authors to exercise independence from patrons and sell works directly in open markets. However, this came at the cost of mystification of the true nature of creative processes.

### 3.2. Post-structuralism

Mark Rose explains how, "The gap between poststructuralist thought and the institution of copyright brings into view the historicity of the seemingly 'solid and fundamental unit of the author and the work.' "[61] Roland Barthes noted the problematic notion that, "The explanation of a work is always sought in the man or woman who produced it, as if it were always in the end, through the more or less transparent allegory of the fiction, the voice of a single person, the author 'confiding' in us."[62] Arguing against *author-ity*, Michel Foucault explains how, "We are used to thinking that the author is so different from all other men, and so transcendent with regard to all languages that, as soon as he speaks, meaning begins to proliferate, to proliferate indefinitely. The truth is quite the contrary…"[63]

For Derrida, signs, and consequently language, structure human consciousness; accordingly, there is no author who can claim to have created something wholly distinctive with the very language that structures his or her consciousness.[64] In his noted work *Limited Inc. a b c*, he forcefully argued how by acknowledging the contribution of others, John Searle as an author had himself become "divided, multiplied, conjugated, shared."[65]

Far from being secluded originations, works are a conglomeration of existing ideas and influences created as well as understood through constant social dialogue. This discourse is the Foucauldian *author-function*. Craig & Kerr expound on it through

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59 *Ibid.*
60 *Supra* note 1.
61 *Supra* note 54.
62 R. Barthes, "The Death of the Author," in S. Burke (ed.), *Authorship: From Plato to Postmodernism: A Reader* 125-130 (Edinburgh University Press, Edinburgh, 1995).
63 M. Foucault, "What Is an Author?", in J. Harari (ed.), *Textual Strategies: Perspectives in Post-Structuralist Criticism* (Cornell University Press, New York, 1979).
64 L.R. Danil, "Deconstructing Copyright", *Critical Legal Thinking*, *available at*: https://criticallegalthinking.com/2013/04/08/deconstructing-copyright/ (last visited on March 26, 2022).
65 J. Derrida, *Limited Inc.* (North Western University Press, Illinois, 1988).

Bakhtin's dialogic theory, "… authorship seeks to encourage precisely this discursive participation in the dialogic process of human interaction and the mutually constitutive creation and exchange of text, meaning, and identity."[66] An AI may regenerate Rene Magrite's pipe, but only social discourse will construct the significance of "*ceci n'est pas une pipe.*"

Barthes' *Death of the Author* eliminates the authoritative influence over the text and opens channels for heteroglossia, "The text is a tissue of quotations drawn from innumerable centres of culture."[67] Deconstruction of the author as monologic and work as his solitary product of genius allows the audience to view all the voices that preceded the work and contributed to its present form, as also the ones that will succeed it and add to it their own contributions.

Prof. Litman's famous critique stands its ground again, this time for emergent works, "The very act of authorship in any medium is more akin to translation and recombination than it is to creating Aphrodite from the foam of the sea."[68] In a non-technical sense, most works of art are derivative in that they either depict another work of art or an element of nature.[69] Search[70] and Mateas[71] conclude that copyright law should understand "the plasticity of the (AI) medium" and recognize it as a means of "establishing communication between author and audience".

### 3.3. The Doctrinal Mud[72]

Dr. Bridy[73] says, "… figure of the author as a 'writing machine' is about as radical a deconstruction of the figure of the romantic author as a good post-modernist could wish for, and it is arguably one whose time has come in the discourse on copyright

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66 S*upra* note 1.
67 *Supra* note 62.
68 J. Litman, "The Public Domain", 39 *Emory L.J.* 965 (1990).
69 S. Giry, "An Odd Bird", *Legal Affairs, available at*: https://www.legalaffairs.org/issues/September-October-2002/story_giry_sepoct2002.msp (last visited on Feb. 7, 2022).
70 P. Search, "Electronic Art and the Law: Intellectual Property Rights in Cyberspace", 32 *Leonardo* 191 (1999).
71 *Supra* note 45.
72 P. Samuelson, "Allocating Ownership Rights in Computer Generated Works", 47 *University of Pittsburgh Law Review* 1185, 1197 (1986).
73 A. Bridy, "Coding Creativity: Copyright and the Artificially Intelligent Author" 5 *Stanford Technology Law Review* 12 (2012).

law." Prof. Kaminsky notes, "It is harder to romanticize free expression as an essential output of human autonomy when machines can spew out news, poems, and op-eds." [74]

Yet, the sentiment that Foucault identified as "the privileged moment of individualisation" continues today to demand that either the AI be recognised (via legal fiction) as the new *ex nihilo* creator; or that these works remain unprotected on account of lack of human (emotional) attributes characteristic of romanticised production. The former rationalisation anthropomorphises, the latter overlooks the practical process of creation of emergent works. We argue that both approaches undermine the tedious human effort happening behind the scenes - one that is dispensing Lockean labour, expressing Hegelian personality and deserves utilitarian reward.

The implications of legal literature assuming that "creative robots" are generating works entirely independent of human beings who created the system[75] or that there might be no one holding the proverbial pen,[76] is akin to qualifying "intrinsic qualities and abilities which the software controlling the (output) cannot possibly achieve."[77] Take for instance, the renowned human-computer art collaboration created by artist Harold Cohen using a programed plotter that he named AARON.[78] Dr. Bridy asks, "Is Cohen also properly regarded as the author of AARON's paintings? He doesn't lift a finger to create them, after all."[79] However, as per Harold's son, Paul Cohen, "He had little faith in machine learning… he wanted to retain control of AARON's development."[80] He did lift his fingers to program AARON through McCarthy's first AI programming language, Lisp. He remained in control of the code, altering it periodically to program AARON for different tasks. Cohen's artworks, with and without the use of AARON, comprised a data corpus authored by him, not the plotter.

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74 M.E. Kaminski, "Authorship, Disrupted: AI Authors in Copyright and First Amendment Law", 51 *U.C. Davis Law Review* 589, 598 (2017).

75 S.Y. Ravid and L.A.V. Hernandez, "Copyrightability of Artworks Produced by Creative Robots and Originality: The Formality-Objective Model", 19 *Minnesota Journal of Law, Science & Technology* 14 (2018).

76 *Supra* note 73 at 21.

77 W.J. King, "Anthropomorphic Agents: Friend, Foe, or Folly", HITL Technology Memo (1995), *available at*: https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.57.3474&rep=rep1&type=pdf. (last visited on March 16, 2022).

78 H. Cohen, "Aaron", *available at*: http://www.aaronshome.com/aaron/index.html (last visited on March 6, 2022).

79 A. Bridy, "The Evolution of Authorship: Work Made by Code", 39 *Columbia Journal of Law and the Arts* 395 (2016)

80 P. Cohen, "Harold Cohen and AARON", 37 *AI Magazine* 63 (2017).

The 'Portrait of Edmond Belamy' is a GAN-based artwork developed by Obvious, a Parisian art collective of three students, Hugo Caselles-Dupré, Pierre Fautrel and Gauthier Vernier. The algorithm was fed with 15,000 portraits dating 14th to 20th century. *Belamy* being the french colloquial to GAN's creator Goodfellow. Christie's noticed Obvious' work on SuperRare, a blockchain market and touted it as a "portrait… not the product of a human mind. It was created by an artificial intelligence." "The giveaway clue as to the origins of the work is the artist's signature at the bottom right - in cursive Gallic script it reads: (min G max D x [log (D(x))] + z [log (1 – D (G(z)))])."[81] Caselles-Dupré proclaimed, "If the artist is the one that creates the image, then that would be the machine."[82]

All is not that obvious. The promotion for auction of *Belamy* was, "some really clumsy communication of what we did, and we just thought it was cool, so we did it like this."[83] Germany-based AI artist, Mario Klingemann, who was cited among Obvious' inspirations told The Post that he believed, "Maybe this is just a practical joke among oligarchs... [The Obvious portrait] is something that everybody can do. You can clone this [code] from GitHub, start your computer and start doing it."[84] The *Belamy* code was indeed lifted from GitHub, originally authored by a then-19 year old Robbie Barrat and Klingemann has stated, "You could argue that probably 90 percent of the actual 'work' was done by [Barrat]".[85] In contrast to Obvious, Barrat provides a truer version of the process, "A human chose the data set. A human designed the network. A human trained the network. A human curated the resulting outputs."[86]

Caselles-Dupré clarified in a subsequent interview to ArtNome, "If I was not part of this and saw the articles that are coming out, I would think it was a scam or not

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81 *Supra* note 41.

82 *Ibid.*

83 J. Bailey, "The AI Art at Christie's Is Not What You Think" *Artnome* Oct. 14, 2018, *available at*: https://www.artnome.com/news/2018/10/13/the-ai-art-at-christies-is-not-what-you-think ((last visited on March 16, 2022).

84 M. Flynn, "A 19-year-old developed the code for the AI portrait that sold for $432,000 at Christie's", *The Washington Post* Oct. 26, 2018, *available at*: https://www.washingtonpost.com/nation/2018/10/26/year-old-developed-code-ai-portrait-that-sold-christies ((last visited on March 16, 2022).

85 J. Vincent, "How three French students used borrowed code to put the first AI portrait in Christie's" *The Verge* Oct. 23, 2018, *available at*: https://www.theverge.com/2018/10/23/18013190/ai-art-portrait-auction-christies-belamy-obvious-robbie-barrat-gans (last visited on March 16, 2022).

86 *Supra* note 83.

right..."[87] Lovelace's critique reasserts its relevance. Post the auction, the issue of "AI Knowledge gap" has assumed interest among AI practitioners, many of whom are now highlighting the divide between actual and perceived scientific progress in the field.

A combined empirical study[88] conducted by scientists from MIT, Harvard and Max Plank Institute found that creating a narrative that repeatedly emphasises on AI as an anthropomorphic technology "may lead to situations wherein individual responsibility and accountability is obfuscated due to a lack of clear understanding of who the relevant actors are and how they interact."[89] They conclude, *inter alia*, that Obvious' code is a 'tool' and not an autonomous 'agent'. This misclassification is prejudicial "to allocating credit and responsibility to human stakeholders"[90] since "increased anthropomorphicity of an AI system may diminish the perceived responsibility of all human actors involved."[91]

In another recent paper, leading AI practitioners clarify, "To date, no system exists that exhibits the intentional autonomy that philosophers such as Boden argue is fundamental for human creative practices, and mechanisms to achieve it remain illusive".[92] Boden views "self-organisation" as synonymous with a specific kind of autonomy where, "the system's independence is especially strong: it is not merely self-controlled, but also self-generating", [93] with the "self" in self-organisation referring to the impersonal components of the system, not the intentional, mental self.[94]

AI experts from Monash University's SensiLab explain succinctly, "…their ability to act autonomously is limited within a very tight statistical framework that is derived from their training data. While a claim such as, 'an AI created this artwork' might be literally true, there is little more autonomy or agency that can be attributed to such an

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87 *Ibid*.
88 Z. Epstein, S. Levine, *et.al*., "Who Gets Credit for AI Generated Art?" 23 *iScience* 1 (2020).
89 *Id*. at 2.
90 *Ibid.*
91 *Ibid*.
92 Z. Epstein, H. Blakeley H. Payne, *et.al*., "Closing the AI Knowledge Gap", ArXiv (2018), *available at*: https://arxiv.org/pdf/1803.07233.pdf; S. Colton, A. Pease, *et.al., On the Machine Condition and its Creative Expression*, Proceedings of the International Conference on Computational Creativity (ICCC) (2020), *available at*: https://acris.aalto.fi/ws/portalfiles/portal/51479962/Colton_et_al_Machine_Condition_ICCC20.pdf. (last visited on March 29, 2022).
93 M. A. Boden, *Creativity and Art: Three Roads to Surprise* 180 (OUP, Oxford, 2010).
94 J. Mc. Cormack, T. Gifford, *et.al*., "Autonomy, authenticity, authorship and intention in computer generated art", 11453 *Lecture Notes in Computer Science* 35 (2017).

act than would be to a situation where 'a word processor created a letter', for example."[95] On whether present stream of AI-assisted works should be categorised as a new kind of cultural production, McCormack *et al*. [96] say, "Probably not in any major way. At least no more than any other kind of computer generated art (which has existed since 50 years)."

Arthur Miller's interviews[97] show that these machines and algorithms may themselves have become the new artist's muse. For her poetry-generating AI, Prof. Allison Parish of NYU-ITP, is of the opinion "I always seize authorship for myself… When I put out a book of poems it's by Allison Parrish, not Allison Parrish and a poetry bot … in the same way that a Jackson Pollock painting is not by Jackson Pollock and a paint can."[98]

When we as researchers speak of "training" an algorithm, or an algorithm that "learns," it is easy to misinterpret this as being the same thing as human learning - but these words mean quite different things in the two contexts.[99] Some AI practitioners are suggesting new terminologies in order for subsequent AI research to break free from drawing parallels between human and machine intelligence.[100]

Mapping the human condition onto software existence likely serves more the purpose of understanding humanity than increasing our understanding of machines.[101] Accurate attribution not only benefits these authors, but helps establish the authenticity of work produced with AI systems.[102] We need to recognise the value being generated from personal unique decisions of how to use the AI and disseminate emergent works as a continuation of the dialogic system that post-structuralist critique identifies as among the core functions of authorship.

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95 *Ibid.*
96 *Ibid.*
97 *Supra* note 36.
98 *Id*. at 244.
99 A. Hertzman, "Can Computers Create Art?" *7*(2) *Arts* 18 (2018).
100 D. Watson, "The Rhetoric and Reality of Anthropomorphism in Artificial Intelligence", 29 *Minds & Machines* 417–440 (2019).
101 *Supra* note 92 [S. Colton].
102 *Supra* note 94 at 10.

## 4. A New Creative Process

Artbreeder,[103] a collaborative AI platform works on StyleGAN and BigGAN models that allow crowdsourcing of artworks which users can morph and manipulate to create new art through a custom interface. As newer works were constantly added to the website, it became difficult to decide whom, if anyone, could claim sole rights on the images.[104] Alexander Reben, believing that these works were 'created by AI' and thus available for public use, arranged for a gallery show of their prints. After being called out on Twitter by another GAN-artist, Danielle Baskin, he conceded to allegations of substantial similarity. Artbreeder then clarified, "Any shared image can be used, edited or mixed." Now, a unique lineage of each contributing user is stored in the metadata and the website identifies uploads by usernames. The updated Terms of Use[105] require users "…to license any images you create on Artbreeder under the Creative Commons CCo license."

If an author makes incremental additions via a system that continuously builds off of other works, can this work be considered "original"? Is this a process of appropriation resulting in infringement or of inspiration protected and promoted by fair use/fair dealing provisions? This part analyses criticisms against AI in four successive degrees of severity – do these works meet legal requirements for copyrightability? Are they violating existing copyright rights? Will they overtake the market to the detriment of traditional creators? And lastly, will they subvert the entire social space of creative and original effort that copyright law was built to protect?

### 4.1. Threshold of Originality

The American *Trade mark cases*[106] stylised 'originality' in a romantic perspective of "fancy or imagination… genius, elaborate thought." Since then, legal threshold has been lowered to expenditure of some 'skill and judgment'. Holmes, J. in *Bleistein* v. *Donaldson Lithographing Co.*, moved away from "evaluation of aesthetics."

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103 "Artbreeder", *available at*: https://www.artbreeder.com (last visited on March 23, 2022).

104 Jason Bailey, "Why is AI Art so Complicated?" *Artnome* March 27, 2019 *available at*: https://www.artnome.com/news/2019/3/27/why-is-ai-art-copyright-so-complicated ((last visited on March 23, 2022); A. Hertzmann, "New AI art has artists, collaborators wondering: Who gets the credit?" *The Conversation* March 7, 2019 *available at*: https://theconversation.com/new-ai-art-has-artists-collaborators-wondering-who-gets-the-credit-112661 (last visited on March 23, 2022)

105 Artbreeder, "Terms of Use" Nov. 20, 2019, *available at*: https://www.artbreeder.com/terms.pdf.

106 Trademark Cases, 100 US 82 (1879).

In *Alfred Bell*[107], Frank, J. held, "A copyist's bad eyesight or defective musculature, or a shock caused by a clap of thunder, may yield sufficiently distinguishable variations." Works are eligible for copyright without too deliberate or specific identification of authorial intent.

In *Feist Publications*, Rural's attempt at copyright failed, as a constitutional matter, because originality also requires "creativity," and its work did not exhibit the requisite degree of that quality.[108] Common-law conception then devalued from "sweat of the brow" to "modicum of creativity". The requirement is not as stringent as novelty demanded by patent law; instead, it is to show as *Burrow-Giles'*[109] prescribed "intellectual production, of thought, and conception." The courts may also consider elements of selections and arrangement to ascertain presence of originality.

The long-standing insistence that American copyright is a protection of economic rather than personal interests[110] is opposed to CJEU's *droit d'auteur* emphasis on personality. In *Infopaq*[111] making short summaries through a data extraction process did not violate right of reproduction since they were products of "authors own intellectual creation" as "evidenced clearly from the form, the manner in which the subject is presented and the linguistic expression."[112] Words as such are not protected and "creativity in an original manner" was expressed "through the choice, sequence and combination of those words."[113] In *Football-Dataco*[114] it also included "subjective choices, thereby imprinting the work with his personal touch" in the 'selection or arrangement of the data' contained therein.

The issue of exercise of "too minor (a) degree of creative freedom" was considered in *Painer*. The court held that an intellectual creation is an author's own if it "reflects the author's personality."[115] That is the case if the author was able to express his creative abilities in the production of the work by making "free and creative choices"[116]

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107 *Alfred Bell* v. *Catalda Fine Arts Inc*., 191 F.2d 99, 158 (2d Cir. 1951).
108 Dianne Zimmerman, "It's an Original! (?): In Pursuit of Copyright's Elusive Essence", 28 *Columbia Journal of Law and the Arts* 187, 194 (2005).
109 *Burrow-Giles Lithographic* v. *Sarony*, 111 U.S. 53 (1884).
110 *Supra* note 108.
111 *Infopaq International A/S* v. *Danske Dagblades Forening* [2009] ECLI:EU:C: 2009:46.
112 *Id*. at 44.
113 *Id*. at 45.
114 *Football Dataco* v. *Yahoo!UK*, (2012) ECLI:EU:C:2012:115.
115 *Eva-Maria Painer v. Standard VerlagsGmbH and Others*, (2011) ECLI:EU:C:2011:798.
116 *Id.* at 89.

which can be made "several ways and at various points in its production."[117] For instance, the "stamp of personal touch" in photographs can be expressed through choice in lighting, background, pose, framing, view of angles as well as choice of procedure for post-production development.

Importantly, in *Premier League* and *Cofemel,* "the extent of that protection does not depend on the degree of creative freedom exercised by its author."[118] The CJEU does not, however, seem to require that the author's creativity or personality (''personal stamp'') be objectively discernible in the resulting expression (the output).[119] Comparable to common law requirements, EU copyright *acquis* does not require assessment of aesthetic quality and elements of novelty.

In UK, the test of originality is based on Lockean labour theory. In *Walter* v. *Lane*[120], work made from a note-taking process was awarded copyright for expenditure of "an 'industrious collection' effort." Similarly, in *University of London Press*[121], originality in an "independent creation" was found through proof of "skill and labour". Post-amendment of the copyright statute, addition of 'original' was noted in *Interlego A.G.*[122] to mean that the work should "originate from the author".

The Canadian Supreme Court crafted a midway between the creativity and industriousness standards in *CCH Canadian Ltd.*[123] deciding the status of originality at "exercise of skill and judgement" which need not be novel creativity but should be more than mere labour. The Indian Supreme Court adopted the same in *Eastern Book Co.* v. *D.B. Modak*[124], "Copyrighted material… maybe it is a derivative work which gives a flavour of creativity… should be original in the sense that by virtue of selection, co-ordination or arrangement of pre-existing data contained in the work, a work somewhat different in character is produced by the author."

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117 *Id.* at 90.
118 *Cofemel* v. *G-Star Raw CV*, (2019) ECLI:EU:C:2019:721.
119 P. B. Hugenholtz and J.P. Quintais, "Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?", 52 *The International Review of Intellectual Property and Competition Law* 1190 (2021).
120 (1900) AC 539.
121 *Univ. of London Press, Ltd.* v. *Univ. Tutorial Press, Ltd.*, (1916) 2 Ch. 601.
122 *Interlego A.G.* v. *Tyco Industries, Inc*. (1989) A.C. 217 (P.C.).
123 *CCH Canadian Ltd.* v. *Law Society of Upper Canada*, 2004 (1) SCR 339.
124 AIR 2008 SC 809.

It is well known that, because of the different nature of copyright works and the inevitable unpredictability of case law, the originality requirements are not even consistent or harmonised within one copyright jurisdiction, and probably will never be.[125] However, the absolute minimum threshold of originality can be seen to contain elements of conscious expenditure of some skill to make choices, selections or arrangements that render in the work presence of some general authorial contribution. What is essential is that room for making creative decisions must be present and the same should have been exercised and expressed.

Even a combination of fairly obvious choices in the design, execution and editing of an AI-assisted output could suffice.[126] By extension, projects like the Next Rembrandt show adequate potential for creative choices and original expression at all stages of the work's production executed under human-defined objectives. Pre-curation and creation of algorithmic source code requires extensive authoring, the generative model itself is heavily reliant on personal selections and arrangements for data corpus, post-curation requires meticulous redaction and often also post-processing and editing.

Sartor *et.al.* conclude, "Artistic works become inputs for a data-mill, which amalgamates, adapts and develops micro-elements, patterns, styles into new outcome, different from each one the input works, and possibly having some novel artistic meaning."[127] Although, even when creative decision-making is apparent, the use of intermediate copies in large data tropes for upstream modelling seem to push fair use/fair dealing constraints which in effect raises concerns of infringement in downstream generated works.

### 4.2. Balance of Rights

Any software operation or new technology that reliably reduces existing workload is likely to be very popular, especially when it targets operations that are widely perceived as tedious.[128] This also applies to current bottlenecks, such as image search or

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125 A. Rahmatian, "Originality in UK Copyright Law: The Old 'Skill and Labour' Doctrine Under Pressure", 44 *The International Review of Intellectual Property and Competition Law* 34 (2013).

126 *Supra* note 119 at 1199

127 M. D. Esposti, F. Lagioia, *et.al.*, "The Use of Copyrighted Works by AI Systems: Art Works in the Data Mill", 11 *European Journal of Risk Regulation* 51–69 (2020).

128 A. Pfiffer, "Creativity and Technology in the Age of AI", *available at* https://www.pfeifferreport.com/essays/creativity-and-technology-in-the-age-of-ai/ (last visited on March 28, 2022).

learning new features, where AI is perceived as potentially useful.[129] This has made some scholars consider AI-output non-copyrightable on grounds of transparently heavy dependence on upstream use of data which they concur should not be made freely accessible.

Existing US case law involving technology companies may help to explain this distinction and could be applied *mutatis mutandis* to AI scenarios.[130] In *Authors Guild* v. *Google, Inc.*[131] Leval, J. opined that since "Google makes an unauthorized digital copy of the entire book, [but] it does not reveal that digital copy to the public",[132] scanning of copyright-protected material was permissible. Similar activities were also permitted in cases like *Hathitrust*[133] and *Perfect 10 Inc.* [134] Notably in *iParadigm*,[135] Traxler, J. held "a highly creative, and thus highly protected, work could nevertheless be used in a way that is unconcerned and uninterested in those creative aspects."

Also in Europe, legal approaches favourable to transformative automated processing of copyrighted works have often been adopted, by using various legal arguments (eg. by assuming non-revocable implied consent when a text is made accessible over the Internet, or by understanding in a broad sense the idea of transiency).[136] Fair dealing imposes conditions on use of copyrighted material without seeking owner's permission. One such exception, fair dealing under defence of 'research and study', seems to be particularly applicable to data mining for ML.

Transitory reproductions essential for technological purposes have been excused in fair dealing jurisdictions, for instance, to permit storage of cached files while web browsing. Cases involving innovative computational technologies regularly feature the wholesale copying of literary and visual works, and courts have consistently held that wholesale copying can be necessary for certain purposes.[137]

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129 *Id.* at 13.
130 E. Bonadio, L. McDonagh, "Artificial Intelligence as Producer and Consumer of Copyright Works: Evaluating the Consequences of Algorithmic Creativity", 2 *International Philosophical Quarterly* 112 (2020).
131 804 F.3d 202 (2d Cir. 2015), cert. denied 136 S. Ct. 1658 (2016).
132 *Id.* at 221.
133 *Authors Guild* v. *Haithitrust*, 755 F.3d 87 (2d Cir. 2014).
134 *Perfect 10, Inc.* v. *Amazon.com, Inc.*, 508 F.3d 1146 (9th Cir. 2007).
135 562 F.3d 630 (4th Cir. 2009).
136 *Supra* note 127 at 66.
137 A. Levendowski, "How Copyright Law Can Fix Artificial Intelligence's Implicit Bias Problem", 93 *Washington Law Review* 579, 627 (2018).

Both fair use and fair dealing provisions seem to absolve ML processes in Generative AI of infringement, at least theoretically. Japanese copyright law, amended by the National Diet in May, 2018 and entering into force on 1st January, 2019, does the same functionally. New provisions called "flexible limitation provisions" facilitate AI development through use of copyrighted materials in algorithms without any express requirement of seeking consent from those authors. Article 30-4 permits use of protected works for data training so long as it is done "without the purpose of enjoying the thoughts or sentiments expressed."[138] Making of transient electronic copies has been allowed under the new Article 47-4, with the Diet acknowledging that such use will not be considered as causing market harm to prior authors. Finally, compilation of copyrighted works into searchable databases can now be conducted under Article 47-5.

### 4.3. Market Threat

Some fear that AI training from existing works will outmanoeuvre human-made works when both compete in the same market.[139] The Author's Guild's reply to USPTO's call for comments on AI and Copyright summarises the concern, "The unauthorized (unlicensed) ingestion of copyrighted works to generate new competitive creative works will ultimately cause market harm to the value of human-created copyrighted works that the AI machines essentially mimic in style and essence. Those types of uses should not be permitted without authorization."[140]

Forcing such a demand for authorisation could, in some part, lead us towards a market environment of what Lawrence Lessig identified as the extremism of "permissions culture"—a culture in which creators get to create only with the permission of the powerful, or of creators from the past.[141] In this vein, CJEU's opinion in *Football Association* is noteworthy, "…exception must allow and ensure the development and operation of new technologies and safeguard a fair balance between the rights and

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138 WIPO, *Questionnaire on Artificial Intelligence Policies*, *available at*: https://www.wipo.int/export/sites/www/aboutip/en/artificial_intelligence/call_for_comments/submissions_march2020/ms_japan.pdf (last visited on March 28, 2022).

139 J. L. Gillotte, "Copyright Infringement in AI-Generated Artworks", 53 *UC Davis Law Review* 2655 (2020). ("When AI-generated works directly compete with those of human authors, the latter may eventually stop creating as they see the market for their output shrink.")

140 M. Rasenberger, Impact of Artificial Intelligence ("AI") Technologies on Copyright, Docket No. PTO-C-2019-0038 *available at*: https://www.authorsguild.org/wp-content/uploads/2020/01/Authors-GuIld-Responses-to-USPTO-AI-NOI1.pdf.

141 Lawrence Lessig, *Free culture* 6 (Mort Homme Books, Pennsylvania, 2015).

interests of right holders, on the one hand, and of users of protected works who wish to avail themselves of those new technologies, on the other."[142]

The Guild's argument is problematic on two counts. First, it wrongfully considers access-restriction as a function of copyright. It cannot be pragmatic to seek individual authorisations from the several hundred works that a deep learning algorithm may need to reference in order to function meaningfully. Retracing the post-structural analysis of creative process, it should also not be legally required. In any case, the scraper does not extract expressive elements from the ML training data set. The intermediary copies are transient and the aim is not to replicate them. The information that would be extracted from semantics and probabilistic patterns like words for NLP and visual proportions in artworks is already in the public domain. Dr. Ahmed Elgammal's AICAN has been "trained on 100,000 of the greatest works in art history, from Rembrandt and Bruegel, to Warhol and Rauschenberg."[143]

Second, the Guild fails to take into account the idea-expression dichotomy. The law can protect the poems Robert Frost wrote, but, it does not function to stop everyone else from studying Frost and attempting to author similar works.[144] The premise of copyright law is to protect against copying of content in works, not to promote monopolies over styles and articulation. Consider a model of GPT-3, 'Verse by Verse'[145] an experimental poetry-writing tool that works on a training corpus of 20 American poets.

Furthermore, copyright's minimal requirement for originality does not subscribe to a protection from an anticipated market failure; unless the works are found to be infringing in a court of law.[146] As held in *Hathitrust*, "transformative work... serves a new and different function from the original work and is not a substitute for it."[147] Such arguments do not substantiate why emergent works should face a higher originality barrier given that likelihood and manner of infringements are similar in both. Such

142 *Football Association Premier League* v. *QC Leisure*, [2012] EWCA Civ. 1708.
143 "AICAN", *available* at: https://aican.io/ (last visited on Feb. 18, 2022).
144 A. Aggarwal, *Are Machines the New Authors? Situating Copyright in Works of Artificial Intelligence* (2021) (Unpublished LLM Dissertation, NALSAR University of Law).
145 "Verse by Verse", *available at*: https://sites.research.google/versebyverse/ (last visited on Feb. 18, 2022).
146 *Supra* note 144.
147 *Supra* note 133 at 96.

apprehensions are not sufficiently merited to deny copyrightability of AI-based works altogether.

Restricting access to data may also have negative ethical implications. Prof. Levendowski argues, “Most public domain works were published prior to 1923, back when the "literary canon" was wealthier, whiter, and more Western than it is today. A dataset composed exclusively of these works would exclude voices that were never recorded or rarely published.”[148] Thus, permitting access to data for transformative uses and development of AI technology could have a positive impact on fairer representation in literary, scientific and artistic domains in the long run.

### 4.4. New Art Movement

A step beyond purporting market failure, the most extreme of assumptions prophesises mass job displacements and an entire dehumanisation of literature and art through replacement of the present stream of authors by AI technology. This is not a new challenge. Photography, cinematography and software were subjected to romantic critiques and dismissed for being irreconcilable with the domain of copyright; whilst outside legal circles, new methods of artistic experimentation gradually became ubiquitous. Social acceptance forced a legal change. Even though philosophical critiques and legislative drafting issues still persist, they attained official “list-status” in the Berne Convention and other treaties and directives, on the common understanding that new media could satisfy minimum Berne standards.

Despite some obvious differences in the methods of production, it serves well to analogise these technologies with AI. It shows us that the nature of theoretical commentary that AI practitioners might be faced with today runs parallel to what photographers and film-makers have already witnessed. In all such commentary, the founding criticism stems from weakening of the author-work bond, allegedly diminishing the value of control and transposition of personality from authors to their work. The purported reason is mechanical intervention – cameras, computers, several hidden layers in deep learning networks, and perhaps now even a combination of all of the above.

[148] *Supra* note 137 at 615.

Hertzman[149] and Arcas[150] among others have specifically noted the frequent dismay which followed when photography began to replace portraiture. Contrary to the disquietude for an end of painting, however, this catalysed the emergence of new genres. This further led to the Modern Art movement and photography developed simultaneously as a *bona fide* art form in itself. Similar misconceptions were opaque for digital film editing, software coding, animation and recently, procedural content generation (PCG). In the present day, a mix of experience with all of these has led to success of motion capture technology, VFX and CGI (some of which has already become AI reliant) and its pervasive prominence in film-making.

Another argument is that a full claim of authorship and consequent originality is impossible because a part of the process that happens in the hidden layers remains unknown. Here too, our previous analogy with photography is useful. The images we see can only be "beautiful" or "real-looking" because they have been heavily processed, either by neural machinery or by code (in which case, both), operating below our threshold of consciousness.[151] Likewise, a programmer need not understand why a neural network 'learned' a certain set of weights, or the mathematics behind a cost function.[152] Even with the variation in determining originality, it is possible for a programmer to demonstrate they used a machine as a tool in attaining a copyrightable result.

Antithetical to the initial scepticism, these tools did not annihilate older art forms, but, only supplanted cumbersome processes for ease-of-use alternatives. Increasing access to these tools simultaneously increased participation of more people in acts of authorship, creative expression, storytelling and social communication. The same is already steadily underway for AI-based works through platforms like Github and Twitter for those interested in AI coding, and alternatives like Artbreeder and Prof. Elgammal's Playform[153] for those who would rather not code. Before rejecting copyrightability entirely, legal scholarship must stop and consider the real possibility that

149 S*upra* note 99.

150 B.A. Arcas, "Art in the Age of Machine Intelligence", *Medium* Feb. 24, 2016, *available at*: https://medium.com/artists-and-machine-intelligence/what-is-ami-ccd936394a83 (last visited on March 21, 2022)

151 *Ibid*.

152 J.K. Eshraghian, "Human Ownership of Artificial Creativity", 2 *Nature: Machine Intelligence* 157-160 (2020).

153 "Playform", *available at*: https://www.playform.io/ (last visited on March 4, 2022).

use of AI has begun; if not to usher in a new art movement, then at least certainly augment and revitalise the creative process.

But, what happens when AI is used to generate similar works by design? Which human stakeholder would be the owner of infringing piece? Who is responsible and to what extent? One such case has already reached the courts in Canada. Production of AI-assisted works has increased, not decreased, the involvement of people in the creative process. The next part shows that the real problem is not about pitting machine automation against human authors, but of appropriate identification of human contribution.

## 5. Ownership Stakeholders

Adam Basanta's two scanners tipped in front of each other produce abstract pictures influenced by the room's changing lighting conditions, randomised settings and an automatically moving mouse. An AI system compares the images to existing works of art. The first part of the process is 'creation' and the second he calls 'validation'. Basanta's objective is to validate machine-generated art's potential for human consumption by establishing likeness with existing human-made works. A claim has been filed by artist Amel Chamandy, against Basanta's exhibition of "85.81%_match: Amel Chamandy: Your World without Paper (2009)". It's on the Quebec Superior Court to decide if her copyright was infringed.[154]

Judge Learned Hand's Grecian Urn analogy comes to mind.[155] On the face of it, 85% seems like substantial similarity in copyright terms. The similarity match percentage was generated by the AI system, not Basanta's artistically trained eye. The two images are actually absolutely distinct. If existing Canadian standards of originality are applied, the case has no merit. Indeed, the entire setup here is defined by the fact that this is a totally independent creation — and the "validation" process only serves to highlight that there is no copying.[156] Nevertheless, assuming for argument's sake that there was infringement, how would the court decide issues of ownership, allocation and

154 *Galerie NuEdge Fine Arts* v. *Adam Basanta* (decision pending).
155 *Sheldon* v. *Metro Goldwyn Pictures Corporation*, 81 F.2d 49 (2d Cir. 1936).
156 T. Geigner, "Art, AI and Infringement: A Copyright Conundrum" *Techdirt* Oct. 16, 2018, *available at*: https://www.techdirt.com/2018/10/16/art-ai-infringement-copyright-conundrum/ (last visited on April 1, 2022).

responsibility? This part first dispenses with arguments against ownership in AI-based works. We then identify possible stakeholders and analyse recent AI-related judgements.

### 5.1. Some ghosts, the Titanic and a monkey

While authorship and originality are centred on origination and identity, ownership is more deliberately proprietary and concerned with economic exploitation. Consequently, ownership deems on the entity an aggressive locus of control. Exercising ownership in absence of a visible connection to the work raises an ethical and legal dilemma. Thus, proponents of the view that AI-based works belong only to the public domain have argued that sophistication in deep learning hidden layers precludes any human's claim over the generated output.

This view runs contrary to a fringe inside copyright law. The English court in *Cummins* v. *Bond*,[157] held that since the plaintiff, though under a trance, "actively cooperated in translating the spirit's words into a comprehensible language", she had satisfied criteria for authorship. In *Urantia Foundation*,[158] the American court decided that it was irrelevant whether creator of a work was claimed to be a celestial being and copyright law had no specific requirement to prove human effort for authorship.[159] Thankfully, no court commented on extent of presence of spirits/voices as effectively diluting claims for authorship and ownership.

In *RMS Titanic*[160], authorial control was vested by the court in the director for planning and controlling the film's progress. The fact that he had not used the camera himself or dived to see the shipwreck which was the subject of the film were not important considerations. The now infamous *Monkey Selfie* case[161] centred on the question of who pressed the shutter-release button. The fact that David Slater deliberately organised the camera set-up after spending months on establishing trust with and understanding the behaviour of macaques was belittled by those who wished to use the work for free; but

157 1 Ch. 167 (1927).
158 *Urantia Foundation* v. *Maherra*, 114 F.3d 955, 957 (9th Cir. 1997).
159 A. Kasap, "Copyright and Creative Artificial Intelligence (AI) Systems: A Twenty-First Century Approach to Authorship of AI-Generated Works in the United States", 19 *Wake Forest Journal of Business & Intellectual Property Law* 335 (2019).
160 *Lindsay* v. *The Wrecked & Abandoned Vessel R.M.S. Titanic*, No. 97 Civ. 9248 (HB) (S.D.N.Y. Oct. 13, 1999).
161 *Naruto* v. *Slater*, 888 F. 3d 418, 426 (9th Cir. 2018).

eventually accepted in a large part of legal and expert opinions. Slater's experience stands in stark contrast to that of Sergei Gorshkov.

"The Embrace", Gorshkov's grand-title winning entry for the World Photography Awards 2020[162] was a photograph created using camera traps. Trail cameras or camera traps are cameras rigged with motion sensors that are designed to self-activate and take photos. They are widely used to track animal movements in deep wilderness without human intervention. It was after ten months of failed attempts that Gorshkov found this photograph. Similar to the team that created the Next Rembrandt, Gorshkov had immense control over selection, arrangements and planning, while having very little certainty of what the final output might look like.

Hello Games has created a GAN-based interactive video game called No Man's Sky. A team of programmers has built a self-generating cosmos, and even they don't know what's hiding in its vast reaches.[163] The game presents a traversable cosmos of unimaginable scale: 18 quintillion life-size planets by the studio's latest count.[164] Every single game play is expected to be a unique experience. Again, that is not to say that AI is producing *ex nihilo* – the team has designed highly labour-intensive character drawings, underlying artistic assets and software codes; training and controlling the AI to mix and match to produce coherent forms.

Arguably, Slater, the Next Rembrandt team, Hello Games and Gorshkov expended similar time, effort, creative choices, intervention and judgements to create similar forms of work. Our legal sensibilities should extend to all of them alike. For instance, No Man's Sky's underlying IP assets remain under the uncontested ownership of Hello Games, which the company licenses through an end-user license agreement. Though, in similar situations when multiple interest holders get involved in courts of law, legal opinions get polarised across jurisdictions.

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[162] The Embrace, Wildlife Photographer of the Year, Natural History Museum, *available at*: https://www.nhm.ac.uk/wpy/gallery/2020-the-embrace?tags=ed.current (last visited on May 12, 2022).

[163] R. Morin, "Inside the Artificial Universe That Creates Itself", *The Atlantic* Feb. 18, 2016, *available at:* https://www.theatlantic.com/technology/archive/2016/02/artificial-universe-no-mans-sky/463308 (last visited on Feb. 24, 2022).

[164] S. Parkin, "No Man's Sky: the game where you can explore 18 quintillion planets", *The Guardian* July 12, 2015, *available at:* https://www.theguardian.com/technology/2015/jul/12/no-mans-sky-18-quintillion-planets-hello-games (last visited on May 12, 2022).

### 5.2. China

In, *Beijing Film Law Firm* v. *Beijing Baidu Netcom Technology Co., Ltd.*[165] ("Baidu"), the first case directly dealing with AI software, the Beijing Internet Court categorically dismissed claims of machine autonomy and attributed authorship to the (human) plaintiff for exercising "supervision and responsibility" over work's production.

Subsequently, in *Tencent*[166], the Shenzhen Court the company Tencent was given authorship over works produced using its AI 'Dreamwriter'. The court elaborated on the requirement of "plaintiff's unique expression of will" that could be noted in arrangements, template-designs and formatting to vest copyright in AI-assisted works. It was also clarified that a software's automated functions did not make it "self-aware" and to consider it to be so would be "unfair".

In *Gao Yang et al.* v. *Golden Vision (Beijing) Film and Television Culture Co. Ltd. et.al.*[167] the court decided for the first time on ownership and infringements of automatically taken photographs. Plaintiffs attached a camera to a hot air balloon and extracted images from the video recording. The court held that choice of balloon, camera, shooting angle, in-camera settings and post-curation from the recordings were all sufficient for claim of ownership.

### 5.3. Australia

Judicial opinion is in direct contrast in Australia. The High Court emphasised idea-expression dichotomy to allow unrestricted use of databases in *IceTV*[168], affirming that copyright does not protect facts. Later in *Telstra*[169] on the issue of infringement in computer automated telephone directories, it was held that presence of human input should be evident throughout the creation of the work, not just at initial preparations of data. Court remained unwilling to accept Telstra's copyright claims due to a multiplicity of authorial contributions and Telstra not explicitly recognising each author precisely, coupled with the use of Genesis software that initiated a "computerised process of storing, selecting, ordering and arranging the data to produce the directories in the form in which

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165 (2018) Jing 0491 Min Chu No. 239.

166 *Shenzen Tencent* v. *Shanghair Yinxun*, Decision of the People's Court of Nashan District, 24 December 2019 – Case No. (2019) Yue 0305 Min Chu No. 14010.

167 Beijing Intellectual Property Court (2017) Jing 73 Min Zhong No. 797 Civil Judgment. April 2, 2020.

168 *IceTV Pty Limited* v. *Nine Network Australia Pty Limited* [2009] HCA 14.

169 *Telstra Corporation Limited* v. *Phone Directories Company Pty Ltd.,* (2010) FCAFC 149.

they were published." Again, in *Achos Pty Ltd.* v. *UCorp Pty. Ltd.*[170] copyright protection was refused for material safety data sheets produced using computer automated process.

**5.4. USA**

In *Rearden LLC* v. *Walt Disney*[171] conflict arose over a motion capture software, MOVA which has been used frequently in high-budget Hollywood motion pictures. In a previous lawsuit Rearden had attained favourable ruling against Digital Domain 3, which froze special effects works in big-banner films. [172] This second lawsuit nearly threatened to disrupt Disney's profits. Rearden argued that since it owned MOVA, it should consequently exercise rights over all characters generated from its use; since it was the software that was doing "lion's share" of the work by tracking faces in high-precision and rendering in 3D. Tigar, J. held to contrary, assessing "lion's share of creativity" being exercised by actors and directors of the movies with the software itself being of "marginal" assistance. This test can at best be employed only in a case-to-case inquiry.

Another strain of thought contemplates assigning legal personhood to AI. This could be a quick solution. A self-aware "strong AI" could perhaps be considered an author, with ownership vesting in a human through the work-for-hire doctrine. Yanisky-Ravid deliberates, "AI systems should be seen as the creative employee or self-contractor creators working for or with the user—the firm, human, or other legal entity operating the AI system."[173]

However, the development of such technology is far out of reach. Denicola reasons that, "if computers lack "personhood" for purposes of copyright ownership, it seems wrong to then characterize them as "employees" for purposes of the work made for hire doctrine."[174] With anthropocentrism's potential to absolve participating humans of responsibility, premature creation of legal fiction within copyright and its subsequent transposition to other AI domains can create a detrimental precedent; especially in high-risk areas like automated weapons systems and self-driving automotive industry.

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[170] [2012] FCAFC 16.
[171] 239 F. Supp. 3d 963 (N.D. Cal. 2018).
[172] S. Jhonson, "Digital Domain's New Legal Setback Freezes VFX Tech Used by Major Studio" *The Hollywood Reporter* June 28, 2016 *available at*: https://www.hollywoodreporter.com/news/general-news/digital-domain-mova-tech-banned-906902/ (last visited on March 15, 2022).
[173] *Supra* note 75 at 671.
[174] R.C. Denicola, "Ex Machina: Copyright Protection for Computer-generated Works", 69 *Rutgers University Law Rev*iew 251 (2016) (emphasis in original).

### 5.5. Common Law Jurisdictions

Section 9 (3) of the UK Copyright Designs and Patents Act, 1988 is analogous to provisions in South Africa, Ireland, India, Hong Kong and New Zealand.[175] It reads, "In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken." The intention was to assimilate into copyright's list of works, those with no apparent human author.

The quantum of "arrangements" required as well as the criteria to deem them "necessary" have not yet been expounded upon. In *Century Communications* v. *Mayfair Entertainment*[176], the court identified that the person who has "initiated the making of the film, organized the activity necessary for making it, and paid for it" was the one responsible for copyright rights. *Nova Production*[177] has been the only case in UK to apply Section 9 (3). Kitchin, J. was of the opinion that merely playing a game did not satisfy the "arrangements necessary" to claim authorship. The author of each frame in arcade games was, thus, the programmer.

One potential consideration of test of "arrangements necessary" could follow the requirements of "supervision and responsibility" elaborated in *Tencent* and *Baidu*. The core rationale behind both appears to be identification of the person most proximate to the work. It also remains to be seen if this proximity shall be in terms of control over dissemination of work or creative decision-making or both. In the event of the former, precedent that "rules or constraints leave no room for creative freedom" found in existing rulings like *Achos* and *Football Dataco* might operate as restrictive criteria.

In India, the provision does not seem to be applicable to cinematography and sound recordings. Incidentally, AI use has already become prevalent in both these arenas. Especially after *Ramesh Sippy* v. *Shaan Ranjeet Uttamsingh*[178] where the Bombay High Court has expanded the meaning of author and first owner, holding that "there is no such prohibition in section 13 (2) (ii) which precludes a Partnership firm or a Company to be an author /first owner of copyright (in films)", this could bear interesting results.

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175 The Indian Copyright Act, 1957 (Act 14 of 1957), s. 2 (d) (vi); Ireland's Copyright and Related Rights Act, 2000, s.2; South African Copyright Act, 1978, s. 1(h) and New Zealand Copyright Act, 1994, s. 5 (2)(a).

176 [1993] EMLR 335.

177 [2007] EWCA Civ. 219.

178 (2013) (55) PTC 95 Bom.

## 6. Conclusion

AI artists that are participating in the relational social practice of authorship, and communicating to us as an audience through a new technological process that subverts notions of the lone creator, merit recognition. Referring again to the Next Rembrandt project, it becomes evident that even one of the most advanced and complicated AI outputs thus far has been crucially dependent on human creativity, decision-making, selection, skill and cultural dominion.

Legal scholarship with its conflicted perception of romantic authorial experience, has either accepted or rejected machine authorship for presence or absence of a solitary genius behind the work. However, as soon as an exhaustive undertaking to delineate the new creative process is initiated, it becomes clear that wanting or imagining anthropocentric insights in AI systems is not required.

AI is not the first technology to strain the human-work bond. Recourse to copyright's treatment of previous technologies holds valuable insights to interpret current reactions for and against AI as well as to demarcate probable policy solutions. Chinese courts and Japanese public policy are taking the smart approach of permitting some uses that are essential to the proliferation of AI technology, with a larger aim of assisting further AI development and simultaneously gaining first-mover advantage in an emerging and well-funded market.

In case Professor Grimmelman[179] is wrong and the day of complete machine autonomy dawns on us with copyright still being a concern, then perhaps, tools of legal fiction shall become ever more useful. AI is helping professionals amplify their creative expression and steadily becoming more accessible for common use. Enforcing unseemly restrictions heightens the AI knowledge gap and has no theoretical or legal grounding.

[179] J. Grimmelmann, "There's No Such Thing as a Computer-Authored Work", 39 *Columbia Journal of Law and the Arts* 403 (2016).

# THE "*UNDERLYING*" CONUNDRUM OF COPYRIGHT IN A SOUND RECORDING

*Pragyan Pradip Sharma*[*]

**Abstract**

*Copyright is a bundle of rights - of which the three classes of "work" i.e., a literary, dramatic, musical or artistic work; a cinematograph film; and a sound recording, are mutually exclusive. It is in this context this paper seeks to analyze the contentious issue of separate license in respect of such literary and musical works even when a license is secured from the copyright holder in the sound recording. While discussing the issue the paper also deals with the context as to how and why the issue arose and the legal and commercial framework pertaining to the rights involved being literary and musical and sound recording rights. It also seeks to discuss the various cases on the issues that has dogged the Indian Courts. Finally, the papers seek to give reasons as to why under the framework under the Copyright Act, 1957, there is indeed a requirement for obtaining a license for the "literary and musical rights" along with a license for "sound recording" in as much as sound reproduction does not lead to extinction of rights in the lyrics and musical composition.*

**Keywords**: Copyright, Sound Recording, Conundrum, Exploitation.

## 1. Introduction

Music available or heard in India today may be categorized into three broad categories, film music, non-film music and international music. Whatever be the category, music generally consists of different components or elements, made by a team of persons comprising different talents. To name, music has lyrics (or words of a song), which is written by a "*lyric writer*"; then there is the "*music composer*" who provides the melody or the tune; another category is the "*performers*"[1] who actually "sing" the words written by the lyric writer. Under the Copyright Act 1957,[2] (Act), lyric writers and music

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1 The Copyright Act, 1957 (Act 14 of 1957), s. 2 (qq).

2 *Id*., s. 2(y).

composers create works, which are recognized as "literary" and "musical works" as defined under section 2(o) and 2(p)[3] of the Copyright Act (hereinafter the Act) respectively. The persons who "sing" (performers) have a separate "*neighbouring right*" which is termed as "Performance Rights" under section 38 of the Act.[4] The "author" for both a literary work is the author of the work and that of the musical work is the "composer."

Another very important component of "*music*" is the "*sound recording*"[5] rights. Sound Recording Rights are derivative[6] rights drawn out of original copyright like literary and musical works. Courts have also recognized that a sound recording is a derivative work emanating from certain underlying works.[7] So, when a CD is made out of the original literary and musical works or, the same is uploaded onto any website or application, a sound recording rights gets created. In other words, once a sound recording comes into existence, it takes on a life of its own[8] and generates along with it another form of copyright called the sound recording copyright.[9] Interestingly, the "author" in relation to a sound recording is the "producer."

Under the scheme of the Act, literary, musical and sound recordings are all "work,"[10] in which copyright subsists.[11] The Act, also permits the holder of copyright, to exploit or authorize, the exploitation of the work and do such acts as mentioned in section 14. Section 14, encompasses the "economic rights" granted exclusively to the holder of copyright. What is however, interesting to note is on one hand, "to communicate the sound recording to public" is a specific economic right granted under section 14(e)(iii) *qua* sound recording and on the other, section 14(a)(iii) permits the holder of copyright literary and musical work to "perform the work in public, or communicate it to the public."

This, provokes and ignites the conundrum, whether the communication to the public, of a sound recording also amounts to a communication to the public, of literary and musical works, embodied in the sound recording under the Copyright Act 1957, and, if so,

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3 *Id*., s. 2.
4 *Supra* note 1, s. 38.
5 *Supra* note 1, s. 2(xx).
6 A derivative right is the legal permission to develop a new work derived from an original work protected under copyright law.
7 *Music Broadcast Pvt. Ltd.* v. *Indian Performing Right Society Ltd.*, (2011) 47 PTC 587.
8 *Bishop* v. *Stevens*, [1990] 2 SCR 467.
9 *Supra* note 1, s.13(1).
10 *Supra* note 1.
11 *Supra* note 1, s. 13(1)(a) & s. 13(1)(c).

whether a separate license in respect of such literary and musical works can be asserted by the owner of copyright in such works in addition to the license secured from the copyright holder in the sound recording.

In a digital world, that we are in today, it is primarily the "sound recording rights" that gets exploited as the instances of "performances"[12] where "literary" and/or "musical" rights gets exploited are occasional and limited. So, the conundrum as to exploitation of the underlying literary and musical work along with the exploitation of the sound recording, is a matter of great economic and commercial relevance.

## 2. Genesis of the Conundrum

The bedrock and cornerstone to the conundrum lies in the fact that "music" or "content" today in view of technological advancements, has huge economic and commercial value. It is also for this reason that "Copyright Law" has had a transformative journey from being the "cinderella" amongst the various rights that encompass Intellectual Property Rights (IPR), to become its "showstopper". The ascent of Copyright started with the opening up of the Indian Economy and various measures taken towards it including issuance of Radio licenses, till then, "music rights" were exploited only through traditional mediums like Cassettes, CD's. The impelling force however was the launch of "call back tones" and "caller tunes" by mobile companies which suddenly swelled and spiraled the commercial and economic value of music rights. The increase in valuation and demand for content, also signaled spark, glitter and sheen for music rights amongst both the owners as also people seeking to exploit such rights.

In no time, a situation arose when the holders of copyright wanted to maximize their returns on investment and the users seeking to exploit the copyright would refuse to play ball and seek out ways and means to shell out the minimum for exploitation of copyright. The Radio Licenses were given by the Government of India in the year 2001, these organizations sought and obtained licenses from both holders of copyright in both sound recording rights Phonographic Performance Limited (PPL) on one hand and literary and musical rights on the other, from Indian Performing Rights Society (IPRS), both Copyright Societies at that point of time for administering their respective rights. IPRS license gave the Radio Licenses an "infancy discount." It was the claim of IPRS that the

[12] *Supra* note 1, s. 2(q).

Radio Licensees violated the terms of the License Agreement and that in view of the change of circumstances and huge growth of Radio Industry, they were no longer entitled to the "infancy discount." The Radio Industry countered this challenging the very right of IPRS to issue Licenses, triggering a long legal saga, a question, that been one of the most important and contentious issue that has dogged the copyright litigation roster of Indian Courts, whether exploitation of the derivative work (sound recording) also cause exploitation of the underlying works (literary and musical rights).

## 3. Flow of Music Copyrights

The manner in which the music rights flow, depends on the category of music. In the "film music" category, although the "author" is the first producer of the lyrics and the composer the "author" of the musical composition, yet the manner in which provisions of the Act is designed, the "producer" of the "cinematograph" becomes the "first owner" of the copyright in not only the "literary and musical right" but also the "sound recording." The "lyric writer" and the "music composer" normally is engaged based on a "contract of service" rather than a "contract for service." In other words, the rights of the composer and the lyricist in relation to lyrics (literary works) and musical compositions (musical works) are distinct rights which vested in the film producer (who is the first owner under section 17) and such rights were components of the bundle of rights. The film producer, as the "owner" then converts the lyrics and musical compositions into a new copyright - sound recording, which also then forms part of the bundle of rights, either himself (in the cinematograph) and/or transfers the same to a sound recording company. The sound recording company then commercially exploits the said "sound recording right" through different mediums including applications, websites etc.

## 4. Broad Scheme of the Copyright Act

The broad scheme of the Act is to provide protection not only to the creators and owners of copyright but also to the public at large. Copyright Law protects originality and any independent creation. The creators and their assignors are given exclusive rights for exploitation to the exclusion of others. We have already discussed how "copyrights" are "a bundle of rights" and each of these rights can be exploited either individually or in bundles.

The vesting of individual rights can take place collectively, but what vests are still individual rights and capable of such distinction by virtue of section 14(a) and section 14(e)

of the Copyright Act – which are also known as the "economic rights." Thus, since individual rights are segregable, any transfer which passes on from the film producer to the sound recording company must obviously include the transfer of three separate rights namely right in lyrics, right in musical composition and right in the sound recording.

Literary Works, Musical Works, Sound Recordings and Cinematograph Films are distinct classes of works under section 13[13] of the Act with distinct rights under section 14 as stated earlier. Thus, when the owner of a literary and/or musical work allows the making of a sound recording under section 14(a)(iv), distinct rights arise under section 14(e) like producing different sound recording in any medium, using the same for commercial purpose, making the work available to the public etc. and thus, the right under section 14(a)(iii) as regards performing the work in public cannot impact the right enshrined under section 14(e)(iii).

It is to be noted however that the exclusive rights in section 14 are "subject to the provisions of the Act*"* meaning that the rights enumerated in section 14 are tampered or restricted by provisions in the Act such as, the "first owner provision" under section 17; the "assignment provisions" under section 18 & 19; the "license provisions" under section 30 read with section 30A; the "fair dealing provisions" under section 52; the "compulsory license provisions" under section 31; and so on.

The copyright in literary, musical or dramatic works comprises of (under section 14(a)), *inter alia*, the following different exclusive rights- (i) right to perform the work in public, or communicate it to the public,[14] (ii) right to make any cinematograph film or sound recording in respect of the work[15] *etc*. Copyright in sound recording also comprises of (section 14(e)) right to communicate it to public.[16]

Therefore, the "communication to the public" right under section 14(a)(iii) is distinct from and not a sub-set of the right to "make" a cinematograph film or a sound recording under section 14(a)(iv). So also, right to communicate the sound recording right to public.

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13 *Supra* note 2.
14 *Supra* note 1, s. 14(a)(iii).
15 *Supra* note 1, s. 14(a)(iv).
16 *Supra* note 1, s. 14(e).

## 5. The Basis - 1977 Supreme Court Judgment

The basis on which the argument that only a singular sound recording license is sufficient to communicate to the public and there is no need of a separate license in respect of such literary and musical works is premised on the argument that literary and musical right gets subsumed in the sound recording rights and hence the owner of copyright in musical and literary right cannot assert another license in such works in addition to the license secured from the copyright holder in the sound recording, is primarily premised on the ratio of the celebrated 1977 judgment of the Supreme Court in the case of *Indian Performing Right Society* v. *Eastern Indian Motion Pictures Association*[17] (EIMPA case) wherein it was held[18] that once an author/composer "parts with a portion of his copyright," the distinct film copyrighted in favour of the film producer allows the producer to exploit the film without any further interference from the author of the literary and musical work. Therefore, applying the same logic to sound recordings, there is no requirement for obtaining a separate authorization from the owners of the literary and musical work when exploiting a sound recording embodying the literary and musical works.

### 5.1. Reliance on EIMPA Case Misplaced

The reliance in my view on EIMPA case, is quite misplaced as the EIMPA case, arose from a contest between authors/composers on the one hand and the film producers on the other, all claiming ownership of the copyright in the literary and musical works incorporated in the "sound track" of the film. It did not deal with the issue of exploitation, and if or how many copyrights would be exploited by any third party when that cinematograph film is communicated to the public. It is also interesting to note that when the said issue (as in the EIMPA) arose the members of IPRS consisted only of authors and composers. However, as a consequence of the said judgment, copyright owners (producers and their assignees *i.e.* music companies) joined IPRS and assigned the administration of the musical and literary rights in respect of communication of the said right to public to IPRS.

The essence and import of the EIMPA case, is exemplified on an analysis of the order of the Calcutta High Court in *Eastern Indian Motion Pictures Association* v. *IPRS,*[19]

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17 *Indian Performing Right Society* v. *Eastern Indian Motion Pictures Association* (1977) 2 SCC 820.
18 *Ibid.*
19 *Calcutta High Court in Eastern Indian Motion Pictures Association* v. *IPRS,* AIR 1974 Cal. 257.

against which an appeal came to be filed in the Supreme Court, which culminated in the EIMPA case. A reading of the said judgment clarifies that the EIMPA case was a contest on ownership between authors/ composers on the one hand and the film producers on the other.[20] The High Court held that, in light of the employment or commissioning of the authors/composers and section 17[21] of the Act, the copyright in the underlying works belonged to the producer and not the authors/composers. Hence, the copyrights could not have been assigned to IPRS. It was further held that "an assignee cannot have a right higher than the right of an assignor. A composer of music for valuable consideration who composes for the first time for a cinematograph film does not acquire any copyright in the music unless there is a contract to the contrary. section 17 of the Copyright Act is the only section that speaks of the first owner of the copyright and under proviso (b) in a cinematograph film the first owner is the person at whose instance the film is made. In our opinion, therefore, when a composer of a lyric or music composes for the first time for valuable consideration for the purposes of a cinematograph film, the owner of the film at whose instance the composition is made becomes the first owner of the copyright in the composition. The composer acquires no copyright at all either in respect of the film or its sound track which he is capable of assigning. In these circumstances, assignment, if any, of the copyright in any future work is of no effect. The composer can claim a copyright only on the basis of an express agreement reserving his copyright between him and the owner of the cinematograph film.[22]

The Supreme Court in the EIMPA case, in my view, only dealt with the question of ownership in as much as the Court was considering, whether the right of the lyricist and composer can be assigned and whether a producer of a cinematograph can defeat the same through a contract of service. The Supreme Court held that the rights of the author/composer could be defeated under section 17[23] proviso (b) or (c) and that by commissioning or employing the authors/composers, the film producer would be the first owner of copyright in the literary and musical works incorporated in the film. The authors/composers could not, therefore, assign any rights in the literary and musical works

20 *Id*.
21 *Supra* note 1, s. 17.
22 *Supra* note 19, para 32 and 33.
23 *Supra* note 1, s. 17.

incorporated in the film to IPRS.[24]

### 5.2. Two Licenses or One - The Litigations

The Radio Companies, took recourse to various remedies, for redressal of their argument that once a license for the sound recording is secured from the copyright holder, there was no necessity of a separate license in respect of such literary and musical works.

The first of these, was an arbitration proceeding initiated by Entertainment Network India Private Limited (Radio Mirchi) against IPRS. The sole arbitrator (Justice Sujata Manohar) based came to pass an award holding that no license from IPRS was required to be taken. Appeals against the said award filed by IPRS is pending before the Bombay High Court.[25]

Then, in the case of *Music Broadcast Pvt. Ltd.* v. *Indian Performing Right Society Ltd*,[26] the Bombay High Court held when a sound recording is aired on an FM station, the viewers do not see or hear the method or hardware used to make the sound recording because the case concerned the broadcasting of sound recordings on an FM station, hence no license of the "literary and musical rights" was needed. The Bombay High Court in the process also affirmed that there was no reason to hold that the law laid down in respect of underlying works in a cinematographic film, would not be applicable in the case of incorporation of underlying works in sound recordings. An appeal is also pending against the said judgment.

Then again, in *Radio Today Broadcasting Ltd.* v. *Indian Performing Rights Society*,[27] this issue arose in the context whether the appellant needed permission from the copyright holders of the underlying works to broadcast the sound recordings. The Calcutta High Court ruled that a royalty was required to be paid to the copyright owners of the underlying works when the sound recordings incorporating them.

The main case, however, in this saga is the case of *Indian Performing Rights Society* v. *Aditya Pandey Ors.*[28] before the Delhi High Court. The Single Judge [Justice Ravindra Bhatt (as he was then)] ruled against IPRS and held that a separate license is not

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24 *Supra* note 19, para 17.
25 Appeal no. 626 of 2016 and Appeal no. 628 of 2016, Bombay High Court.
26 (2011) 47 PTC 587.
27 *Radio Today Broadcasting Ltd.* v. *Indian Performing Rights Society*, (2007) 34 PTC 174.
28 (2012) 50 PTC 460.

required to be procured since there is no "separate communication of the underlying literary and musical works" on the communication of a sound recording to the public, thus denying the copyright holders of the underlying works the right to receive royalty on the exploitation of the sound recording incorporating such works. In an appeal filed by IPRS, the Division Bench[29] of the Delhi High Court upheld the order passed by the Single Judge. The Supreme Court in the case of *International Confederation of Societies of Authors and Composers (ICSAC)* v. *Aditya Pandey*[30] held that all observations, findings and views expressed by the Delhi High Court in the original and appellate proceedings would "have no legal effect," wherein the Court held as under:

> 27. The object of an interim exercise by the court is to find a reasonable solution to the matter which should govern the parties until disposal of the suit where the main controversy is required to be decided. Having perused the order of the learned Single Judge as well as the Division Bench, I am of the view that the order of the Single Judge, set out in opening part of the judgment of my learned Brother (which has been affirmed in appeal by the Division Bench of the High Court), strikes a reasonable note to find a workable solution during the pendency of the suit. I therefore fully agree with the views expressed by my learned Brother that the order of the High Court needs to be upheld.
>
> 28. However, while saying so I would like to take note of two disturbing trends which have emerged from the facts of the present cases. The suits, by now, are over 10 years old; yet, there has been no substantial progress therein. The parties to the suits seem to have lost all interest in prosecuting the same, perhaps, because the exhaustive orders at the interim stage had virtually foreclosed the issues in the suits. It is evident from the order dated 24-8-2016 passed by the Joint Registrar of the High Court in *Indian Performing Right Society Ltd.* v. *Aditya Pandey* that due to repeated adjournments sought on behalf of the plaintiff and on account of the failure of the plaintiff to file affidavit evidence of witnesses, the right of the plaintiff to lead evidence has been closed. In the other suits i.e., OS No. 666 of 2006 and OS No. 1996 of 2009 there has, again, been persistent defaults on the part of the plaintiffs and

[29] *Indian Performing Right Society Ltd.* v. *Ad Venture Communication Pvt. Ltd.* (2012) 52 PTC 621.
[30] (2017) 11 SCC 437.

> the said suits now stand transferred to the competent civil court from the Delhi High Court. The pendency of the suits, for a period of over 10 years with no progress and the conduct of the plaintiffs in not filing/placing their evidence before the learned trial Judge, though vehemently contesting the present appeals (against interim orders) are facts which are difficult to reconcile. Equally difficult is to accept the fact that the International Confederation of Societies of Authors and Composers (ICSAC), though not a party to any of the suits but have been allowed to contest the interim matter before this Court on the basis that the order of the High Court adversely affects the Societies' rights, has chosen not to implead itself as a party to the suits and pursue the same.
>
> 29. Having said what was felt required and necessary we dispose of all the appeals by holding all observations, findings and views expressed by the High Court in the original as well as appellate proceedings before it to be of no legal effect, whatsoever, insofar as the merits of the suits are concerned which will now be expedited and heard and disposed of within a year from today.

Thus, the Court held that the recording company/label, as the producer of the sound recording, has an independent copyright in its work and can thus grant permission for the broadcast or public communication of the film, including the sound recording part (as a composite work), without obtaining permission from the composer or author of the lyrics. Therefore, in support of such authorization, the recording companies alone should get the royalties for transmitting or broadcasting a song to the public through a third party (event organizers), rather than the song's lyricists and composers. The Court also acknowledged that the underlying literary and musical works that are included in a cinematic film or sound recording are protected by a distinct copyright. When a sound recording or a number of sound recordings are created, such underlying works do not cease to exist. According to the Court's interpretation of section 14(a) of the Act, the owner of copyright for literary and musical works has the only right to transmit or perform the work in public. On the other hand, the owner of a sound recording's copyright is only permitted to share the work in public communication under section 14(e) of the Act. Accordingly, the Hon'ble Court made it clear that the copyright in a sound recording that is not a component of a cinematograph film shall not impact the author's entitlement to an equal share of any royalties or other payments due for the Respondent's use of the work

in any way.

Interestingly, in the same judgment the Court also observed that post the introduction of the 2012 amendments, the legal position in this regard has changed. The court explicitly emphasized on the effect of the newly introduced section 19(10) and held that copyright holders of underlying works in sound recordings not forming a part of any cinematographic film shall have the right to receive an equal share of royalties on the exploitation of such sound recordings.

Recently, this issue also came to be urged before the Intellectual Property Appellate Board (IPAB) in relation to a Statutory License application filed by Radio Companies under section 31D of the Act.[31] In the said order, IPAB while providing new rates for the radio royalty system, completely overhauled the existing structureof royalty acquisition and set royalty rates for underlying works in the sound recordings when the sound recordings are broadcasted through radio.[32] The IPAB order is however under challenge with appeals being filed before the Division Bench of the Delhi High Court by both the Radio Companies as also the copyright holders.

Interestingly, a single judge bench of the Delhi High Court in the case of *Indian Performing Right Society Ltd.* v. *Entertainment Network (India) Ltd.*,[33] passed a verdict which denied royalty to the authors of underlying works on the exploitation of the sound recordings incorporating them. Though the infringement suits in this case were filed prior to the 2012 Amendment, the court held that even if the amendments[34] were to be made applicable in deciding the present case, it would not have any effect on the legal position at all.[35] However, subsequently this judgement has been stayed by a Division Bench of the Delhi High Court and has been directed not to be relied upon or used as a precedent in any further proceedings.[36]

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31 Intellectual Property Appellate Board, *available at*: https://ipab.gov.in/ipab_orders/delhi/OP-(SEC-31D)-1-to-9-2020-CR-NZ-and-OP-(SEC-31D) -1-2020-CR-WZ.pdf (last visited on July 30, 2022).

32 Adyasha Samal, "IPAB's First Statutory License Order Overhauls Radio Royalty System," *Spicy IP*, *available at*: https://spicyip.com/2021/01/ipabs-first-statutory-license-order-overhauls-radio-royalty-system.html. (last visited on July 31, 2022).

33 *Indian Performing Right Society Ltd.* v. *Entertainment Network (India) Ltd.*, (2021) 85 PTC 190.

34 New changes introduced in the Amendment of 2012 Act: Copyright Board, Relinquishment of Copyright, Compulsory Licensing, Provision for the disabled, License for Cover Version, Copyright Societies, Enforcement & Protection Measures and Provisions for Library and Library Services.

35 *Supra* note 32.

36 *Indian Performing Right Society Ltd.* v. *Entertainment Network (India) Ltd.*, 2021 SCC OnLine Del 158.

### 6. Amendments of 2012 by Copyright Act (Amendment) Act, 2012

The amendment of the Copyright Act in the year 2012[37] has introduced a number of provisions intended to provide relief to the authors and copyright owners of underlying works. The Parliamentary Standing Committee Report on the Copyright (Amendment) Bill of 2010,[38] clarifies the legislative intent. Section 1.3 of the Report enumerates the statements of objects and reasons appended to the said Bill. Clause (vi) of the said section clearly mentions that the proposed amendments seek to "ensure that the authors of the works, in particular, author of songs included in the cinematographic films or sound recordings, receive royalty for the commercial exploitation of such works."[39]

The 2012 Amendment, as previously stated, considerably altered the structure of sections 18 and 19. The third and fourth proviso to section 18(1), mandates that when the author of a literary or musical work assigns his copyright for the purpose of incorporating the literary or musical work in a sound recording that is not part of a cinematographic film, he cannot assign or waive the "right to receive royalties to be shared on an equal basis with the assignee of copyright" and any agreement that seeks to assign the right to receive royalty would be void. A corresponding provision was also made in section 19(9) and section 19(10) of the Act. Section 18 and section 19, thus in a way makes the accruement of royalty in underlying works in sound recordings evident.

Interestingly, the single-judge bench of the Delhi Court while delivering the judgement *Indian Performing Right Society Ltd.* v. *Entertainment Network (India) Ltd.*[40] interpreted the term "utilization of such work in any form" in section 19(10) to mean "utilization of such work in any form other than its utilization through sound recordings." Such an interpretation, in my view, would be misplaced, in view of the legislative intent and the very language of the provisions of the Act. A reading of section 19(9) reveals that the provision states that royalties will be paid on the use of the underlying work in whatever form, but specifically excludes the public communication of the underlying work "together with the cinematographic film in a cinema hall." section 19(10), goes on to add that royalties will be paid on any use of the underlying work in any form. If the

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37 The Copyright (Amendment) Act, 2012, (Act 27 of 2012).

38 Parliament of India, Rajya Sabha, Department Related Parliamentary Standing Committee on Human Resource Development, 227th Report (2010).

39 *Supra* note 38, para 1.3.

40 *Indian Performing Right Society Ltd*. v. *Entertainment Network (India) Ltd.*, (2021) 85 PTC 190.

legislature had intended to exclude "utilization through sound recordings" from section 19(10), it would have stated so clearly like in the case of section 19(9) where an exemption has been made for. As a result, a reasonable interpretation of section 19(10), as well as the fourth proviso to section 18(1) and section 19(3), would lead to a conclusion that the underlying works subsumed in sound recordings that are not part of any cinematographic film do, in fact, incur royalty (through a license) when such sound recording is exploited.

### 7. Doctrine of Merger and Import of Section 13(4)

Another argument is of that the "literary and musical rights" gets merged or subsumed within the "sound recording" and hence there is no necessity to take a separate license. This argument also, in my view, is misplaced. The counter to this argument is based on several reasons.

Firstly, section 13(4) of the Act, states that when a sound recording is made in connection with an underlying work, the sound recording's copyright does not impair the underlying work's independent copyright in any manner.[41] The words "separate copyright" as used in this section can be interpreted to allude to copyright in underlying works *i.e.*, literary and musical rights. Further, throughout the Act "rights" and "copyright" are treated differently, *e.g.*, sections 18(1), 18(2), 19(2), etc. Copyright is the entire "bundle" of rights in section 14(a). Maintaining the integrity of this, "copyright" would require that no single right contained in this bundle is cut down on/ restricted including the section 14(a)(iii)[42] right. Thus, "merger theory" propounded by the respondents is inconsistent with section 13(4).[43]

Secondly, the manner in which a sound recording is created also repudiates the merger argument. A sound recording embodying a literary and/or musical works can only be created with the authorization of the owner of the copyright in the works otherwise the sound recording would be an infringement and would not enjoy copyright protection [section 13(3)(b)]. The Act mandates that authorization may be given to the producer of the sound recording only in any one of the following three ways: Employment/Commissioning under section 17, assignment under section 18 and 19 and

41 *Supra* note 1, s. 13(1).
42 *Id*. at 7.
43 *Id*. at 6.

license under section 30 read with section 30A). All assignments or licenses under the Act are required per force, by virtue of section 19 of the Act, to be in writing (for licenses section 19 is to be read with section 30A of the Act). There is no basis for oral assignments or licenses under the Act. The "communication to the public" right is distinct from the right "to make a sound recording." Each right may be assigned or licensed without the other. Therefore, the exploitation of a literary/musical work as part of a sound recording or a cinematograph film will always depend upon the terms of the license/assignment *i.e.*, contract between the owners involved. For instance, a producer may be licensed only the right to make a sound recording or a cinematograph film (the section 14(a)(iv) right), with the "communication to the public" right under section 14(a)(iii) in the literary and musical work being withheld. In terms of the Act the above "withholding" would tantamount to a "contract to the contrary" as referred to in section 17(b). In such case even a film producer in India would infringe the rights of the author. In light of the above, if the "merger theory" *qua* a sound recording, argument is accepted, and the producer of a sound recording becomes entitled by virtue of section 14(e) to do certain acts irrespective of rights accorded by section 14 (a) to literary & musical works, then sections 18, 19, 30 and 30A will have no meaning and be rendered otiose *qua* literary and musical works.

Thirdly, the principle of the "co-existence of copyrights" has been recognized since the inception of the sound recordings copyright. In *Gramophone Co. Ltd. v. Stephen Carwardine & Co.*[44], the Chancery Division Court held, that a special copyright under section 19 of the Imperial Copyright Act, 1911 (the Indian Copyright Act, 1914) in favour of phonograms also allowed for the "public performance" of phonograms and that this "special copyright" was *in addition to* the copyright in the underlying works and *not to their detriment/prejudice*. Justice Maugham held that the "concept of co-existing copyrights is a familiar one in copyright law." This principle is also seen in various clauses in the Act itself namely section 13(4), section 52 (1) (y),[45] section 31, section 31D and the rules made in respect of the said provision, *etc.*

[44] *Gramophone Co. Ltd.* v. *Stephen Carwardine & Co*, [1934] 1 Ch. 450.
[45] *Supra* note 1, s. 54.

## 8. Conclusion

The discussion above demonstrates that there are overwhelming reasons as to why when a sound recording comprising any underlying work (that is not part of a cinematographic film) is exploited, the underlying work will undoubtedly be subject to royalties and the same may be exploited through a separate license even though a sound recording license has been obtained by the person seeking to exploit the same. If there was no legislative mandate, the Amendment Act of 2012 makes it explicit, loud and clear and rightly so, why should the authors and composers who created the music be deprived of their due. The need for the same was nicely summed up in the speech of Mr. Kapil Sibal (the then Minister for Human Recourse Development), while moving the motion for consideration of the Copyright (Amendment) Bill, 2010, wherein he said: "We are in the midst of a new era, which I call the digital era. We need to understand its complexity and to ensure that key stakeholders are protected and are conferred with rights, so that they could take benefit of the new technologies in this new era. We have been witnessing a situation in the past where certain key stakeholders have had access to rights and other stakeholders, who are the creators of intellectual property, have been denied that access."[46]

[46] Rajya Sabha, "Supplement to Synopsis of Debate, Dated May 17, 2012", *available at:* http://164.100.47.5/newsynopsis1/englishsessionno/225/Supp.%20Synopsis%20English%20dated%2017.5.pdf (last visited on July 31, 2022).

# CRYPTOCURRENCY, INTELLECTUAL PROPERTY RIGHTS AND COMPETITION LAW- CHALLENGES AND IMPLICATIONS

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**Abstract**

*Blockchains are a growing technology and most applications based on them are at an experimental stage. There is no scientific data on the behaviour of its applications, particularly in the context of Intellectual Property Rights (hereinafter "IPR") and Competition Law, where the former confers a degree of exclusivity on the owners while restricting others' access to the same, and the latter attempts to encourage competition and improve market access. There appears to be an inherent tension between the two. However, there is a growing consensus that the two worlds may not only coexist but also complement one another. The current study aims to identify the most significant risks associated with the application of this technology to the enforcement process under IPR and competition law in India. This study begins with the evolution and the various dimensions of Cryptocurrency. It examines the constitutional validity of cryptocurrency and the interface between IPR and competition law for economic development. The result shows that the government of India and concerned authorities have failed or ineffective in regulating this currency and its application to the above-mentioned laws in India. In addition, it also demonstrates that the existing legislation (IPR and competition law) is required to be transformed by considering scientific developments. Finally, it confirmed the value of addition in the field of law, especially among academicians, stakeholders, and government officials, for enhancing knowledge, efficiency, and formulation of policies in India.*

**Keywords:** Blockchain, Cryptocurrency, Competition Law, Intellectual Property Rights (IPR).

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## 1. Introduction

Cryptocurrency is a technology that disrupts businesses and organizations all around the world. While the Internet provides for the publication and digital flow of information, it enables asset identification and traceability by giving the trust necessary to perform transactions and eliminating ambiguity. It is the foundation technology upon which several crypto currencies[1], such as Bitcoin[2] and Ethereum,[3] are based, but its unique technique of securely preserving and distributing information has consequences that extend beyond it.

Despite the risks associated with virtual currencies in India, the nation garnered $638 million in crypto fundraising and block chain investments over 48 financing rounds in 2021.[4] Global funding for crypto and blockchain investments also increased.[5] It is also worth noting that India is the ninth-largest e-commerce market with sales of US $63 billion in 2021, contributing to the worldwide growth rate of 29 percent with a 26 percent increase. According to the World Economic Forum, by 2027, blockchain will have stored 10 percent of global GDP, demonstrating the rapid and continuing expansion of the digital market and blockchain technology, which has now become a significant worry under competition law and concerned authorities.[6] The concerns surrounding cryptocurrency legal regulation, as well as the hazards connected with the use of blockchain technology in terms of IPR's and Competition Law, appear to be a difficult challenge for the national enforcement agencies. It is also discovered that the legal regulation of cryptocurrencies as a payment method necessitates an integrated strategy that is hard to achieve without taking into consideration the properties of blockchain technology. Now, technical protections must be included in the implementation of any

1 S. Corbet, B. Lucey, *et.al*., "Cryptocurrencies as a financial asset: A systematic analysis", 62 *International Review of Financial Analysis* 182-199 (2019).
2 A. Urquhart, "The inefficiency of Bitcoin", 148 *Economics Letters* 80-82 (2016).
3 C. Dannen, "Introducing Ethereum and solidity", 1 *Berkeley: Apress* 159-160 (2017).
4 A. Pandey, "Astounding Turnover of $638 Million in Crypto This Year" (January 3, 2022), *available at*: https:/ /themorningcrypto.com/astounding-turnover-of-638-million-in-crypto-this-year/ (last visited on May 30, 2022).
5 R. Caferra, and D. Vidal-Tomás, "Who raised from the abyss? A comparison between cryptocurrency and stock market dynamics during the COVID-19 pandemic", 43 *Finance Research Letters* p.101954 (2021).
6 T. Philbeck and N. Davis, "The fourth industrial revolution", 72(1) *Journal of International Affairs* 17-22 (2018).

prospective choices in these areas, as well as the development of a single platform for all players in future blockchain applications.[7]

## 2. Overview of Cryptocurrency

Digital currency is the world's largest virtual currency, which continues to alter numerous sectors as its benefits become apparent. In barely a decade, it has surged in both value and adoption from the first mention of digital ledger networks in Satoshi Nakamoto's white paper in 2008 to the end of digital money's largest 'Bull Run'.[8] Bit coin was the first digital ledger-based digital gold, and it is still the most widely used and appreciated. The underlying technological basis on which decentralized virtual money is launched in full force in 2009 with the publication of a white paper detailing the fundamentals relating to this technology. This notion was developed by computer engineer Wei Dai, more than ten years before the advent of digital money, and the idea of digital currency emerged in the late 1980s.[9] The concept was to create a currency that could be transmitted in an untraceable manner without the use of centralized institutions. It was initially distributed as open-source software as a decentralized form of money with no need for a central bank or middleman.[10] This was initially utilized following the introduction of open-source software in 2009, and its popularity quickly grew.[11]

Furthermore, other currencies were issued using the same method. Since the currency's formal introduction, an increasing number of digital gold advocates have begun trading and mining in it, which is the most valuable and is regarded as the first modern virtual currency since it was the first widely used exchange that combined a decentralized regulator, user confidentiality, and inherent inadequacy. It is frequently used to describe coins and

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7 M. Mihajlović, "The History of Crypto", (February 11, 2022), *available at*: https://academy.shrimpy.io/lesson/the-history-of-crypto (last visited on April 27, 2022).

8 S. Faustino, I. Faria, *et.al.*, "The myths and legends of king Satoshi and the knights of blockchain", 15(1) *Journal of Cultural Economy*, 67-80 (2022).

9 Team Koinex, "A Brief History of Cryptocurrency", *available at*: https://medium.com/koinex-crunch/a-brief-history-of-cryptocurrency-889fed168555 (last visited on April 27, 2022).

10 Ledger, "A Brief History of Bit Coin & Cryptocurrency", *available at*: https://www.ledger.com /academy/crypto/a-brief-history-on-bitcoin-cryptocurrencies (last visited on April 27, 2022).

11 S. Steiniger and E. Bocher, "An Overview on Current Free and Open Source Desktop GIS Developments", 23(10) *International Journal of Geographical Information Science* 1345-1370 (2009).

tokens created after bit coin and is also protected by cryptography[12], which does not have its dedicated digital ledger but instead uses the cryptographic ledger of another crypto-asset called tokens and is built on block chain machinery, a scattered record created by a different computer grid. At the heart of the allure and usefulness of this digital money is that it is thought to keep a virtual record of all transactions ever completed, which is sufficiently safe and coordinated by the whole system of a single node. Furthermore, it has been discovered that its continual growth might impact investment and trading decisions in digital currency. Recently, bit coin made news when the price of a single unit of the cryptocurrency surpassed $11,500 for the first time. The constant rise in demand for virtual currency drew the financial sector's attention, indicating that it began utilizing the block chain for purposes other than monetary transactions, resulting in the evolution of smart contracts in the market.[13]

The growth of the internet and the digital economy raised concerns about the IPR's and competition law's capacity to disclose new rivalry issues that occurred as online platforms became more widespread. Various observers argue that with the expanding internet, a new set of norms for determining competition problems in cyberspace may be necessary. Learning about blockchain machinery can also help competition regulators handle competition issues related to blockchain submissions.[14] Furthermore, discussions between blockchain firms and competition experts on various market dynamics and trends may benefit from gaining a critical perspective.[15] In most circumstances, bitcoin has been deemed to be a product rather than a legal tender that complies with the levy rules provided by the relevant bodies with comparable tax effects. The legal definition of "financial product" excludes digital currencies, their trading is not classified as a commercial facility.[16] Some countries also observed that it is neither currency nor asset but could technically be classified as

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12 M. Campbell-Verduyn, "Bitcoin, Crypto-Coins and Global Anti-Money Laundering Governance", 69(2) *Crime, Law and Social Change* 283-305 (2018).

13 Ernst & Young LLP, "Discussion Paper on Blockchain Technology and Competition, CCI", (2021), *available at*: https://www.cci.gov.in/sites/default/files/whats_newdocument/Blockchain.pdf (last visited April 27, 2022).

14 A. Farouk, A. Alahmadi, *et.al*., "Blockchain Platform for Industrial Healthcare: Vision and Future Opportunities", 154 *Computer Communications* 223-235 (2020).

15 *Supra* note 13.

16 F. Black and M. Scholes, "From Theory to a New Financial Product", 29(2) *the Journal of Finance* 399-412 (1974).

securities, and some government bodies expressed a cautious attitude toward the possible approval of settlements in it, even though it is not directly prohibited and is not even recognized as a legitimate method of payment.[17] It is also critical to understand the distinction between bitcoin and digital currency. When Finance Minister Nirmala Sitharaman announced in her 2022 Budget speech that the Reserve Bank of India (hereinafter referred to as the "RBI") would launch its digital currency, there was much speculation about what a digital currency is and how it would differ from crypto currencies such as Bitcoin, Dogecoin, and other popular tokens.[18] The digital version of fiat cash that you carry in your wallet or withdraw from an ATM is referred to as digital money. It is the same money that is backed by an institution and may be exchanged for real money when it is released in 2023.[19] Simply explained, it is a digital asset that is spread among several computers in a shared network. They are impervious to government regulatory agencies' monitoring because of the network's decentralized nature.

The word "Cryptocurrency" refers to the encryption techniques used to safeguard the network, which includes certain significant elements, such as the lack of a centralized expert and the management of everything through distributed networks. The system keeps track of bitcoin components and who owns them, as well as determine if additional units may be generated and, if so, the origin and ownership terms. The ownership of cryptocurrency components may be proven cryptographically. The approach permits transactions in which the names of cryptographic components are changed.[20]

Moreover, with the development in cryptocurrency use, experts question if the technology's exponential expansion would be hampered by IP protection such as copyright, patent, or trademark; especially, crypto currencies related with them. There has always been

[17] O.S. Bolotaeva, A.A. Stepanova, *et.al.*, "The Legal Nature of Cryptocurrency", 272(032166) *IOP Conference Series: Earth and Environmental Science* 2 (2019).

[18] "Budget 2022: Full Text of Nirmala Sitharaman's Speech", *Indian Express*, (Feb. 1, 2022), *available at*: https:// indianexpress. com/ article / business /budget /budget-2022-full-text-of-nirmala-sitharamans-speech-7751059/ (last visited on May 30, 2022).

[19] P. Panurach, "Money in Electronic Commerce: Digital cash, Electronic Fund Transfer and eCash", 39(6) *Communications of the ACM* 45-50 (1996).

[20] A.A.A. Ahmed, H. Paruchuri, *et. al.*, "Cryptography in Financial Markets: Potential Channels for Future Financial Stability", 25(4) *Academy of Accounting and Financial Studies Journal* 1-9 (2021).

tension between the functionality of legal protections offered by intellectual property law and the significance of entrepreneurship. While both opponents and advocates of intellectual property law may understand how intellectual property law may either stimulate or restrict innovation depending on the circumstances, it is important to emphasis that current IP legislation is yet to be amended for incorporating this type of technology.

Cryptocurrency and IPR are intricately connected, and ready to use blockchain to unlock hitherto unused capacities in a range of industries, thereby emphasising the essential role to be played by intellectual property (IP) in the future.[21] Blockchain technology's dependability and security could be used to strengthen every stage of the IP rights life cycle, such as resolving ownership disputes, creating licensing agreements via crypto agreements, identifying counterfeits, or actually creating an IP document for registration and recording all forms of IP rights. It is challenging to provide IP protection for cryptocurrencies since determining ownership of cryptocurrency is imprecise.[22] If a cryptocurrency's sole job is to serve as a medium of exchange, such as a traditional money, it may not qualify as a product or service. An item or service related with a function, on the other hand, may allow the cryptocurrency's name to be trademarked. As a result, claiming ownership of the coin would be impossible for an individual or corporation. Many people are opposed to registering blockchain as a trademark because they feel blockchain is a machinery, not a symbol. Hence, everybody in the domain might use it and may not be held by a single company. As a result, the aforementioned issues lead to ambiguity regarding acquiring IP protection for bit coin or block chain.[23]

In addition, the application of this technology to the competition law and policies also raises important issues including the transformation of various existing legal provisions including the definition of market, price, person, enterprises, anti-competitive agreements,

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[21] G.M.D.C. Mello, P. Nakatani, *et.al*., "Dollar Hegemony under Challenge and the Rise of Central Bank Digital Currencies (CBDC): A New Form of World Money?", in G.M.D.C Mello, H.P. Braga (eds.), *Wealth and Poverty in Contemporary Brazilian Capitalism* 143-182 (Palgrave Macmillan Cham, 2022).

[22] M. Chawki, "Cybercrime and the Regulation of Cryptocurrencies", in Arai. K. (ed.), *Advances in Information and Communication*: *Proceedings of the 2022 Future of Information and Communication Conference (FICC)*, 694-713 (Springer, 2022).

[23] Amlegals, "Cryptocurrency and IPR in India-A Legal Perspective", *available at*: https: //amlegals.com/cryptocurrency-and-ipr-in-india-a-legal-perspective/ (last visited on May 27, 2022).

cartels, abuse of dominant position, leniency programme etc. for economic development and consumer welfare. It has also become a major concern before the competition law enforcement authority on how to meet all such hurdles connected with cryptocurrency in India.[24]

### 3. Constitutional Dimension

Simply explained, Bitcoin is a digital asset that is distributed. For several quarters, Indian lawmakers have debated the risks of trading cryptocurrencies and are testing a digital currency backed by the central government. The Indian government is considering on presenting a new bill dubbed as the Cryptocurrency and Official Digital Currency Regulation 2021 (hence "New Bill"), which is similar to previous versions but wants to restrict reserved cryptocurrency with rare exceptions, to promote the core technology and transactions of virtual currency in India and provide the foundation for the formation of an authorized digital currency to be issued by the RBI. The "Cryptocurrency and Official Digital Currency Regulation Bill 2021", which has been put on the legislative agenda, would also provide a "simplification framework" to create an official digital currency for India.[25] However, India has chosen a different approach and intends to introduce legislation prohibiting the trade of any digital currency other than those authorized by the government.

It should also be noted that the government attempted, through the RBI, to prohibit any banking transactions with persons or businesses who hold or trade bitcoins, thereby killing the vehicle. The Government of India organized a high-level inter-ministerial committee in November 2017 to draught studies on different problems relating to the usage of virtual money and later that year.[26] The Supreme Court decided that the RBI's restriction on financial institutions trading all types of virtual currency went beyond the RBI's authority and violated Article 19 (1) (g), lifting the ban on banks and financial institutions engaging

[24] J.S. Saini and N. Kumar, "Issues pertaining to growth of digital economy: An arduous challenge before CCI", 20(4) *Journal of Public Affairs*, e2301 (2020).

[25] N. Hildreth, "India: Cryptocurrency Bill 2021: The Road Ahead", *available at*: https:// www.mondaq. com/india/fin-tech /1145012/ cryptocurrency –bill - 2021-the -road -ahead #:~:text= According %20to %20the%20Lok%20Sabha, the% 20Reserve%20 Bank %20of%20India (last visited on May 30, 2022).

[26] S. Prabhu, "On Crypto Bill, More Changes Likely, Government Goes Slow: 10 Points", *available at*: https://www.ndtv.com/business/crypto-bill-wont-be-tabled-before-cabinet-today-more-changes-expected-2652033 (last visited on April 27, 2022).

with cryptocurrency owners and exchanges. The key argument in favour of prohibiting financial institutions from dealing with cryptocurrencies is that they do not have an authorized form of virtual currency to ban.

In *Internet and Mobile Association* v. *The Reserve Bank of India*,[27] the Internet and Mobile Association claimed that cryptocurrency trading is a lawful and licensed company over which the RBI has no jurisdiction because it is regarded as a commodity rather than a national currency. The Internet and Mobile Association of India immediately appealed the RBI's decision to prohibit the functioning of cryptocurrencies, claiming its rights. In India, the highest financial body defined cryptocurrency as a type of virtual money formed by a sequence of transcribed processer codes based on cryptography and hence independent of any central issuing authority. Through economic policy, it exerts control over the creation of currency by banks. Administrations often ban the possession and sale of other kinds of currency to safeguard the legitimacy of the legal currency for the benefit of all residents. So far, patterns suggest that most of the time, other countries have influenced India to implement technology-related legislation. It is believed that India should play an active role in the implementation of new technical regulations, with a particular emphasis on the Metaverse. The need of the hour in India is intelligent legislation and strong control of existing digital money and crypto-assets.[28]

## 4. Interface of Cryptocurrency with Intellectual Property Rights (IPR) and Competition Law

The potential of blockchain as an all-purpose technology is now being tested in a number of areas, including Intellectual Property Rights (IPR). As user numbers grow, the system will be more valuable and capable of engaging larger groups of users.[29] However, it is still unclear what the threshold number of users would be in order to start disrupting the

[27] Writ Petition (Civil) No.528 of 2018.

[28] M. Guruswamy, "India Needs Thoughtful Legislation on Digital Currency", *available at*: https://indianexpress.com/article/opinion/columns/india-legislation-digital-currency-7689252/ (last visited on April 27, 2022).

[29] M. Finck and V. Moscon, "Copyright Law on Blockchains: Between New Forms of Rights Administration and Digital Rights Management 2.0", 50(1) *IIC-International Review of Intellectual Property and Competition Law*, 98 (2019).

existing status quo.[30] It thus seems merely a matter of time before the law addresses the potential obstacles to a broad-scale legal application of distributed ledger technologies, such as questions about the laws and jurisdictions that will be applied; smart rights that can be enforced; data security and privacy concerns; robust rules and definitions for smart contracts--and that will seep into intellectual property laws and practices. The uncertain status of who owns a blockchain has not affected its rapidly growing adoption.[31]

In the context of IP-heavy industries, blockchain and related distributed ledger technology provide obvious opportunities for IP protection, registration, and evidence, either at the registration phase or in court. It also promises a low-cost way to accelerate such processes. Potential use cases include: authentication of creatorship and provenance; registering and clearing IP rights; controlling and tracking the distribution of (un) registered IP; providing evidence of genuine and/or first use in trade and/or commerce; digital rights management (e.g., online music sites); establishing and enforcing IP agreements, licenses, or exclusive distribution networks; and transmitting payments to IP owners in real-time. Blockchain can also be used for authentication and provenance in the detection and/or recovery of counterfeit, stolen, and parallel-imported goods. The significance of this technology could be appreciated in determining "Smart" IP rights, evidence of use of IP rights, creatorship, smart contracts and digital rights management, enforcement of IP rights, supply chain management, etc. Supply chain management etc.[32] For its better management, the Chamber of Digital Commerce recently launched a Blockchain Intellectual Property Council (BIPC) as a defensive patent strategy led by industry experts in order to fight against patent trolling on the blockchain. It facilitates in balancing the need for specialised digital security with the accountability required for innovation.[33]

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30 *Ibid.*

31 O. Dalgıç, "Could Regulating Blockchain Technology Improve Competition in Digital Markets?", (March 20, 2020), *available at*; https://turkishlawblog.com/read/article/215/could-regulating-blockchain-technology-improve-competition-in-digital-marketsg (last visited on July 5, 2022).

32 D.J. Durie and M.A. Lemley, "A Structured Approach to Calculating Reasonable Royalties", 14 *Lewis & Clark L. Rev.* 627 (2010).

33 S. Yanisky-Ravid and E. Kim, "Patenting blockchain: Mitigating the Patent Infringement War", 83 *Alb. L. Rev.* 603 (2019).

In addition, blockchain technology has the potential to improve competition in digital markets as a disruptive technology.[34] It attracts investment and raises expectations for influencing market conditions, which may or is likely to have a significant negative impact on competition. It is also noticed that India received $638 million in crypto funding and blockchain investments across 48 rounds in 2021, and global funding for cryptocurrency and blockchain investments totaled $24.86 billion, spread across 930 funding rounds.[35] This raises serious questions, such as, what would be the nature of the investment and the person involved in it; what would be the threshold limits; how to determine jurisdiction; what is the legal status of investors in cryptocurrency. It is most likely that such large participants or investors will abuse economic strength. Further, it is also very difficult to determine a dominant position and its abuse regarding cryptocurrency.

## 5. Challenges imposed by Cryptocurrency on IPR

The interaction of blockchain technologies, cryptocurrencies, and intellectual property (IP) laws is experiencing exponential growth. With blockchain technology's growing popularity alongside cryptocurrencies, the world is intrigued by the technology's underexplored potential across different industries. Blockchain is one of those revolutionary technologies that will prove beneficial in providing better intellectual property protection.[36] Blockchain, as it is designed, could be used to make sure there is no doubt regarding ownership or rights to intellectual property.[37] Therefore, it is hard to identify owners of such technologies and currencies to give them intellectual property (IP) protection, including trademarks. Such a granting of trademark rights to Bitcoin has been opposed worldwide since Bitcoin and Blockchain operate on open-source software that anyone can access to offer services in the crypto-currency.[38] Patents enable a '*Non-Fungible Tokens*' (hereinafter

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34 S. Saberi, Kouhizadeh, *et. al.*, "Blockchain Technology and Its Relationships to Sustainable Supply Chain Management" 57(7) *International Journal of Production Research* 2117-2135 (2019).

35 "India bags $638 million in cryptocurrency, blockchain funding in 2021", *available at*: https://economictimesindiatimes.com/news/economy/finance/india-bags-638-million-in-cryptocurrency-blockchain-funding-in-2021/articleshow/88626670.cms?frommdr (last visited on July 5, 2022).

36 *Supra* note 23.

37 E. Hanapole, "The Metaverse of Intellectual Property", *available at*: https://www.ibm.com/blogs/journey-to-ai/2022/04/the-metaverse-of-intellectual-property/ (last visited on May 27, 2022).

38 "Trademarking of Cryptocurrency" (2021), *available at*: https://www.kashishworld.com/blog/ trademarking- of-cryptocurrency/ (last visited on May 27, 2022).

'NFT') blockchain holder to license the technology that he or she uses to run his or her NFT and allow consumers to own the actual brand collectibles. With the increased usage of cryptocurrencies, experts are wondering whether this technology's explosive growth could ultimately be hindered by intellectual property protections like copyright, patents, or trademarks; in particular, the cryptocurrency associated with it.[39] With the regulatory bills enactment, crypto is set to be an established term in India. It is an open question if its unpredictability can be controlled by assigning ownership, something which could be done with the help of IP protection such as copyright, patents, and trademarks. It is expected that once the regulation bill is implemented in India, many startups might emerge which adopts the technology behind cryptocurrency might turn towards IP laws to gain legal protection for their methods and processes.

Apart from the regulation, there is also legal uncertainty present in the IP and crypto domains, which the author shall further discuss. [40] Blockchain and smart contracts may develop into a hugely useful and necessary technology in terms of protecting IP. In other words, when a new technology is developed, the law protects it as an intellectual property (IP) resource; similarly, laws must be tailored to technology to gain additional leverage. The new bill acknowledges the grey areas in cryptocurrency laws and suggests banning all private cryptocurrencies completely. Yet, this is still a grey area wherein all types of cryptocurrencies would be covered by the Private Cryptocurrency Act. The Indian Government is considering drafting a new law called the Cryptocurrency and Regulation of Official Digital Currency Act, 2021 (New Bill), which is identical in spirit to the previous version.[41]

## 6. Challenges imposed by Cryptocurrency on Competition Law

The legal issues involved with Non-Fungible Tokens (NFTs) are debatable in India due to the lack of a legislative framework for regulating crypto assets. The uncertainty

[39] Khurana and Khurana, "NFT and Its Relationship with IPR", *available at*: https://www.khuranaandkhurana.Com /2021/11/15/nft-and-its-relationship-with-ipr/ (last visited on May 27, 2022).

[40] *Supra* note 23.

[41] Ahlawat and Associates, "The Legality of Cryptocurrency in India", *available at*: https://www.legal500.com/developments/thought-leadership/the-legality-of-cryptocurrency-in-india/ (last visited on May 27, 2022).

associated with such assets is exacerbated by the fact that cryptocurrencies and NFTs, while not considered illegal in countries, are not subject to any kind of regulation. In India, there is no specific legal framework applicable to cryptocurrencies.[42] Moreover, the application of the competition law on cryptocurrency raises various serious concern. One side, it deals with the economic growth and consumer welfare by preventing unfair business practices. It also promotes and sustains competition. It supports business investment for economic development. But, on the other side, the competition law enforcement mechanism faces an arduous challenges including online platform.[43]

Further, it is evidenced that the legal status of cryptocurrency with reference to the competition law is still yet to be decided. It is also found that the Competition (Amendment) Bill 2020 have been ineffective in dealing with the issues relating to cryptocurrency including the determining factors of jurisdiction person, price, participant, thresh hold limits etc. There has not been a specific case of competition law and intellectual property rights under the combined rules and combinations in general governed by Section 6 of the Competition Act. This issue must be answered by investigating the legislation of nations that have legalized cryptocurrencies and determining whether India has the legal framework to sustain them.[44] According to CCI, One of the key reasons for the increased interest in blockchain technology is its influence on economies, maintaining records, exchange of information, negotiation, and identity management.[45] In particular, every process related to the functioning of the blockchain is based on an algorithm that is sure to create a dilemma for CCI. However, it has the right to exercise jurisdiction over global Blockchains in cases where there is a noticeable contrary consequence on rivalry in the significant marketplace in India, its application would not be, to say the least, a practical obstacle.

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42 C. Abrol, "Cryptocurrencies and NFTs are all the rage", *available at*: https:// www.managingip.com/article /b1tb4hb8j56syw/cryptocurrencies-and-nfts-are-all-the-rage (last visited on May 27, 2022).

43 *Supra* note at 22.

44 K. Lalchandani, "The intersection of IPR and Competition Law", *available at*: https://www.newindianexpress.com/opinions/2021/sep/16/the-intersection-of-ipr-and-competition-law-2359297.html (last visited on May 27, 2022).

45 Lexlife India, "Cryptocurrency v/s Law in India", *available at*: https://lexlife.in/2021/07/16/cryptocurrency-v-s-law-in-india/ (last visited on May 27, 2022).

## 7. Implications of Cryptocurrency on Intellectual Property Rights and Competition Law in India

The interaction of blockchain technologies and intellectual property (IP) laws is experiencing exponential progress. Although the opponents and supporters of IP law including how IP laws may either foster innovation or inhibit novelty, are reliant on the circumstances. It is essential to realize that today's IP laws are actually still not fully utilized within the context of blockchain technology.[46] Since a basic perspective, and in light of the nature of the basic assets NFTs represent, intellectual property rights law (especially copyright law) and the laws surrounding the IT industry cannot be ignored when analyzing legal rights and obligations that may accompany NFTs. When considering the IP implications of NFTs, it is important to differentiate between the NFTs' property rights and those underlying IP. That is, simply holding the NFT representing a musical composition in a blockchain does not confer rights to publish, distribute, or receive royalties on that musical composition, unless the artist expressly grants the NFT-holder the copyright to such composition via contractual agreement.[47]

In reality, NFT sales do not only include smart contracts; they are usually also accompanied by text-based terms that restrict exactly what IP (intellectual property) rights are transferred. As creative works get into the NFT market, there are issues associated with IP rights that arise in a transaction.[48] Distributed ledger technology may potentially play an important role in the area of unregistered IPRs, such as copyright and unlicensed industrial designs, by providing proof of creation, usage, qualifying conditions, and status.[49] Blockchain technology's trustworthiness and security can be used to strengthen each stage of an IP rights lifecycle, for example, to settle property disputes, to establish license agreements through blockchain contracts, to identify counterfeit products, or to just build a

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46 *Supra* note 22.

47 P. Sulakshya, "India: NFT and Its Relationship with IPR" (November 17, 2021), *available at*: https://www.mondaq.com/india/fin-tech/1132188/nft-and-its-relationship-with-ipr (last visited on May 29, 2022).

48 *Supra* note 29.

49 B. Clark and B. McKenzie, "Blockchain and IP Law: A Match made in Crypto Heaven?" (February 2018), *available at*: https://www.wipo.int/wipo_magazine/en/2018/01/article_0005.html (last visited on May 29, 2022).

record of IP for recording and tracking various types of IP rights.[50] Another relevant issue surrounding the application of legal regimes for blockchain is jurisdiction. As a result, the legal implications of certain blockchain actions differ from those of a conventionally centralised computer network. Potential legal challenges and disputes include those related to privacy rights, picture rights, security laws, fraud, consumer protection, taxation, and others.[51] Although the copyright could be claimed under the Indian Copyright Act, 1957, regulatory issues posed a murky risk for the investors and purchasers of the new NFTs. Sheppard Mullins' nationally recognised intellectual property practice has deep expertise advising clients on comprehensive intellectual property strategies for blockchain technologies and digital currencies. The creation of a mind can be regulated and protected within a framework of laws known as intellectual property rights, or IP rights. [52]

## 8. Conclusion and Suggestions

The interaction of blockchain technologies, cryptocurrencies and intellectual property (IP) laws is experiencing exponential growth. There has always been great tension between innovation and the role of the legal protections provided by IP law. There is a need for legal practitioners in this specialist field to ensure innovators are provided with high-quality legal advice since the patentability of blockchain technologies involves complex legal and technical issues.[53] It has been proposed that block chain-related innovations may be non-patentable because the majority of the services created on top of the block chain merely take an earlier concept (distributed ledger technology) and design a new application. On a larger scale, one could argue that there is an urgent need for streamlining the existing laws and guidelines in such a way as to allow the granting of patents on inventions generated by these systems. The emergence of digital spaces calls for an overhaul of the IP guidelines and adequate training for the examiners and legal professionals in both the domains of patents

[50] S. Pahari, Cryptocurrency and its legal implications: A comparative analysis (July 22, 2019), *available at*: https://blog.ipleaders.in/legal-implications-cryptocurrency/ (last visited on May 29, 2022).

[51] *Supra* note 33.

[52] S. Mullin, "Blockchain", (2022)", *available at*: https://www.sheppardmullin.com/industries-87 (last visited on May 29, 2022).

[53] S. Kumari, "India: Is It Possible to Patent a Cryptocurrency?" (April 27, 2022), *available at*: https://www.mondaq.com/india/patent/1186000/is-it-possible-to-patent-a-cryptocurrency (last visited on May 29, 2022).

and trademarks to completely capture the fantastic possibilities that Blockchain technologies can unlock, and it will be interesting to see the trend in the future of patents and trademarks being granted to blockchain-related technologies.[54] Thereby, it seems that law will address possible obstacles to massive legal implementations of Blockchains, such as issues about the regulations and jurisdictions to regulate, the accuracy of intelligent rights, information security and privacy concerns and robust rules and definitions to be applied for smart contracts, and it pervades IP legal frameworks.[55]

In 2013, a press release issued by the Reserve Bank of India warned users about potential financial, operational, legal and security-related risks associated with trading cryptocurrency. The RBI indicated that it does not consider bitcoin to be legal cash or currency and that it is worried about the use of crypto assets to support illicit activities, pledging to take all necessary measures to address such risks. It is worth noting that the Prohibition of Cryptocurrency and Regulation of Official Digital Currency Act, 2019 (the Bill, 2019) proposes to prohibit mining, producing, retaining, selling, trading, issuing, transferring, disposing, or using private crypto assets of any kind, while making exceptions for the use of Blockchain technologies in certain circumstances.[56] Notably, the legislation places the same requirements on cryptocurrency-to-cryptocurrency exchanges that are presently placed on digital assets with law-tender providers (so-called cryptocurrency-to-fiat exchanges). In furthermore to the other clauses, the regulations cover service providers such as financial companies, notaries, and lawyers.

Furthermore, the new directive applies to both crypto currency systems and custodians of cryptocurrency wallet providers. The proposed regulations would, among other things, necessitate blockchain information service providers to register with the state, verify their users' identities, and keep track on all material on their operating systems for at least

[54] J. Trivedi, "Dawn of Blockchain Technology in the Indian Patent Regime", (2022), *available at*: https://www.aipla.org/list/innovate-articles/dawn-of-blockchain-technology-in-the-indian-patent-regime (last visited on May 29, 2022).
[55] *Supra* note 38.
[56] *Supra* note 29.

six months.[57] Although cryptocurrency platforms have opened up several channels of arithmetical economic businesses and provided original currencies with numerous devices and approaches, they are unmonitored and unregulated. Similarly, the Competition Commission of India (CCI) is also facing numerous challenges in dealing with the digital market[58], including cryptocurrency.[59] The Competition (Amendment) Bill, 2022 aims to strengthen the regulatory structure by boosting CCI accountability, flexibility and enforcement efficiency but still has many challenges, including regulation of crypto assets before CCI, which seems unanswered.[60]

In the end, it is revealed that cryptocurrency regulations are at a working stage and result in numerous challenges before enforcement authorities in India. Hence, this study suggests that in India, a central level institutional framework with effective cryptocurrency regulation should be developed. In addition, some important definitions, time-bound processes and artificial intelligence (AI)-based enforcement mechanisms are required to be incorporated on an urgent basis.

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57 Perkinscoie, Digital Currencies: International Actions and Regulations (2021), *available at*: https://www.perkinscoie.com/en/news-insights/digital-currencies-international-actions-and-regulations.html (last visited on May 29, 2022).

58 *Supra* note 25.

59 *Ibid*.

60 V.M. Kumar, "The Competition (Amendment) Bill, 2022: A Low-Key Bill Wider Implications", (March 18, 2022), *available at*: https: // www.livemint.com /opinion /online- views/ a-low -key-bill-with-wide-implications-for-our-economy-11647548332989.html (last visited on May 29 2022).

# RE-DEFINING THE IPR MARKETS: AN ECONOMIC ANALYSIS

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**Abstract**

*The fields of Intellectual Property are very wide and far more extensive which cover the entire economy both at national as well as international level in a globalized world. The future of the nations and also the level of economic development would, no doubt, depend on efficient production of intellectual property which needs to be protected by law. Intellectual Property is a category of intangible rights protecting commercially valuable product of the human creation and intellect. It is a generic name for patents, copyright, trademarks, design rights, trade secrets and other like rights recognized and protected by specific legislations not only in India, but in the developed and developing countries of the world today, especially after globalization due to the fact that the modern world is moving towards a knowledge based economy. Intellectual property is, thus, an intangible right exercisable and asserted in respect of a material or tangible work. When we look at the definition of Intellectual Property Rights, it generally refers to the creativity of human being and the persons holding intellectual property rights can enjoy monopoly over their creativity or products through different IPR laws. Monopoly mostly covers protection and commercialization; but only in the initial stage during coverage of protection. The persons and legal entities holding IP rights may reduce production and sales generating higher monopoly prices for the consumers. Monopoly and competition are two important market forces acting through demand and supply. But the question is whether competition in the IPR market is completely absent as is found in actual situations where the majority of real markets are competitive in nature. Furthermore, in the IPR market we very often find different offences committed. What is the mechanism or why are these offences committed? Sometimes, we fail to understand them. This paper is an answer to the aforementioned questions utilizing a few principles of economics.*

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**Key Words**: Intellectual Property, Intellectual Property Rights, Monopoly and Opportunity Costs.

## 1. Introduction

IPR markets, in fact and in reality, are very complex phenomena, though law and relevant legislations have made it simple, simply specifying and assigning it to be a legal Monopoly. But from practical use and marketing point of view, completely a new situation is faced, which is apparent when supply and demand factors are taken into account in the market place apart from the aspects of legal Monopoly which generally protects the original innovators and authors in terms of patent or copyright. This implies that there is a need to develop a new perspective in IPR marketing, where the elements, monopoly and competition exist.

Prior to justification made in this context, let's have some ideas about the Intellectual Property (IP). Justice Posner in *Rockwell Graphic Systems, Inc. v. DEV Industries*[1] observed: "The future of the nation depends in no small part on the efficiency of industry, and the efficiency of industry depends in no small part on the protection of intellectual property." Intellectual Property is a category of intangible rights protecting commercially valuable product of the human brain and intellect. It is a generic name for patents, copyrights, trademarks, design rights, trade secrets and other like rights recognized and protected by specific legislations not only in India, but in almost all the developed and developing countries of the world today, especially after globalization due to the fact that the modern world is moving towards a knowledge based economy. Intellectual property is, thus, an intangible right exercisable and asserted in respect of a material or tangible work. In *Gramophone Company of India Ltd.* v. *Birendra Bahadur Pandey*[2], the Supreme Court has also observed that intellectual properties are the brainchild of the authors, the fruits of labour and therefore considered to be their property.

When we look at the definition of Intellectual Property Rights (IPR), it generally refers to the creativity of human being and the persons holding intellectual property rights

1 925 F.2d 174, 180 (7th Cir. 1991).
2 AIR 1984 SC 667.

can enjoy monopoly over their creativity or products through different IPR laws. Monopoly as we know mostly covers protection at individual level, but not at the commercialization level in the market places. Marketing the output is, no doubt, a different strategy, even for the legal monopoly holder. The persons both natural and juristic like Companies holding intellectual property rights may reduce production and sales generating higher monopoly prices for the consumers.

Market power and competition are two important forces found operating in market situations through demand and supply. The market power is the ability to influence the market, in particular to influence the price. In a market with perfect competition, firms do not have market power, they face stiff competition. At the other extreme is the monopoly which has strong market power and faces no competition. The majority of real markets are competitive, but the competition is not as fierce as in the case of perfect competition, since in these markets, firms have some market power; but the power is not as strong as in the case of monopoly. Such markets are neither perfect competition nor monopoly, but can be characterized as monopolistic competition.

The main objective of this study is to make a critical study on determination of IPR markets besides giving a look on the crime market and the forces operating behind governing these market conditions so far infringements of intellectual property rights are concerned. Analysis of these market situations from economic point of view as to how the IP crimes are committed with their immediate impact on the consumers as well as on economic development of a country. The study is based on the idea that principles of economics of market policy can be applied equally to analyze IPR market conditions including the crime market relating to IPR theft or in other words, infringements of Intellectual property rights. The scope of this study is, though limited, may be extended to study the complex criminal phenomena to be applied in developing proper concepts for the purpose of explanations of criminal philosophy relating to infringements of intellectual property rights. If we do become able to find out the root causes of infringements of such rights caused by way of counterfeiting and piracy constituting a crime market in an economy which may affect both the producers and consumers differently, then we can

improve our existing situations. The interests and rights of producers of original works or products are, no doubt, protected by statutes; but so far the question of infringements of IPR of original works of the producers is concerned, law is still found to be inefficient as it does not stand directly to be a bar in the path of the economic development of the country for which it accords sanctions and grants patents to *process patents* and recognize within limits the use of *reverse engineering* in the production system or in other words, in the manufacturing process of goods and services, with a view to promote fair competition instead of pure monopoly. Therefore, the study has kept wide scope open for further study. The concept of this study is based on certain basic assumptions without which it would not be possible. The principal assumptions are:

i. The Intellectual Property Rights violators (the criminals) are rational in their behaviour and non-rationality is an exception.
ii. They are assumed to influence the market operations and their tastes and preferences have a direct impact on it i.e., the demand and supply.
iii. They always aim at maximizing their benefits over costs of Intellectual Property Rights violations (the crimes) committed by them.
iv. The Intellectual Property Rights violators, *i.e.*, the criminals are always selective as regards commission of crimes and are influenced by choices or preferences between crimes.
v. They are guided by the principle of Marginal Benefits and Costs or by their equality.
vi. The principle of *cateris paribus*, *i.e.*, other things remaining same is being taken into account while violating IP Rights, or in other words committing crimes.
vii. The Supply Curve of crime of an industry is generally upward-sloping from left to right. It may be perfectly elastic and perfectly inelastic or vertical for individual criminals or firms depending on conditions.
viii. The Demand Curve of crime is generally downward-sloping from left to right. It may be perfectly elastic and perfectly inelastic or horizontal for individual criminals or firms depending on conditions.

ix. The price–effect, income–effect and substitution-effect and their impacts on crimes and criminals are well considered.

## 2. Conceptual Understanding of IPR and Opportunity Cost

Intellectual Property is the creation of human mind, human intellect and hence called "intellectual property."[3] Random House Webster's Unabridged Dictionary defines the term 'Intellectual Property' as "Property that results from original creative thought, as patents, copyright material, and trademarks."[4] According to Black's Law Dictionary,[5] "Intellectual Property is a category of intangible rights protecting commercially value products of the human intellect." Though intangible in nature, law accords property status to these rights.[6] As we have seen, the writers, inventors and artists transform ideas into tangible property. When this property qualifies under law, the creator is granted certain rights. For example, the author of a book can prevent others from copying it. Similarly, the owner of a patented invention can prevent others from making, using, or selling the device under the patent. Intellectual property law, thus, covers copyrights, patents, trademarks, and trade secrets as well as related areas of law such as the right of publicity, unfair competition, false advertising, fine arts law, and protection of semiconductor chips. All these disciplines recognize property that is created by the human mind.[7]

"Intellectual Property Rights" or IPR is a generic name for patents, copyrights, trademarks, design rights, trade secrets and other like rights. A comprehensive definition of the term 'Intellectual Property' is contained in art. 2 (viii) of WIPO[8] Convention, 1967 which defines 'intellectual property' as including 'the rights relating to literary, artistic and scientific works, performances and performing artists, phonograms and broadcasts, inventions in all fields of human endeavor, scientific discoveries, industrial designs,

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3 B. L. Wadehra, *Law Relating to Intellectual Property* 15 (Universal Law Publishing Co, New Delhi, 2016).

4 *Ibid.*

5 B. A. Garner, *Black's Law Dictionary* (Thomson West, USA, 8th ed., 2004).

6 D. F. Mulla, H.R. Khanna, *et. al.*, *Mulla on the Transfer of Property Act,1882* 56 (N. M. Tripathi Pvt. Ltd., Bombay, 1995).

7 Richard Stim, *Intellectual Property- Patents, Trademarks, and Copyrights* 12 (Cengage Learning India Pvt. Ltd., Delhi, 2008).

8 World Intellectual Property Organization, "Convention Establishing the World Intellectual Property Organization", *available at*: https://wipolex.wipo.int/en/text/283833 (last visited on May 25, 2022).

trademarks, service marks and commercial names and designations, protection against unfair competition, and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.[9] For example, a patent is a form of intellectual property right granted and protected by law. Similarly, a copyright in a work is also an intellectual property right. Thus, Intellectual Property Rights is a special genre of rights which protect the results of intellectual and creative labor or endeavor of the human minds.

IPR thus provides a monopoly or rather a limited monopoly right. Monopoly is a form of market structure extensively prevails in capitalist economies of the world including that of India. Monopoly is said to exist when one firm is the sole producer or seller of a product which has no close substitutes.[10] Thus, there must be a single producer or seller of a product if there is to be monopoly. This single producer may be in the form of an individual owner or a single partnership or a joint stock company. There must be one firm in the field, if there is to be monopoly. 'Mono' means one and 'Poly means seller.' Thus, monopoly means one seller or one producer. Monopoly therefore, implies absence of all competition as because there are no close substitutes for the product the firm is producing and supplied to the market. The monopolist has the power or control over the price of its product or output. Prof. Bober rightly remarks, "the privilege of being the only seller of a product does not by itself make one a monopolist in the sense of possessing the power to set the price. As the one seller, he may be a king without a crown."[11]

Therefore, if there is to be monopoly, the cross elasticity between the product of the monopolist and the product of any other producer must be very small. Cross elasticity of demand shows a change in the demand for a good as a result of change in the price of another good. Thus, under monopoly other firms for one reason or another are prohibited to enter the monopolist's industry which means that barriers to the entry of firms are so strong that prevent entry of all firms except one which is already in the market. Thus, for existence of monopoly, three conditions are necessary:

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9 Feroz Ali Khader, *The Law of Patents – With Special Focus on Pharmaceuticals in India* 1 (LexisNexis Butterworths, Wadhwa Nagpur, 2009).

10 H. L. Ahuja, *Advanced Economic Theory* 539 (S. Chand & Company Pvt. Ltd., New Delhi,1981).

11 M.M. Bober, *Intermediate Price and Income Theory* 237 (W. W. Norton, New York, 1962).

i. There is a single producer or seller of a product.
ii. There are no close substitutes for the product.
iii. Strong barriers to the entry into the existing industry.

### 2.1. Opportunity Costs

The economists generally use the term "Opportunity Cost" to indicate what must be given up to obtain something that is desired or expected. The fundamental principle of economics is that every choice has an opportunity cost. For example, if you choose to spend 5 hours in copying a page of a book, you must give up 5 hours' time in investing in some original works in the same way that if you choose to marry one person, you must give up the opportunity to marry anyone else. The idea lying behind is that the cost of one item is the loss of opportunity to do or consume something else. Thus, Opportunity cost of a resource means the value of the next- highest valued alternative use of that resource. In short, it is the value of the next best alternative.

Opportunity costs are calculated as follows:

$$\text{Opportunity Cost} = FO - CO$$

Where FO stands for return on the best foregone option or option not chosen and CO for return on the chosen option.

While choosing options, people inevitably face trade-offs in which they have to give up things they desire to get other things they desire more. In many cases, recognizing the opportunity cost can alter personal behaviour or can have direct impact on economic activity or decision – making. Such costs are not only in consumer decisions; but also in production decisions, capital allocation, time management and lifestyle choices.

Opportunity costs, thus, represent the benefits an individual, investor or a business misses out when choosing one alternative over another. Understanding the potential missed opportunities foregone by choosing one investment over another allows for better or more profitable decision-making. You must assess the relative risk of each option in addition to its potential returns.

## 3. Defining Intellectual Property Crime

The relevant question here is to know what an intellectual crime is. An Intellectual Property crime is committed when someone manufactures, sells or distributes counterfeit or pirated goods, such as patents, trademarks, industrial designs or literary and artistic works for commercial gains. Thus, when someone uses an intellectual property right without the authorization of its owner, the IP crime is committed. Counterfeiting and piracy are the terms primarily used to describe a range of illicit activities related to intellectual property right infringement. Most counterfeit goods infringe a trademark which means that a good is produced without the authorization of its right holder. Piracy refers to the illegal use of literary and artistic works protected by copyrights. In short, IP crime is nothing, but any breach of intellectual property rights. The manufacture, importation, sale and distribution of goods which falsely carry the trademark of a genuine brand without permission and for gain or loss to another, simply called counterfeiting. An unauthorized copying, use, reproduction, distribution of materials protected by intellectual property rights fall within piracy resulting IP crime.

In order to understand the market situations intensively, it is also necessary to know the basic characteristics of Intellectual Property. First, ownership of intellectual property is similar to the ownership of other forms of property. The owner of intellectual property has also the right to exclude others from infringing or taking the property away without consent or authority granted by him. The intellectual property owner can license, sell or will the patent, copyright or trademark. Being the creation of human mind, intellect and labor, intellectual property is like a hidden property and is adjudged to be an important means of accumulating tangible wealth. Intellectual properties and intangible assets jointly form the most important driving force not only of national, but also of the world economy. Intellectual property is usually divided into two categories:

i. Industrial property;
ii. Copyrights and neighbouring rights.

The industrial properties are Patents, Trademarks, Industrial designs, Layout design and geographical indications etc. whereas the copyright and neighbouring rights are

Writings, Musical Works, Dramatic works, Audio-visual works, Paintings and drawings, Sculptures, Photographic Works, Architectural works, sound recordings, Performance of musicians, actors and singers, and broadcasts etc.[12]

Copyrights, trademarks, designs and patents are intangible personal properties which can be owned and dealt with. Salmond, in his classic work on jurisprudence also said that in modern law every man owns that which he creates. The immaterial product of a man's brain may be as valuable as his land or his goods. The law, therefore, gives him a proprietary right in it, and the unauthorized use of it by other persons is a violation of his ownership. He also enumerates some traditional intellectual properties, patents, copyright, trademarks and trade names.[13] The rights of intellectual property are created and protected by statutes. An invention may relate to a new product or an improvement of an existing product or a new process of manufacturing of existing or new product. These immaterial products arise out of human brain and they must be traded as valuable as his lands or goods. It includes anything that would result from the human intellect.[14] IPR is not a single right, but a bundle of rights which can exist and be exploited independently. They are essentially negative rights which stop others from exploiting, say in case of copyright, the work of the author for their own benefit without the consent or license of the author. In other words, they stop pirates, counterfeiters, imitators and even in some cases the third parties who have independently reached the same ideas, from exploiting them without the license of the right-owner. At the same time, another important aspect of intellectual property which cannot be over-looked is that they also confer on the right-holder some positive entitlements or economic rights. For example, under section 14 of the Copyright Act, 1957 the rights conferred on a copyright owner are economic rights; because the exploitation of the work by the author by exercising these rights may bring economic benefit. The author may exploit the work himself or license others to exploit any one or more of the rights for a

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12 *Supra* note 3 at 16.

13 P. J. Fitzgerald (ed.) *Salmond on Jurisprudence* 422- 423 (Universal Law Publishing Co. Pvt. Ltd., New Delhi, 2010).

14 Jeremy Phillips, "Introduction to Intellectual Property Law," 46(1) *The Cambridge Law Journal* 190-191 (1986).

consideration which may be in the form of royalty, a lump-sum payment under specific contract.

### 4. Necessity of Process Patent

Let's explain now, what is a Process Patent? A process patent refers to a patent granted to a process or method of making an article. "Patented article" has been defined for the purposes of Chapter XVI of the Patent Act to include any article made by a patented process. As we have seen, the right to manufacture a product is one amongst the many rights that accrue upon a patentee. In the case of a process patent, the patentee is given exclusive right to manufacture an article using a particular process for which the patent is claimed. The patentee can stop any person from using that particular process to manufacture the article. A point that needs emphasis is that the right to manufacture the end product is not *per se* hindered. Only a particular way of manufacturing a product, that is to say, a particular process is claimed and protected. As such there is no bar for a competitor to manufacture the same – end product using a different method or process. In this way, process patent for pharmaceuticals do not curb the manufacture of medicines and drugs. Similarly, the process patents for beverages do have the same effects to this regards. The competitors in the market are free to manufacture the product using different process Thus, a process patent restricts only some of the means through which a product can be manufactured, but does not restrict the ends of manufacture.[15] In short, product patent refers to patent protection granted to the end product. Any method of manufacture which results in the patented product would amount to an infringement.

### 5. The Market Approach: An Analysis of Costs & Benefits

Prior to market analysis of IPR crimes, let's have some idea about why do people intend to commit a crime. If we properly analyze and go through modern criminal psychology, we find that most of criminal commit crimes with a view to gain or to make some profits out of his or her criminal activity. In this sense, a potential criminal is assumed to behave rationally. He or she usually compares the anticipated gains from a crime with the anticipated costs that he or she has to face while involved in commission of the desired

[15] *Supra* note 9 at 20.

crime. The costs of engaging in criminal behaviour are more varied and no doubt, complicated. Daryl A. Hellman[16] has talked about certain kinds of costs to be calculated by the criminal before the crime is committed. First, the material costs which include costs of tools and equipment used for commission of the crime. Second is the time costs. Rather than committing an illegal act, the criminal could be doing something else, such as earning a legal wage or salary by working in a legal market, and engaging himself or herself in economic activities. This is the opportunity cost as already explained which must at least be paid to induce him to keep himself engaged in the legal industry. The value of the time used in planning and executing a crime must therefore, be regarded as a cost. In fact, opportunity costs are the value of the leisure time. Third category of costs taken into account by the criminal is the psychic costs. As with psychic gains, there are a large number of possible psychic costs which vary with crimes and the criminals. Fear, anxiety, dislike of risk and guilt are some example of psychic costs.

However, the costs which are more complicated and need explanation for analyzing criminal behaviour are the expected- punishment costs. These costs are included to account for the possibility that the criminal will be caught and punished. If this were to happen, it would impose costs on the criminal in the form of fines, a prison term, or both. Punishment is not certain to happen, but there is some possibility of it. For this reason, a cost must be included to compensate for the risk involved in criminal act.

If the gains exceed the costs, then it is rational to commit the crime. This implies that if the monetary and psychic gains are sufficient to cover the material and psychic costs, as well as what the criminal's time is worth (i.e. time costs), and a compensation for risk (expected-punishment costs), then then the rational crime will be committed.

Thus, if expected-gains> expected-costs, crimes are likely to be committed; and

if expected- gains < expected-costs, the rational criminals will refuse to commit any offence. However, this will not apply to irrational criminals who commit crimes under certain exceptional circumstances.

[16] A. Hellman Daryl, *The Economics of Crime* 39 (St. Martin's Press, New York, 1980).

According to Daryl A. Hellman, psychic gains is a very general category and includes lots of possibilities – the thrill of danger, or value of risk, a feeling of getting back at the system, a sense of accomplishment and so forth. The importance of psychic gains depends on the crime and differs from crime to crime.

Thus, besides these gains, we may refer to kind of more specific gains called an intellectual gain which mainly yields mental satisfaction to one's mind and add more pleasure over the present status of a person living in the society. This type of benefits or gains can easily be had or derived by an academician desiring a higher degree like Ph.D. which may result in his promotion yielding monetary or material benefits to him. This may be an encouraging for him for infringement of copyright of an original author's works; subject to only fear of being caught by Plagiarism Mechanism or subsequent cancellation of his degree if detected later on which also constitutes a psychic cost for the copyright infringer.

### 5.1. Market Analysis

Market analysis is very important to be explained from legal and economic perspectives. Crime market of IPR infringement may be regarded totally a unique market and more difficult for easy determination of the market forces like that of traditional natural monopoly. This is mainly due to few reasons: first, the modern legislative trend to create a legal monopoly in case of IPR, particularly the regimes of patent and copyright which requires understanding the legal and regulatory structure of intellectual property. Second is the tradition of treating intellectual property as somewhat different from physical property. It says that intellectual property is special because it also protects information and information has unique attributes not generally shared with physical property. Adam Smith also rejected the notion that copyrights and patents could be thought of as a natural species of property; he classified them as "monopolies", though he thought them desirable monopolies.[17] But we find is that intellectual property is mainly the brainchild of human being and created by human labour. The truth is that all the properties are created by the

[17] R. L. Meek, D.D. Raphael, *et.al., Lectures on Jurisprudence* 83 (Oxford University Press, New York, 1978).

human endeavor except the free gifts of the nature which cannot be created at all. Third is that intellectual property has also been referred to as a "Public good" which is "non-rival" and "non-excludable". Richard Posner and William Landes define public good in the economic sense as that consumption of it by one person does not reduce its consumption by another.[18] Thus, a non-rival public good is one that once produced, can be consumed by all without any person's consumption impairing any other's consumption which clearly indicates that additional "units "of the good can be produced or consumed with zero marginal cost. Similarly, intellectual property is "non-excludable" means that when once produced, is available to all because it is not possible to exclude anyone from consumption of that good. If we consider these attributes of intellectual property, then we find that Intellectual Property law is all about granting rights to exclude. Thus if under the intellectual law, the underlying innovations, writings and other informational products were really non-excludable, then the law in this field would be trying to do the impossible. Stanford economist, Paul Romer also explains, "even though the information from discoveries is non-rival ……, economically important discoveries usually do not meet the other criterion for a public good; they typically are partially excludable, or excludable for at least some period of time."[19] People and firms have some control over the information produced by most discoveries; and therefore, it cannot be treated as a public good.

### 5.2. IPR Theft Market: Highlighted

It is also important to have some idea about IPR crimes and an illegal market world-wide facing these days. In consideration to the above, we may rather create a separate market for the infringers of intellectual property rights and may simply refer to as the Market for the Stolen Property.[20] As already stated, IPR crimes are most modern committed with the help of modern sophisticated tools and equipment unlike traditional thefts are committed in respect of tangibles movable property. IP theft involves robbing creators or companies of their works, ideas, inventions, and creative expressions, known as

[18] William M. Landes and Richard A. Posner, *The Economic structure of Intellectual Property Law* 14 (Harvard University Press, Cambridge, 2003).
[19] Paul M. Romer, "The Origin of Endogenous Growth," 8(1) *Journal of Eco. Perspectives* 3-13 (1994).
[20] *Supra* note 16 at 100-104.

Intellectual Property. Copyright crime is an example. Deliberate infringement of copyright on a commercial scale may be a criminal offence punishable under section 63 of the Copyright Act, 1957. This is usually known as copyright piracy and is often linked to willful infringement of trade marks designated as counterfeiting where criminal offence also exists. Both piracy and counterfeiting are referred to as intellectual property crime which can include everything from trade secrets and proprietary products to movies, music and software. It is a growing threat, especially with the rise of digital technologies and internet file sharing networks. With the help of these modern technologies, the rational people may even produce an IPR crime (output) if the gains from the crime exceed the costs including opportunity costs which refer to the economic cost of an alternative that has been forgone. On this analogy, a criminal will commit such crime through infringements if his monetary and psychic gains from the crime exceed the costs. The market for stolen property determines the market prices of the various forms of stolen property. There are very often middlemen in such illegal markets, just as there are in the legal markets. So, there is very likely that the prices of the stolen property are determined in each of stages of distribution, which may be very common in case of pirated goods. However, to simplify our analysis, we may regard such market as one and assume that there is a single supply of and demand for the stolen property.

Such markets are found at both national levels and international level and are very wide and more extensive in existence. There are a variety of marketplaces for fake, copied and pirate goods. It penetrates the supply chain by door to door sales, online sales, market stalls, street sales, car boot sales and even high street shops.

Thus, if we analyze them properly, then we find that the IPR theft market may accurately be termed either as pirated goods markets or counterfeiting goods markets depending on the nature of Intellectual Property Rights violations whether they are copyrights or patents. These markets generally benefit the consumers as the price is less than the monopoly price and outputs produced and supplied are higher than under the monopoly where restrictions in terms of monopoly is exercised in setting higher price with minimum amount of output produced. The costs of production of pirated and counterfeiting

goods are also comparatively less than innovative monopolists producing completely new brands which requires at least some minimum fixed costs to be incurred for their innovations and efforts. Since the number of producers are more, not one like under monopoly situations producing non-rival or substitutes goods, these markets are monopolistic in nature producing or supplying close substitutes at very competitive prices placing the consumers in most advantageous positions, provided they do not opt for branded goods strictly due to their tastes and preferences irrespective of the prices.

### 5.3. Intellectual Property Rights: A Legal Monopoly

The modern trend of law favours that in order to provide incentives to create intellectual products or properties, the innovators or creators must be given some degree of control over the use or marketing of their products prohibiting others from copying their ideas or expressions, or in other words, to exclude others from infringing their copyrights and patents over the subjects. In that sense, it should better be referred to as a "limited monopoly." Because patents granted to the innovators or IPR holders are limited in time and scope, in the same way that copyrights to authors are also given only for certain definite period of time to enjoy some sort of monopoly power in the markets. On important view on this is that strong legal protection is the best, if not the only, means of stimulating innovation and economic growth. From an economic perspective, a primary purpose of IP laws, like other laws, is to produce a desired result that market forces or competition, fail to produce. Specifically, IP laws are designed, in part, to protect future economic gain from IP products as an incentive for investing in research and development (R & D) today. Without such protections, it is assumed that innovation would decline because initial costs cannot be recovered in a free market environment.[21] Paul Romer also holds that innovation requires some degree of monopoly power which, of course, is consistent with current practices of protecting IPR.[22] Thomas Jefferson was also a proponent of the "monopoly" view. At the time of framing the U.S. Constitution, Jefferson viewed both copyrights and patents as

[21] National White Collar Crime Center, "Intellectual Property and White-Collar Crime: Report of Issues, Trends, and Problems for Future Research," *available at*: https://link.springer.com/article/10.1007/s12117-005-1014-z (last visited on July 15, 2022)

[22] Paul M. Romer, "Are Non-Convexities Important for Understanding Growth?" 80(2) *The American Economic Review Papers and Proceedings* 97-103 (1990).

dangerous government "monopolies" that should be strictly limited, if they were to be granted at all.[23]

The short-term costs of providing property rights to the creator of IP are justified by the long-term benefits of promoting economic growth. However, there exists some opposite views also. Thus, by definition, a legal monopoly accorded in respect of IPR is only a grant of an exclusive right by the state for achieving certain short-term and long-term objectives. It usually intends to give protection to and control over a particular market.

### 5.4. Whether IPR fits into Economic Monopoly

The debate whether IPR confers economic monopoly is still not well settled due to divergent opinions put forward to this issue. Harvard Professor Lloyd Weinreb confidently asserts that "the most that can be said confidently about copyright or patent is that it confers a monopoly."[24] This is, no doubt, a legal monopoly created and authorized by legislation. Going a little ahead, economists Michele Boldrin and David Levine asserted that modern rights in copyright and patent "create a socially inefficient monopoly", and what is commonly called intellectual property might be better called "intellectual monopoly."[25] Francis Hargrave observed that copyrights were a form of monopoly by defining the word narrowly to mean "an appropriation of the right of carrying on some particular branch of trade or commerce; to which all men have originally a common and equal pretention."[26]

IPR are exclusive rights as per law, and monopoly also denotes merely "exclusive possession or control of something" usually granted either by the state or work through certain market forces dominated by the private individuals or company. If we take this into account, then patents and copyrights certainly qualify as monopolies.

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[23] "Jefferson's view is evident in his 1789 recommendation to James Madison that the then-circulating draft of the Bill of Rights should include the following provision restricting the government's ability to grant the monopolies of copyright and patent: Article 9. Monopolies may be allowed to persons for their own productions in literature, and their own inventions in the arts, for a term not exceeding …. years, but for no longer term, and no other purpose," as quoted in Andrew A. Lipscomb. (ed.), "Letter to James Madison", August 28, 1789, in 7 The Writings of Thomas Jefferson, 444,451(1904).

[24] Lloyd L. Weinreb, "Copyright for Functional Expression" 111(5) *Harvard Law Review* 1149-1205 (1998).

[25] Michele Boldrin and David Levine, "The Case Against Intellectual Property" 92 *American Economic Review Papers and Proceedings* 209 (2002).

[26] Francis Hargrave, *An Argument in Defense of Literary Property* 28-29 (Garland Publishing, US, 1974).

Let us now examine what actually happens in a monopoly market. As we know, a monopoly market has very low cross-elasticity of demand with other products as the firm is the sole producer of a single product having no close substitutes. There is the presence of full competition on the demand side on the part of buyers so that none is in a position to influence the price of the product by his individual actions. The price is fixed for the consumers. This implies that monopoly price is uncontrolled. There are no restrictions on the power of the monopolist who is free from any threat of entry of other firms into the market. As the monopolist aims at maximizing profits, two conditions are very essential from economic point of view:

i. Marginal revenue must be equal to marginal cost; and
ii. Marginal cost curve must cut the Marginal revenue curve from bellow.

Given these conditions, the price, output and profits under monopoly are determined by the forces of demand and supply. Whatever price he fixes and whatever output he decides to produce are determined by the conditions of demand. The demand curve faced by a monopolist is definite and is downward-sloping to the right which is also his sales curve or average revenue curve. Its corresponding Marginal curve is also downward-sloping and lies below it.

The monopolist will go on producing additional units of output as long as MR> MC. His profits will be maximum and he will attain equilibrium at the level of output at which MR=MC. In the fig.1.1 below, MR=MC at OQ level of output. The firm will be earning maximum profits and will, there, be in equilibrium when it is producing and selling OQ quantity of the product. If he increases output beyond OQ, then MC will be more than MR. Therefore, the monopolist will incur loss. He is in equilibrium at OQ level of output at which MR=MC. At output OQ, the price (= Average revenue) is OP and the total profits earned by the monopolist are equal to the shaded area PRST. From the fig.1.1, it becomes clear that Marginal cost QE< Average revenue or price OP=QR. Thus, price under monopoly is higher than Marginal cost, i.e. Price> MC.

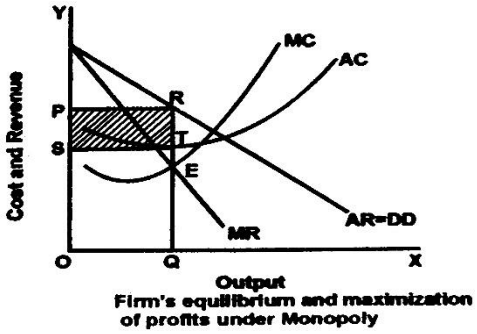


Fig. 1.1

It is to be noted that we have analyzed above the equilibrium under monopoly in general terms without introducing any time period. But in fact, in order to make it real and very near to the actual world, it would be just and proper to study equilibrium price and output-determination with respect to two important time periods: the Short-run and the Long-run.

In the short-run, the monopolist has to work with a given existing plant, and therefore, he cannot change the fixed factors employed in innovations like, plants, machinery etc. What he can do is that he can increase his output or production by changing variable factors. So, in short-run, the monopolist can enjoy super-normal profits generally; but slowly, or at the same time he can enjoy normal profits or even sustain losses temporarily. But in the long-run, if the monopolist is allowed to be in the market, he will earn super-normal profit per unit of output he produced; because in the long-run, the monopolist would definitely choose that plant size among the various alternative plant sizes which is the most appropriate or optimal for a specific level of demand for his product.

Now, if we see and consider like many authors hold the popular view that the owner of an intellectual property right possesses an economic monopoly, we accept the presumptions that an intellectual property right, like all property rights, is an exclusive right which enables the owner to exclude others from the use of the subject matter of the right and in that sense, the owner of an IP right is protected from competition and able to sell into a market with a downward sloping demand curve. For example, patents, which confer the exclusive right to make, use or sell the invention, covered by the claims of the patent, are the intellectual property right most plausibly characterized as a monopoly. But this is

true only if the claims cover all of an economically relevant market, i.e. there is no alternative way for competitors to provide the same economic functionality to their customers without infringing the claims. Trademarks, which protect the exclusive right to commercial identity, are much more difficult to characterize as a monopoly, since the ability of a firm to identify itself would seem to be an essential pre-requisite for competition, not a limit on competition. Copyright protect the exclusive right to "original works of authorship fixed in any tangible medium of expression." However, they do not provide an exclusive right "to any idea, procedure, process, system, method of operation, concept, principle or discovery" and are infringed only by actual appropriation of the protected expression. Because of these limitations, copyrights do not prevent competitors from creating works with the same functional characteristics, as evidenced, for example, by the numerous dictionaries available, by the many television shows, novels, and movies with similar themes and characteristics, or by the many competing software programs.[27]

### 5.5. What is the Alternative Market?

Let's us explain the IPR market situations citing an example from copyright point of view. We have in actual practice many authors, companies or publishers publishing different books written on the same subject. The students of law, for example, while going to a book stall for purchasing the best one of their choice, may ask the owner to display different varieties on that particular subject which the sellers usually do and display to satisfy the enquiry made in this regard for choosing one out of different authors competing among themselves. The protection is accorded only to the individual author or publishing company or the output in terms of copyright under the Copyright Act. A tort student, thus, may opt for a book on it by the authors written either A or B or C or D or..., or N. He would choose or select that book which he finds it convenient for him to follow and which he would understand easily and digests. Each author or the publishing house has his sole authority, in other words, monopoly as to how much is to be produced in terms of output and what would the price fixed for it as he or the company i.e., the publishing house having copyright enjoys legal monopoly as well as market monopoly in the relevant market as

[27] Edmund W. Kitch, "Elementary and Persistent Errors in the Economic Analysis of Intellectual Property" 53(6) *Vanderbilt Law Review* 1727-1730 (2000).

regards to price- output determination; but at the same time they are facing a competition in the consumer market as regards to sale and maximizing profits. Thus, A, B, C, D, ……, N are facing competition in the market, and they have to compete each other based on the consumer's choice or demand i.e. the readers.

Thus, we have found that the owner of Intellectual Property Rights also faces a competition in the actual economic market; because the products, in most of the cases, can be best presented in the market as substitutes, each owner of such products having a market power like a monopolist to a greater extent, can control its price and output as an individual firm or owner, which pave the way for a fair competition in the market.[28] But the competition is not the economically perfectly competitive market, as the products are not purely homogeneous or identical. Perfectly competitive market is an ideal market; but does not exist in real sense. Therefore, what we have in the IPR competitive market is not the perfect competition, but the monopolistic competition. Under monopolistic competition also, due to product differentiation, the owner of IPR or a firm faces a downward-sloping demand curve where the Average Revenue curve implies to be its Demand curve.

The competition may be due to many reasons. The most important one is the assumptions of the rival competitors that the IPR owner or the firm enjoying monopoly power, though for the period of protection, is earning supernormal profits, as monopoly is always associated with profits, and they get attracted to enter into the industry, producing substitutes to that product with a differentiation. Therefore, new authors are entering into the market as a result of which no one is placed to earn supernormal profits like a sole monopolist in a monopoly market. In case of capital goods like machines and equipment and in certain inventions, this has been made possible mainly due to Reverse engineering the use of which has been recognized across the world and is considered to be one of the most beneficial business methods. Reverse Engineering is often opted for learning, changing or repairing a product, providing related service, developing compatible product, creating a clone of the product and improving the product.[29] Although the Patent Laws in India do not directly recognize the technique of reverse engineering, the patent laws around

[28] Fair competition instead of restrictive monopoly is encouraged under the Competition Act, 2002.
[29] James Pooley, *Trade Secret Law* 51 (Law Journal Press, New York, 1997).

the world have not expressly denied the reverse engineering technology. In India, a patent would be granted to an invention on satisfying the Triple test of Novelty, Inventive step or non-obviousness, industrial application and it must fall within the ambit of Patentable subject matter. Section 2 (1) (j) of the Patents Act, 1970 says that "invention" means a new product or process involving an inventive step and capable of industrial application." Since reverse engineering involves significant improvement to a product which will also deem to be an invention under section 2 (1) (j) of the Indian Patents Act, 1970.[30] In order to constitute an invention it is essential to examine that such improvements or the newly innovated product resulting from reverse engineering satisfies the patentability criteria or the Triple test.

Thus, the owner of IPR normally faces the monopolistic competition, rather than a natural monopoly except those privileged by the state what we may call the legal monopoly. The individual owner of IPR or the firm under monopolistic competition can influence the volume of his sales by making changes in the amount of his selling –outlays. The expenditure incurred on advertisements and sales promotion measures etc. comprise of his selling outlays, which change the demand for his product as well as his costs. Therefore, the owner-cum-seller under monopolistic competition has to adjust the amount of his selling –outlays in such a way that his total profits are maximized. The rival owners or firms producing substitutes under this market keenly compete with each other through advertisements by which they attract more consumers and change the demand for their products. They may vary their prices and with it, their sales and output. Under the same conditions as of monopoly i.e. Marginal costs= Marginal Revenue; and MC curve must cut MR curve from below, they aim at maximizing profits. Like that of monopoly, in the short-run, they may earn abnormal profits, undergo losses or may earn only normal profits.

The firm's equilibrium in the short-run earning supernormal profits is illustrated in the fig.1.2 below:

[30] *Bishwanath Prasad Radhey Shyam* v. *Hindustan Metal Industries,* AIR 1982 SC 1444.

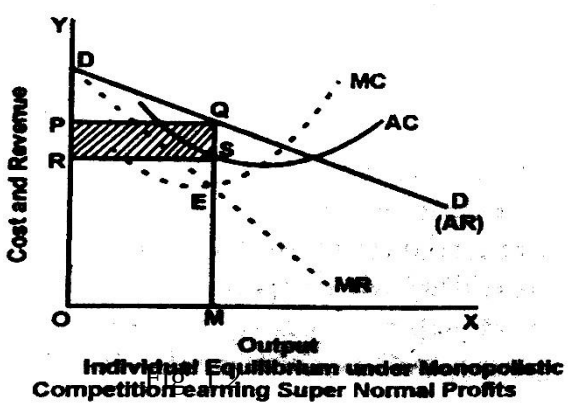


Fig. 1

In the above fig. DD is the demand curve for the product of an individual firm or the IPR owner, the nature and prices of all substitutes being given. The DD is also its average revenue curve. AC represents the average cost curve while MC is the marginal cost curve corresponding to it. The firm maximizes its profits where MC = MR. Thus, the firm is in equilibrium at the point E and determines price MQ = OP at which output OM can be sold. At this price OP and output OM, the firm is earning supernormal profits equal to the shaded area RSQP, since AR>AC.

## 6. Conclusion

In general parlance, principles of economics of market policy can be applied for analyzing the Intellectual property rights and its market situations as well as the crime market. The paper supports what Mark A. Lemley has remarked," While some intellectual property rights may in fact give their owner power in an economically relevant product market, most do not; they merely prevent others from competing to sell copies of a particular product, not from selling different products that compete with the original."[31] Perhaps, the paper also supports what William M. Landes and Richard A. Posner assume (of copyrights) that "The demand curve for copies of a given book is…… negatively sloped because there are goods but not perfect substitutes for a given book."[32] It is obviously true that one book is not an exact copy of another, for then it would infringe the copyright but

[31] William Mark A. Lemley, "The Economic of Improvement in Intellectual Property Law," 75 *TEX. L. Rev.* 989 (1997).

[32] M. Landes and Richard A. Posner, "An Economic Analysis of Copyright Law" 18 *Journal of Legal Studies* 325-327 (1989).

that does not mean that two or more books are not economic substitutes for each other. In fact, they do and are; as they are differentiated in quality and in respect of certain attributes qualifying both for monopoly power and competition. Monopoly powers are exercised in regard to price-output determination i.e., how much is to be produced and what will be the price fixed for each unit; but also are facing competition in the market. Because the books written on the same subject by different authors having own copyright reserved can be used as substitutes, and they are, therefore, placed in monopolistic competitive market situations. Thus, legal monopoly is only granted by law while in actual market situations, the firms (or authors) producing different varieties and selling them in the market are facing a competition to a great extent.

# VIEWING TRADE DRESS PROTECTION FROM THE LENS OF INDIAN LEGAL FRAMEWORK

*Arpana Tyagi*[*]

**Abstract**

*The objective of the present research paper is to understand the concept of trade dress as an intellectual property, to evaluate and analyse the present position and scope of trade dress protection within the trademark regime in the jurisdiction of India with the help of relevant case laws in order to identify and ascertain whether adequate protection is given to trade dress as per the trademark law in India or is there a need to legislate a new law for the adequate protection of the same. The paper is also aimed at making valuable suggestions and recommendations for trade dress protection in India. The present research has been undertaken as the laws for the protection of trade dress within the Indian jurisdiction have not yet been permanently settled and still remain uncertain as even today trade dress is protected as a trademark under the Trademarks Act and thus the laws related to the same are dynamically interpreted by the courts. Thus, in the light of the present situation it becomes important to analyse the present position of trade dress protection in India.*

**Keywords:** Trade Dress, Intellectual Property Rights, Trademark, Trademark Law.

## 1. Introduction

The purchasing decisions of the customers are nowadays not only affected by the brand names that appear on the product, but also by the overall external visual appearance or the get up, the look and the feel of the product and its packaging. Thus, the presentation of a product or its trade dress has become an essential component in the product distinction and brand recall.

Traditionally, trade dress was simply thought of as labels, wrappers, or containers which were used in packaging of a product. In other words, it referred to the manner in which the product was "dressed up" to go into the market. Examples included

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the product label, packaging, display cards and the like. This combination of elements created a visual image to the customers and if used in such a manner as to denote the source of the product, was capable of acquiring exclusive legal rights as a type of trademark.

But, the notion of trade dress has expanded over time and today it means the overall visual external appearance of the product created by a totality of all the elements and a combination of all the features in which a product or service is packaged or presented to the customers for selling. Thus, trade dress at present encompasses the total look of the product and its packaging as it may even include particular sales techniques in certain cases. Therefore, in essence, trade dress is any company's overall image within a marketplace.

The present paper revolves around examining and analysing the very concept of trade dress, the need for its protection, the requirements to be fulfilled for its protection and an analysis into the case laws related to the same in India in order to ascertain the present position of their protection within the Indian jurisdiction so that effective measures can be suggested for its better protection in the future.

## 2. Origin of the Concept of Trade Dress

Though it is widely believed that the concept of trade dress historically evolved in the United States but the origin of the concept can be traced back to the common law doctrine of passing off prohibiting unfair competition. Passing off is a common law remedy basically used for protecting unregistered trademarks and unregistered trade dress. In other words, there may be a situation where a trader has not got his trade dress registered but along with the passage of time, he has acquired considerable recognition in respect of a particular good or service using that unregistered trade dress. Now, if another trader tries to use an identical or similar trade dress for his own product or service, due to the law of passing off he will be restrained from doing so and he will not be allowed to pass off or misrepresent his own goods and services as the goods and services of the former trader through the use of the similar or the identical trade dress with respect to his own goods and services. The remedy is based on the underlying principle that no one has a right to represent somebody else's goods or services as his own goods and services. Thus, the law of passing off protects the goodwill and the reputation that has been created

through long standing use of an unregistered trade dress from being encroached upon by other traders.[1]

### 3. Meaning of Trade Dress

Black's Law Dictionary defines trade dress as "visual impression that is made by totality of all elements used to package or present a service or good for sale giving it a recognizable look."

According to Merriam Webster, trade dress is "the overall image of a product used in its marketing or sales that is composed of the non-functional elements of its design, packaging, or labelling (as colours, package shape, or symbols)."

Earlier a very plain and rudimentary type of packaging was used for products primarily due to limitations on availability of packaging and also due to low competition. Very rarely the wrappers were printed and even if printed, were made up of basic colours only because of unavailability of stable dyes. The growth in trade and commerce led to the increase in competition in trade and commerce and eventually the production of goods increased manifold due to which the consumers had many choices available for a single product as there were now different brands available for the same good. Gradually with the advent of technology, the manufacturers developed different get-ups so that their product could be easily distinguished by the consumers from the product of the rivals. This being the situation, gradually, more importance and reliance was started to be placed on the overall external appearance of a product's packaging, as it is the total external image of the product that allows the consumers to buy the product in their best judgement and this, at times, even shadowed the effect of identity of names of product. Eventually, this led to the upcoming of many infringement and passing off cases due to which arose the need for a law for the protection of the reputation acquired by one manufacturer for his product by applying a particular get-up from a long time from being encroached upon by others, because it is basically the external get up and appearance of a product which remains in the mind of the people and is stuck to their memory which allows them to identify the product and buy the product again.[2]

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[1] R. Chakraborty, "Growth of Intellectual Property Law and Trademarks", (2009), *available at*: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1335874 (last visited on March 9, 2022).

[2] S. Sahay, "Piracy of Trade Dress and the Law of Passing Off: National and International Perspective", 11 *Journal of Intellectual Property Rights* 201-206 (2006), *available at*:

Various courts all over the world, while trying infringement and passing off cases, have made out that when colours are involved in a particular mark, then other features of the mark must also be taken into consideration as it is a combination of all the features which constitutes the overall appearance of a product and it is the overall appearance of a product that allows the customers to buy the product in their best judgment. It is the "overall get up" or the "overall look" or the "overall image" or the "overall appearance" of a product is something that is termed as trade dress. It is the total image of the product that allows customers to differentiate and distinguish between various products that are available in a store and helps the customers in signifying the very source of each product. All aspects of appearance are potentially covered under the term 'trade dress'.

In respect of trade dress Lord Harman in the case of *Hoffman-la Roche* v. *DDSA Pharmaceuticals Ltd.*[3] observed, "…goods of a particular get-up just as much proclaim their origin as if they had a particular name attached to them, and it is well known that when goods are sold with a particular get-up for long enough to be recognised by the public as goods of a particular manufacturer it does not know whether you know who the manufacturer is…"

Originally trade dress protection was limited only to the packaging of a product, *i.e.*, the entire total external appearance of wrappers and labels that were used for packaging a product but gradually the protection extended to take into its ambit all the elements of appearance taken together of the presentation of a product, i.e., including the design and shape in addition to the packaging. Thus, there are basically two types of trade dress, *i.e.*, product packaging trade dress and product design trade dress. The U.S. Supreme Court in the case *Wal-Mart Stores, Inc.* v. *Samara Bros.*,[4] distinguished between "product design trade dress" and "product packaging trade dress".

Product Packaging Trade Dress is an overall combination and an arrangement of all the features and elements of design that make up a product's packaging. This includes the layout of the packet, the graphics on it, the colours and the combination of colours

http://nopr.niscair.res.in/bitstream/123456789/3570/1/JIPR%2011%283%29%20201-206.pdf (last visited on April 18, 2022).

[3] RPC (1965) 82 (15), 503-514.

[4] 529 U.S. 205 (2000).

used on the package because colours are very appealing to the eye and are easier to remember as compared to any word or slogan on the packaging, the logos and the slogans used on the packaging are also a part of the product packaging and are indicators of the authenticity and the source of a product as they leave a deep impact on the minds of the customers. Every trader packs his goods in a manner different from the other traders which is unique in itself and which adds to his reputation because the common consumers some of whom may be illiterate, identify the product by remembering its packaging only. For example, the packaging of a Mc Donald burger is such by which people recognise the product worldwide.[5]

Product Design Trade Dress basically includes the shape, configuration and other features of design of a product. Configuration can be said to be the three-dimensional aspect of the product. For example, the shape of the Coca-Cola bottle. The unique shape of the bottle has been recognised worldwide by the consumers and they know it is a Coca-Cola bottle by recognising the very shape of the bottle itself. In the light of the same it becomes necessary to protect the shape from infringement. A product's packaging can be protected as trade dress whether if it is inherently distinctive or if it has acquired a secondary meaning but a product's design or shape can be protected as trade dress only if it has acquired a secondary meaning also and not if it is inherently distinctive only.[6]

It can sometimes be really difficult to differentiate between a product design trade dress and a product packaging trade dress. In such cases the court concludes that, "courts should err on the side of caution and classify ambiguous trade dress as product design, thereby requiring secondary meaning". This rule basically requires that a party which claims rights over the design of the product is supposed to show and prove in order to get a trade dress protection that the very design of the product has acquired secondary meaning.[7]

In the present times trade dress has gone to another level by even encompassing the design or the packaging of the product or the overall get up of a product as even a

[5] A. Rawat, "Trade Dress Law in India", 5 *SSRN Electronic Journal* 11-12 (2012).
[6] J.A. Handelman, "Stretching Trademark Laws to Protect Product Design and Product Packaging", 4(3) *Landslide* 55-58 (2012).
[7] W. Amberts, "A Brief Overview of Trade Dress Protection under American Law and a South African case study", 81 *JCRL* 95-108 (2018).

distinctive performing style of a rock music group, the theme of a restaurant have been held to be trade dress in certain cases.

## 4. Need and Importance of Trade Dress

A consumer before buying or experiencing the product is unaware of the quality of the product and is also unable to identify as to how much price he should pay for the product. Trademark and trade dress are something that provide the customers with this information and helps in remedying the information problem by providing the consumers with some reputational expectations about the quality of the product. It can thus be said that a consumer's purchasing decisions are very much affected by the trademark, the trade dress and the goodwill or reputation held by the brand.

### 4.1. Trade Dress as an Effective Communication Tool

Trade dress can act as an effective communication tool as it indicates to the customers the very single source of the product and conveys information about the reputation and goodwill attached to the trade dress. Trade dress after trademark is one of the most common transmitters of the information as trade dress permits consumers to easily identify a good of a particular brand with a particular reputation, quality and goodwill. In the absence of trademarks or trade dress it shall become extremely difficult for customers to distinguish between goods of one manufacturer from that of another.

### 4.2. Protection of Firms from Misassociation

By taking protection over a trade dress under the trademark law, the reputation of the firm shall be protected from undesirable association which is the very purpose of the trademark law. By permitting the owner of the trade dress to hold exclusive rights in the use of it, the trademark law enables a part to protect its reputation from interference of others. By looking at the trade dress of a product the consumer will easily be able to identify the source of the product and thus, will be directly able to associate the product to a particular brand or manufacturer. By looking at the trade dress the customers come to know whom they are dealing with, who is the manufacturer, what reputation and goodwill is held by them in the market and what quality standards are maintained by them. Also, if an infringer will try to imitate a registered trade dress for a similar line of

products in which the registered trade dress is used, the owner can sue him for misrepresentation.[8]

### 4.3. Prevention of Goodwill Misappropriation

By giving trade dress protection the trademark law also prevents the destruction or misappropriation of another firm's goodwill. This form of protection arms the trade dress holder with a claim for unjust enrichment, the most common cause of action in trade dress cases. By having a trade dress registration, the owner of the trade dress can prevent another trader from stealing the reputation attached to the trade dress of the owner by misrepresentation.

### 4.4. Trade Dress never expires

Trade dress do not expire as long as they are in use in the trade and commerce and serve the very function of being the indicator of the source of the product.

## 5. Protection and Enforcement of Trade Dress

### 5.1. Common Law Protection of Unregistered Trade Dress in Passing Off Litigation

The unregistered trade dress, in litigation for trade dress infringement, is generally protected under the common law remedy of passing off for the purpose of restricting unfair competition. For the purpose of protecting an unregistered trade dress in a litigation for trade dress infringement the following three standards or requirements have to be fulfilled. Following is the three-prong test which has to be fulfilled while asserting an unregistered trade dress or unfair competition along with identifying elements of trade dress:

#### *5.1.1. Identifying elements of trade dress*

In a litigation for trade dress infringement it will first be required on the part of the plaintiff to identify the combination of all the elements or features of the product's packaging or design that make up the trade dress for which he alleges trade dress infringement or for which he seeks protection.

[8] M. M. Wong, "The Aesthetic Functionality Doctrine and the Law of Trade Dress Protection", 83(4) *Cornwell Law Review* 1124 (1998).

While identifying what features or elements of a product's package or product's design combine to form the trade dress the plaintiff also has to take the following factors into consideration:[9]

i. Whether the combination of elements is unique, distinctive and non-functional;
ii. Whether the combination is one which serves to help in identifying the source and the origin of the plaintiff's business or its goods or services; and
iii. Whether the combination of features is such which is being imitated by the defendant.

An unnecessary, very long list of all the elements or features which make up for the trade dress would be like running a big risk of being found unprotectable as including too many components that are common to other businesses or products or that are functional. Including too many elements in the list will result in limiting the scope of the protection and will make it difficult for infringement to be proved, as any person who intends to copy the same trade dress might just take a combination of some of the listed elements leaving one or two thereby preparing the same trade dress and use those changes to argue non-infringement. Thus, fewer the number of elements more will be the scope and the possibility of getting the protection. Also, it will be easier to prove that the combination is unique.[10]

### *5.1.2. Inherent distinctiveness or acquired distinctiveness (Secondary meaning)*

Of the three-prong, the first prong requires the plaintiff to prove "the inherent distinctiveness or secondary meaning of its trade dress". A trade dress is said to be inherently distinctive if it clearly indicates the source of the product and clearly indicates that a particular product originates from a particular manufacturer or belongs to a particular brand and allows the consumers to clearly distinguish between that product and the product of the competitors. Inherently distinctive trade dress can be protected without any proof of acquired distinctiveness. Only fanciful, arbitrary and suggestive trade dress are inherently distinctive.

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[9] L. Stevens and S. Hardin, "Protecting and Enforcing Trade Dress", *American Bar Association* 22 (2009).

[10] L.A. Heymann, "Overlapping Intellectual Property Doctrines: Election of Rights versus Selection of Remedies", 17 *Standford Technology Law Review* 115-117 (2013).

In the case of *Two Pesos, Inc.* v. *Taco Cabana, Inc.*,[11] the Court held, that "the conclusion of the district court and court of appeals that the restaurant design in question was inherently distinctive and thus required no showing of secondary meaning. The court noted that to require secondary meaning in the case of an inherently distinctive trade dress would penalise persons just starting a business who have not yet developed customer recognition of their mark". On the other hand, if a trade dress is not inherently distinctive but is a descriptive trade dress then the plaintiff in order to succeed in his claim and to protect his trade dress, will have to prove that the trade dress has acquired secondary meaning or has acquired subsequent distinctiveness. It can be proved that a trade dress has acquired secondary meaning only if it is proved that the particular trade dress by way of long term and extensive usage, sales and promotion, advertisement, etc., has acquired distinctiveness and serves an identifying function. Obtaining secondary meaning requires a period of time that is sufficient to create an association in the consumer's mind between the design and the producer of the goods. Enough marketing and promotion to demonstrate that a connection exists between the design trade dress and the producer in the mind of the average consumer. Secondary meaning is defined as the "mental association by a substantial segment of consumers and potential consumers between the alleged mark and a single product". Only generic trade dress are the ones which *per se* are not considered as inherently distinctive and the acquired distinctiveness needs to be proved in order to get legal protection for the same.[12]

In order to get trademark protection over a product design trade dress, it is necessary to prove that the trade dress has acquired a secondary meaning or has acquired distinctiveness even though the particular product design is already inherently distinctive. In many cases it has been held by the court that where it is difficult to identify whether a trade dress is a product design or a product packaging trade dress, *per se* it should be considered as a product design trade dress thereby requiring secondary meaning to be proved in order to get legal protection. On the other hand, product packaging trade dress can be protected if either inherent distinctiveness or acquired distinctiveness of the product is proved. Unlike product design trade dress, it is not necessary to prove that a particular product packaging trade dress has also acquired a secondary meaning, if it is

[11] 505 U.S. 763, 112 S. Ct. 2753 (1992).

[12] M. A. Shpetner, "Determining a Proper Test for Inherent Distinctiveness in Trade Dress", 8(3) *Fordham Intellectual Property, Media & Entertainment Law Journal* 990-991 (1998).

already inherently distinctive. Both the conditions are alternatives to each other and are not required to be fulfilled in addition to each other. Thus, while deciding trade dress cases the courts take out considerable amount of time to establish whether the case involves product design trade dress or product packaging trade dress and in many cases it has been held by the courts that where it is difficult to identify whether a trade dress is a product design or a product packaging trade dress, *per se* it should be considered as product design trade dress thereby requiring the secondary meaning to be proved by the party claiming rights in order to get legal protection under the trademark law.[13]

*5.1.3. Non-Functionality*

A plaintiff in litigation for trade dress infringement would want to prove that the trade dress is decorative or ornamental and does not have utilitarian functions or improve the performance of the product. A defendant may argue that the asserted trade dress is essential to the use or purpose of the article or affects the cost or quality of the article, and that permitting exclusive use of the trade dress would put competitors at a significant non-reputation-related disadvantage. Thus, for the purpose of determining whether a trade dress is functional or not, the trade dress will have to go through the tests of functionality doctrine.

The two apparent purposes for the functionality doctrine are to protect and provide for fair competition in the market and to separate and distinguish between the subject matter for trademark and patent protection. The second function is related to preventing the trademark law from undermining the utility patent law by providing trademark protection for something that is a subject-matter for patent protection. This is particularly troublesome when a party claims trademark protection for trade dress that subject to an expired utility patent. Here, the assertion of trademark protection is used to extend intellectual property protection beyond the time prescribed by patent law (20 years from the filing date). The time period for patent protection is constitutionally limited and cannot be for perpetuity. Patent protection is conditioned upon a patent office determination that the invention is novel, non-obvious, has industrial application and is in compliance with the written description and enablement requirements. However, a

[13] E. Misterovich, "Inherently Distinctive Trade Dress", (June 3, 2015), *available at*: https://revisionlegal.com/trademark/trademark-law/inherently-distinctive-trade-dress/ (last visited on March 3, 2022).

trademark can be protected so long as it is used in commerce, subject to some exceptions. Thus, functionality serves to police trademarkable subject-matter or channel certain subject-matter to utility patent law.[14] Thus, functionality doctrine encourages a legitimate competition by maintaining a proper balance between trademark law and patent law.

The first test of functionality doctrine is called the "Comparable alternatives test" applying which the courts will ask whether giving trade dress protection to a certain combination of features and elements would leave a variety of comparable alternative features that competitors may use to compete in the market. If the answer for the question is no, i.e., giving trade dress protection does not leave room for any alternatives to exist, then such a feature or combination of features is functional, on the other hand, if giving trade dress protection leaves room for alternatives to exist which can be used by competitors for competition then it is non-functional.[15] This test represents the very idea that fair market competition for a product is duly hindered and frustrated if one of its features or a combination of features precludes the marketing of equivalent goods.

The second test is named as the "Essential to usage test" and as the name itself suggests the test poses the question whether a feature or a combination of features is essential to the usage of a product. It has been defined by the courts that, "an essential feature is the one that is dictated by the functions to be performed". Under this test a feature will be said to be functional if it confers a benefit that is indispensable and necessary to the product's use. In case the feature is a non-essential one or the one which is not necessarily or indispensably required for carrying out the main function of the product it is a non-functional feature and hence might get trade dress protection.

The third test of functionality doctrine is named as the "Relation to Use Test" which has been created by the Third Circuit Court of United States. Under this test the question that is posed is whether the feature is related to the utilitarian function of the product. If the feature is one that is highly related to the product's intended use, it is functional. However, if the feature is not so related it is non-functional.

The fourth test for the same is the "Ease of manufacture test" which poses the question as to whether a competitor can manufacture the feature or combination of features in dispute at the same or at a lower cost if trademark protection is given to that

[14] B.I. Johnson, "Trade Dress Functionality: A Doctrine in Need of Clarification", 34(1) *Campbell Law Review* 125 (2011).

[15] M.S. Mireless, "Aesthetic functionality", 21 *Texas Intellectual Property Law Journal* 155 (2013).

feature or combination of feature. If the competitor will not be able to manufacture the feature or combination of features, then the product is functional.

*5.1.4. Likelihood of Confusion*

Once it is established that trademark rights exist for the particular trade dress the next question to be decided is whether there is a likelihood of confusion between the plaintiff's and the defendant's trade dress because a protectable trade dress is infringed when a "likelihood of confusion" exists between the defendant's trade dress and the plaintiff's trade dress.[16] It thus has to be proved that there is a likelihood of customer confusion as to its origin, sponsorship, or approval due to similarity between plaintiff's and the defendant's trade dress.

If a plaintiff and defendant have very similar trade dress and provide competitive or complimentary products or services to the same or similar target customers through similar distribution channels, then the risk of confusion is increased and a plaintiff may be able to prevail on proving a likelihood of confusion based just on an analysis of the likelihood of confusion factors, without proof of actual confusion of consumers.

If the trade dress is less similar and/or the parties do not directly compete, a plaintiff's chances of success in proving a likelihood of confusion will increase if- (1) it can present evidence that some consumers actually have been confused as to source, origin, affiliation or sponsorship due to the similarity of the trade dress; and/or (2) it engages a market research firm to conduct a survey that indicates a significant level of consumer confusion. Defendants may also engage an expert to conduct a survey to prove that confusion is unlikely.

In determining likelihood of confusion, courts consider and balance a non-inclusive list of factors such as the following:

i. The strength of the trade dress (the more unique or well-known the trade dress is, the broader the scope of production);
ii. the similarity of party's trade dress;
iii. the similarity of the goods or services sold under the trade dress;
iv. the similarity of the distribution channels and customers for the products or services at issue;

[16] J.S. Edelstein and C.L. Lueders, "Recent Developments in Trade Dress Infringement Law", 40 *The Journal of Law and Technology* 109 (2000).

v. the sophistication of purchasers and the expense of the product or services at issue (sophisticated purchasers may be less likely to confuse trade dress, and more care is likely to be exercised in the purchase of expensive products);
vi. the similarity of means and methods of advertising and promoting the products or services at issue;
vii. the defendant's intent in adopting its trade dress (i.e., did the defendant do so in good faith or with the intent to imitate the plaintiff's trade dress); and
viii. whether there is evidence of actual confusion of consumers or other relevant groups (is not necessary for a likelihood of confusion, but is strong evidence of likely confusion).

### 5.2. Protection of Trade Dress through Registration as per Statutory Laws

According to the trademark law of India for getting trademark rights over a trade dress or in other words for getting trademark protection over a trade dress only the two conditions or requirements have to be fulfilled, i.e., non-functionality and the requirement of inherent distinctiveness or secondary meaning. The third condition which was supposed to be proved in case of a litigation for an unregistered trade dress infringement, i.e., likelihood of confusion, need not be satisfied for getting federal registration and the application has to be applied in the prescribed manner for the same.

#### *5.2.1. Claims for trade dress infringement*

To establish a claim for trade dress infringement, a plaintiff must prove: (1) that it owns protectable rights in and to the trade dress, including that the trade dress (a) that it is inherently distinctive or has acquired secondary meaning and (b) that it is not functional; (2) that the plaintiff began the use of its trade dress prior to defendant's use of its similar trade dress (or, if the trade dress is not inherently distinctive, that its trade dress acquired secondary meaning before defendant's trade dress did); and (3) that the defendant's use of its trade dress is likely to cause confusion of the consuming public as to the source and origin of goods or services or as to affiliation or sponsorship of a party or its goods or services.

*5.2.2. Defences available to the defendant*

i. Non distinctiveness of trade dress/lack of secondary meaning: A defendant in defence may argue that the trade dress in question is a commonplace and is not inherently distinctive, or that the product packaging or the product design trade dress has not acquired any secondary meaning with the passage of time among the public consuming the same as an indicator or identifier of the source and the origin of the product.

ii. Functionality: As has already been discussed earlier, a feature or combination of features is not protectable as trade dress if it is functional in nature. If trade dress is unregistered, then the defendant can take the defence of functionality if he proves that the feature of the product is functional in nature. If the trade dress is already registered, then it is for the defendant to prove that the feature of the trade dress is functional.

iii. Fair use defence: There are two types of non-infringing uses of another's trade dress that are known under the label of fair use. A "classic fair use" involves a junior user who uses a name, term or device, not in a trademark sense to identify the source or origin of its goods or services, but in a descriptive manner merely to describe its own goods or services. The other type of fair use is "nominative fair use", in which a defendant uses a plaintiff's trade dress in a non-confusing way to identify the plaintiff or plaintiff's goods or services. For example, a comparative advertisement can use another's trade dress to identify the product being compared.[17]

## 6. Protection of Trade Dress through the International Treatise

### 6.1. Trade Related Aspects of Intellectual Property (TRIPs) Agreement

Despite many proposals, suggestions and disputes, a consensus among the international societies could not be reached and thus, neither there is a separate mention of trade dress under the TRIPs agreement, nor is there any separate agreement for trade dress like the Madrid Agreement for Trademarks. In most of the treaties, however, registrability of three-dimensional shapes has been recognised by most of the treatise.

[17] A. Tiwari, "Passing off and the law on 'Trade Dress' Protection: Reflections on Colgate v. Anchor", 10 *Journal of Intellectual Property Rights* 480 (2005).

Under section 2, part II of the TRIPs Agreement substantive provisions related to trademark are contained. The TRIPs Agreement under Article 15.1 defines trademark as "any sign or any combination of signs capable of distinguishing the goods and services of one undertaking from those of other undertakings". A plain reading of the definition clearly shows that the TRIPs Agreement has neither included nor excluded the protection of trade dress, although, it is already known that the definition of a trademark is broad enough to include the protection of three-dimensional marks since atleast some shapes, some product packaging and designs are inherently capable of distinguishing any relevant goods and services, and of those that are not, are most likely capable of acquiring distinctiveness through use.[18]

### 6.2. The Madrid Agreement and the Madrid Protocol

The Madrid Agreement and the Madrid protocol (the Madrid System) has totally changed international system for the registration of trademarks. The Madrid System allows the nationals of the countries who are the members of the agreement to protect their trademarks for any goods or services, in any or all of the other member countries *via* filing of single international application at one place, in one language. This requires minimum formalities to be complied with and also requires the fee for filing to be paid only once, in one currency. Three dimensional shapes are registrable as trademarks under the Madrid Agreement. It was made mandatory by Madrid protocol or member states to provide for protection of three-dimensional marks as a pre-requisite for joining the protocol, thereby throwing a light upon the importance of protection of three-dimensional marks.

## 7. Protection of Trade Dress at the Domestic Level: Indian Regime

The law of trademark in India has undergone considerable change over the years. In the early stages of development, a distinction was made between trademark and trade dress. However, nowadays, this distinction has been done away with and has disappeared, wherein the courts have taken the practical reality into consideration that the choices of the consumers are not only affected by the brand names that could be seen on the products but also by the overall appearances of the product, the look and the feel of the product

[18] S. Sim, *A Comparative Study of Trade Dress in the U.S. and South Korea: Rethinking on the Laws and Precedents in the Apple v. Samsung* (2017) 36 (Thesis, Indiana University Maurer School of Law).

packaging or its design. The very rationale behind trade dress protection is to avail the modernization of law by recognising colour combination and packaging of goods as trademark, which is intended to prevent a consumer from buying one product under the belief that it is another.

### 7.1. Trade Dress Protection under the Trademark Act, 1999

Unlike United States which gives recognition to the concept of trade dress under Section 43(a) of the Lanham Act, in India there is no separate provision for the protection of trade dress under the existing trademark law. In India the introduction of the concept of trade dress took place after the replacement of Trade and Merchandise Marks Act, 1958 by the amended Indian Trademark Act, 1999 through the following definitions:

m) "mark" includes a device, brand, heading, label, ticket, name, signature, word, letter, numeral, shape of goods, packaging or combination of colours or any combination thereof;

q) "package" includes any case, box, container, covering, folder, receptacle, vessel, casket, bottle, wrapper, label, band, ticket, reel, capsule, frame, cap, lid, stopper and cork.

The concept of trade dress has been incorporated in the Indian Trademark Act in the language of Section 2(zb) which defines a trademark in inclusive terms as covering elements such as shape of goods, packaging and colour combinations - as long as such elements are capable of graphical representations and have the ability to distinguish the goods or services of one person from those of others.

This statutory basis is further reinforced by section 10 of the Act which provides that a trademark may be registered with limitations for colour and if a trademark is registered without limitation of colour, it shall be deemed to be registered for all colours. Hence, by looking at the new definition of trademark, mark and package it can be said that even the Indian law comprises all the elements of the trade dress as under the US law.[19]

[19] R. Mohanty, *Trade Dress Protection: An Indian Perspective* 45-49 (2021) (Report, National Law School of India University, Bangalore, DPIIT-MCI Chair on IPR & CIPRA).

### 7.2. Common Law Protection to Unregistered Trade Dress under the Law of Passing Off and Unfair Competition

In India, trade dress with respect to passing off is protected under the Trademark Act, 1999 wherein the common law rights of a trademark owner to take an action by filing a suit for passing off the goods of the defendants as those of the plaintiff have been recognised. In order to win the suit, it is required by the plaintiff to prove the goodwill of his product in the market and will also have to prove the association of the trade dress for which he seeks protection with the source. After this, the next step to be performed would be to find out whether the intention of the defendant behind copying the trade dress of the plaintiff was to create a deception in the minds of the general public and the consumers of the product by making them believe that the source of goods of the defendants are the plaintiff, i.e., the source of goods of both the plaintiff and the defendant are the same or that the plaintiff has sanctioned the selling of his products with that particular trade dress by the defendants. Lastly, it has to be proved by the plaintiff that the act of the plaintiff of passing of the trade dress, i.e., of misrepresentation has caused considerable damage to the goodwill of the plaintiff.[20]

In India most of the cases regarding trade dress infringement come from the medicine and pharmaceutical sector where the defendants are alleged of copying the get up of the medicine manufactured by the plaintiffs. In the case of *Novartis AG* v. *M/S Wanbury Ltd. and Anr.*, the plaintiffs had made a prayer to the court that the defendant should be restrained from using a trade dress, which is deceptively similar to the trade dress used on the goods of the plaintiff sold under the trademark TRIAMINIC. The plaintiff which was a Swiss Company manufactured and sold cough syrup under the trade name CROMINIC, where the bottle of cough syrup had a packaging similar to that of the plaintiff. In the present case the court held that the packaging of the product under the tradename CROMINIC including the colour, fonts, style, letters, presentation, composition, etc., was entirely different from that of TRIMINIC. On the issue of carton and the label as the plaintiff on the designs of the same had taken no copyright protection,

[20] T. Sateesha, "Trade Dress- An Evolving Concept Under the Ambit of Intellectual Property Rights", *Indian Journal of Law and Public Policy* (2022), *available at*: https://ijlpp.com/trade-dress-an-evolving-concept-under-the-ambit-of-intellectual-property-rights/ (last visited on April 23, 2022).

thus, the court held that there was no similarity and therefore, the court refused to grant any injunction in favour of the plaintiff.

## 8. Judicial Pronouncements and Case Laws

There has been a gradual shift in the court's approach to trade dress cases. Until recently, the trend was to examine trade dress infringement in the context of the similarity of a trademark and whether the mark was copied alone or with a label. The copying of labels was a supplemental argument to corroborate bad-faith adoption and to help establish trademark infringement. More recently, the courts have granted injunctions where rival marks are completely different and even in respect of the shape of goods.

### 8.1. Case 1- *Cadbury India Limited and Anr.* v. *Neeraj Food Products*, 142 (2007) DLT 724

A company by the name Neeraj food products launched a food product similar to 'Gems', a popular chocolate product by Cadbury. Their product was called 'James Bond' and the colour schemes and nature of the food were similar. This was contested by Cadbury in whose favour there was a decree given by the Delhi High Court that restrained that the defendant's trademark JAMES BOND was phonetically similar to the plaintiff's trademark, GEMS and it was further held by the court that the packaging of the defendant's product was also similar to the packaging of the plaintiff's product and on the basis of the same observation the court restrained the defendant from using the trademark and the packaging as trade dress. The court held that there was a likelihood that unwary purchasers would be deceived that the goods they were purchasing were those of plaintiff.

### 8.2. Case 2- *Colgate Palmolive Co.* v. *Anchor Health Beauty Care Pvt. Ltd.*, 2003 (27) PTC 478 (del)

Colgate Palmolive sought an interim injunction against Anchor Health and Beauty Care Pvt. Ltd. for use of the trade dress and colour combination of red and white in relation to identical products, i.e., tooth powder. However, the marks used by the two parties were completely distinct, being Colgate and Anchor. The court held that it is the overall impression that a consumer gets as to the source and origin of the goods from visual impression of the colour combination, shape of the container, packaging, etc., if an illiterate, unwary and gullible customer gets confused as to the source and origin of the

goods which he has been using for longer period by way of getting the goods in a container having particular shape, colour combination and get-up, it amounts to passing off.

In other words, if the first glance of the article without going into the minute details of the colour combination, get up or lay out appearing on the container and packaging gives the impression as to deceptive or near similarities in respect of these ingredients, it is a case of confusion and amounts to passing of one's own goods as those of the other with a view to encash upon the goodwill and the reputation of the latter.

To establish an action of passing off, the similarities and not the dissimilarities, should be taken into account. Therefore, the words "Colgate" and "Anchor" being distinct, the ingredients of trade dress, get up, colour combination, and lay out of the container or packaging become important for determining the offence of passing off.

The decision of the high court in the present case came as a fresh air because it clearly reinforced the role played by trade dress as an indicator or identifier of the source of the product and the need for its protection to do away with consumer confusion.

**8.3. Case 3 - *Gorbatschow Wodka KG* v. *John Distilleries Limited*, 2011 (47) PTC 100 (Bom)**

Gorbatschow Wodka is one of the most premium brands of Vodka in the world. Its bottles have a unique bilbous shape inspired by Russian architecture. John distilleries, an Indian company launched a product called Salute Vodka with a similarly shaped bottle, but a different trademark and colour of label. Though John distilleries argued that the consumers of Gorbatschow Vodka are affluent and can never get confused by an economic brand like Salute, the Bombay High Court decreed that the shape of the bottle is identical and deceptively similar to the one used by the plaintiffs and that it will tarnish the image of the plaintiff if the defendant is allowed to sell the same. Thus, the defendant, John Distilleries was stopped from using the shape of the bottle for selling their products because the defendants had no valid explanation for using such a shape for that was strikingly similar to the shape of the bottle used by the plaintiffs. The court held that if the defendant were allowed to dilute the distinctiveness of the plaintiff's mark, then other infringers would be emboldened to infringe upon the plaintiff's right.

**8.4. Case 4 - *L'Oreal India Pvt. Ltd.* v. *Henkel Marketing India Ltd.*, 8 2005 (6) Bom CR 77**

The packaging of L'Oreal products "GARNIER-COLOUR NATURALS" and the product of Henkel Marketing India Ltd. "PALETTE-PERMANENT NATURAL COLOURS" was alleged to be identical. L'Oreal instituted proceedings for passing off arguing that it was a substantial reproduction and/or colourable imitation of L'Oreal label/trade dress.

The court emphasized on the deceptive similarity between the trade dresses of the two products which could create confusion in the minds of the consumers. It was held that, since the trademark of both the products was clearly inscribed in the respective trade dresses, there was no chance of confusion among the consumers who are mostly from the middle class or upper middle class. Thus, trade dress infringement was not made out and L'Oreal lost the proceedings.

## 9. Conclusion

The judicial precedents stated above clearly illustrate that there has been a change in judicial thinking in trade dress cases in India. The protection of trade dress assumes great significance in a country such as India, where a large percentage of the population is illiterate and live in rural areas. Thus, colour scheme and packaging play an important role in creating brand association. Further, product recall is clearly linked to the distinctive get-up and packaging of a product. In other words, trade dress helps marketers to reach all sections of society, including those who cannot read the trademark on the product. The importance of trade dress has been reinforced by judicial precedents which have made it clear that products are purchased not just by reference to brand names, but also their overall presentation.

It can also be concluded from the above discussion that there has been no instance wherein trademark rights have been conferred over a trade dress *via* the registration as per the statutory laws. On the contrary, a manufacturer has to wait for his or her trade dress to be passed off by the other, misrepresenting it as his own thereby causing damage to the reputation and the goodwill of the former, so that the same can be recognised and protected as a trade dress in a passing off litigation. Thus, it can also be said that not an adequate protection is given to trade dress in the Indian jurisdiction within

the trademark regime as registration of trade dress through the procedure mentioned in the statutory laws is still not allowed and continues to be protected through the common law remedy of passing off in litigations.

From the above it can finally be concluded that as trade dress is a field that is still emerging and growing spontaneously and dynamically as a result of different trends in judicial interpretations in each case presented before the court on trade dress, the legal jurisprudence on the same is not very rich yet. Thus, as for now it can be recommended that, as the jurisprudence on trade dress is still under construction and growing, trade dress can be recognised as a separate field or be given a separate identity as an intellectual property within the trademark regime *via* making amendments in the law and later on when there is considerable rich jurisprudence on the same a *sui generis* system of protection can be bought into force for the protection of trade dress as a separate intellectual property wherein easy procedure for the protection of trade dress through registration are established.

# INTELLECTUAL PROPERTY A ROADWAY TOWARDS THE PARADIGM OF BIG DATA AND RPA IN HEALTHCARE DURING COVID-19

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**Abstract**

*The massive outbreak of the Novel Corona Virus brought the world to its knees. It also exposed the existing inequalities of income, age, race, sex, geographical location, etc., which led to the disproportionate impact of the pandemic on the vulnerable sections of the global society. This dismal picture of the healthcare system has much to do with inadequate and indiscriminate access to medicines, Covid testing kits, vaccines, and other facilities. As we all know, in the technological arena, where every possible task is carried out through AI technology Big Data and Robotic Process Automation (RPA) are the slashing innovations in healthcare. Big Data helps store a large amount of data, including patient records, payment details, and other sensitive information that requires secure protection under Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules 2011. RPA helps in auditing patient records; thus, the issue that the authors would like to introduce will be apparent to all the readers. The authors' primary focus is on the utilization of RPA & Big Data in healthcare, and a related issue arises with the access to medicines and privacy in the light of Intellectual Property under the Indian Patents Act 1970. We all know that IPR protects technological innovations like RPA and Big Data. In this article impact of IPR will be discussed thoroughly with the access to medicines and vaccines.*

**Keywords:** Big Data, Robotics, Process Automation, Intellectual Property Rights, Healthcare, AI, Covid-19, Technology.

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## 1. Introduction

Big data refers to massive amounts of information which could be used to do exceptional actions.[1] It has captivated the attention of several individuals for a couple of years due to the tremendous growth that it possesses. Government and non-governmental entities collect, retain, and evaluate data to improve their goods. Significant information assets in the healthcare business include patient information, patient health records, medical examination findings, and internet of things devices. Medical science also generates big meaningful data for public healthcare. It must be appropriately managed and evaluated to get relevant information from this data.

However, finding big data to find a method eventually resembles finding a needle in an exceeding haystack. Various difficulties are attached to every stage of massive processing, which will overcome by adopting augmented technology systems for large data analysis. Consequently, to attain applicable solutions to reinforce public health, tending professionals should be equipped with the required infrastructure to systematically form and analyze big data. Big data management, analysis, and economic interpretation might alter the sport by bridging the gap to new methods for up-to-date healthcare. Together with the healthcare industry, different companies are operating arduously to turn this potential into higher services and monetary benefits. Many of these are contingent on ongoing technological advancements and indicate the growing trend toward personalized medicine. With the rise of technology in every field particularly healthcare, Robotic Process Automation (RPA) has been utilized to sort out the improvement of knowledge in medical care deliveries.

Earlier, a patient suffered a lot from the non-availability of doctor's appointments until the billing of the medicines and check-ups. RPA Technology is one of the sophisticated growing technologies that can implement better facilities daily to serve more patients and improve patient outcomes without incurring high costs. Alternatively, causing undue strain on workers. With the revolution of healthcare in innovative healthcare technology in the 5$^{th}$ generation, RPA can virtually automate any repetitive and manual task critical to healthcare operations and processing. It may inspire

[1] Studylib.Net, "3D Data Management: Controlling Data Volume, Velocity, and Variety", *available at*: https://studylib.net/doc/8647594/3d-data-management--controlling-data-volume--velocity--an (last visited June 01, 2022).

a new character by using intelligent technologies that gather essential information from various domains, including partnership networks, electronic health records, finance systems, payer portal systems, and finance technologies. As the authors have already thrown some light on how RPA generally works, the authors would light on Big Data

During Covid 19, when it threatened the world due to the deadly Coronavirus, healthcare management and health information systems were significant. Artificial Intelligence (AI) helps RPA to reduce the time-consuming factor in the health care billing process. By Digitalization, integration, and effective use of big data healthcare organization from a single network of medical practitioners to a large group of the accountable network which has significant benefits in R&D of the pharmaceutical industries, public health etc. Given the amount of research directly affecting the medical field, writers currently shed information on the creation of slashing treatments. Intellectual Property (IP) law has become an essential presence in the scene. While protecting is a necessary element of biotech and clinical research, increasing the incentives for development and production, other IP areas are also crucial in the strategy of the majority of healthcare-related firms. Here, we look at the connections between medical services and care and how those connections will develop in the future.

The main aim of performing this analytical research is to identify the gaps in understanding the utilization of RPA and Big Data as a tool for helping the researchers in healthcare during the pandemic and identifying the newest form of technology that researchers are prominently using, scientists worldwide. It would help the readers to understand the current emerging trends of the utilization of RPA & Big Data in healthcare sectors as of now in Covid 19. In addition, the authors will contemplate the pros and cons of the current emerging technology, which has significant inception. Secondly, the chapter will deal with the recent Intellectual Property Rights (IPR) protection and its management scope in all forms.

## 2. Overview of Big Data in Healthcare System

Information has been the cornerstone of the more incredible organization and new advancements. The more data we have, the more we can arrange ourselves to offer the most outstanding results. That is why data collecting is such a vital element of every company. We can use this data to estimate the latest situation under specific parameters

and upcoming projections. As we became increasingly aware of this, we began to generate and collect information about virtually everything by makingtechnological breakthroughs in this regard.

Today, we are overwhelmed with information from all aspects of our lives, encompassing social activities, research, work, healthcare, etc. Sometimes senses could compare our present situation to a considerable amount of data. Advanced technologies have enabled us to create a growing amount of data, which has grown unmanageable with current technologies. As a result, the term "big data" was invented to describe massive amounts of data.[2]

### 2.1. Concept and Definition

Big data refers to massive volumes of data that cannot be administered by standard software or a virtual platform. It has a large amount of usage preservation, processing, and analytical power. The term "Big" refers to a vast amount of data. Nowadays, from research to academics, Big Data is useful for many reasons that cannot manage standard software or virtual platforms. As a result, Artificial logarithms and the merging of innovative equations are becoming needful to obtain a large quantity of data.

#### *2.1.1. Healthcare as a significant source*

Healthcare is a multifaceted concept that seeks to prevent, diagnose, and cure specific diseases or impairments. The essential components of a healthcare system include healthcare providers (physicians or nurses), health facilities (clinics, hospitals for providing medications and other diagnosis or treatment technology), and banking institutions to support the first two. Health professionals include dentists, doctors, midwives, nurses, psychologists, physiotherapists, etc. Given the seriousness of a situation, many levels of healthcare are required.[3]

With the development of computer systems and their potential, the Digitalization of all clinical evaluations and medical records in healthcare systems has become a familiar and widely accepted practice. According to various scientists,

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[2] J. Gubbi, R. Buyya, *et.al*., "Internet of Things (IoT): A Vision, Architectural Elements, and Future Directions", 29(7) *Future Generation Computer Systems* (2013), *available at*: https://dl.acm.org/doi/10.1016/j.future.2013.01.010 (last on visited January 04, 2022).

[3] S. J. Reiser, "The Clinical Record in Medicine. Part 1: Learning from Cases", 114 *Ann Intern Med*. 902–907 (1991).

electronic health records (EHR)[4] is referred to as "electronic health records for patients which encompass information relevant to patient details which are there in an electronic system. It captures, transmits, receives, stores, retrieves, links, and manipulates multimedia data to provide healthcare and health-related services."[5]

*2.1.2. Evolution of robotic process automation in utilization smart health care*

When we talk about the term "health care",[6] the first thing that comes into the reader's mind is the USSR declaration for healthcare. The term "healthcare" is defined as the efforts given by medical practitioners to maintain the physical/ emotional and mental growth of well-being. Earlier, the techniques were not well equipped for the treatment, whereas, in the 21st century, medical technologies and treatment procedures are well advanced. Thus, the concept of smart healthcare comes into the picture. According to Blue Stream, smart healthcare means services rendered to the patient through wearable devices and with the help of advanced medical techniques or diagnostic tools.

Currently, due to the rapid increase of Corona Virus or, in short, Covid-19, traditional health care is unable to accommodate everyone's needs. Moreover, the concept of Telemedicine, Robotic Process Automation, and its utilization in smart healthcare came to the forefront.

The concept of "Telemedicine" has been considered a natural evolution of smart health care. The term "Telemedicine" was coined in the 1970s. The Greek word "tele" means "distance" and "mederi" means "heal".[7]

Medical science is getting advanced day–by–day with the latest technique that utilizes digital operations, e-services, and Artificial Intelligence; however, its application is not recognized, and the healthcare industry must still evolve. Efficiency and accuracy have risen to the top of the priority list for healthcare organizations, especially in the light of the current pandemic situation, and having a secure, scalable, and resilient digital

4 Po-Yen Wu, Chih-Wen Cheng, *et.al*., "Omic and Electronic Health Record Big Data Analytics for Precision Medicine", 64 *IEEE Trans Biomed Eng*. 263–273 (2017).

5 M. Reisman, "EHRs: The Challenge of Making Electronic Data Usable and Interoperable", 42 *P T*. 572–575 (2017).

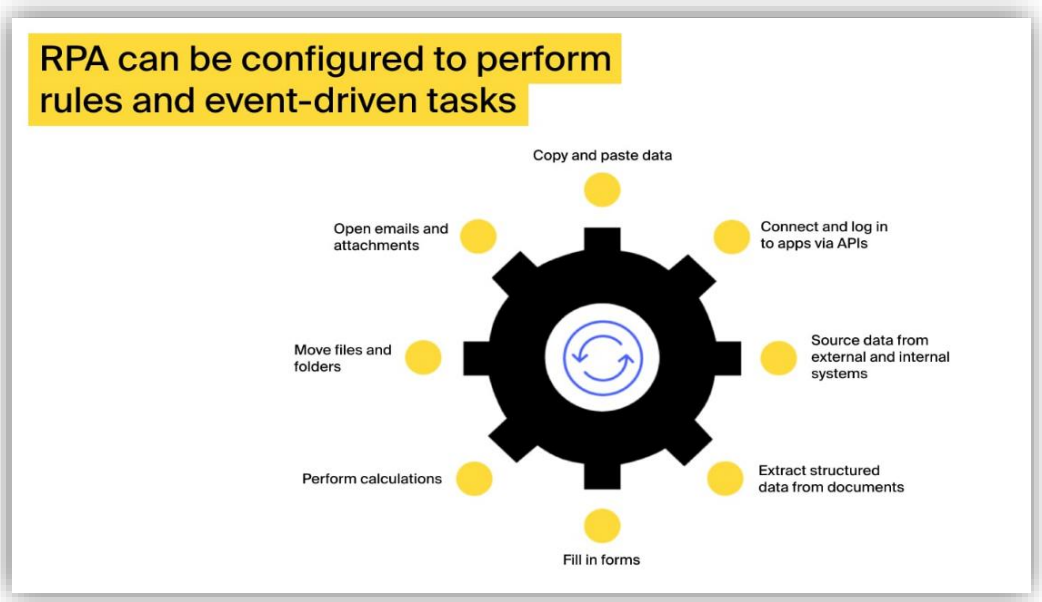
6 G. Sageena, M. Sharma, *et.al*., "Evolution of Smart Healthcare: Telemedicine During COVID-19 Pandemic", 102(6) *Journal of The Institution of Engineers India (Series B)* 1319–1324 (2021), *available at*: https://doi.org/10.1007/s40031-021-00568-8 (last visited on August 06, 2022).

7 E. M. Strehle and N. Shabde, "One hundred years of Telemedicine: Does this new technology have a place in paediatrics?", *available at*: https://doi.org/10.1136/adc.2006.099622 (last visited on August 06, 2022).

workforce has become a requirement. Robotic Process Automation (RPA) can be highly beneficial in this situation. RPA enables businesses to work smarter by automating repetitive, time-consuming manual operations. It allows more efficient use of human resources by putting people in high-value-added jobs and increasing customer satisfaction and interaction. When we say some presentation or any form of technology is a 'smart' representation, it reflects how the whole system has been summarized adequately. So, in the healthcare industry, smart healthcare refers to the proper management of hospital systems in one platform via virtual mode. When the deadly Corona Virus or Covid-19 threatened the world in 2020, RPA was already being used to speed up operations in healthcare, assisting organizations and professionals in dealing with the chaos caused by Covid-19.[8]

Figure 1.1, below is the diagrammatic representation of RPA in smart healthcare. When the patient gets registered, they can pay the bills of the reports online. The leading cause of these issues is employees' reliance on manual labour in the documentation and digitally transferring written records. Maintaining those digital records which needed to be updated manually required even more time from personnel, diminishing face-to-face interaction with patients. Therefore, RPA comes in handy, which signifies handling massive amounts of data. Simultaneously, storing vast amounts of files and information, monitoring the operation of a healthcare unit's back-office and front-office support, and other similar tasks that appear tedious to ordinary humans. Moreover, technology changes society and fuels the network connecting industries, creating enormous changes with the new generation of technology.

[8] S. Sarker, L. Jamal, *et.al.*, "Robotics and Artificial Intelligence in Healthcare during COVID-19 Pandemic: A Systematic Review", 146(103902) *Rob and Autonomous System* (2021), *available at*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/ (last visited on August 06, 2022).




**(1.1.)**

**Fig.: 1.1. Diagrammatic Representation of RPA in Smart Healthcare**

**Image Source:** *https://itrexgroup.com/blog/rpa-in-healthcare/# (last visited on August 06, 2022)*

### *2.1.3. Robotic Process Automation*

Robotic Process Automation is often known to us as RPA.[9] It is a kind of technology where specific software bots are utilized to get a result. As it is a software-based bot, it automatically operates the business procedure by knowing the existing procedures and practices. In general, it minimizes the human workforce in an online mode and performs all kinds of repetitive work. Thus, it reduces the human workforce in an online mode. In today's 21st century, in the arena of business, competition becomes much harder; therefore, all of the competitors wanted to move a step ahead for future perspective. Henceforth the utilization of RPA becomes a boon in increasing the business's profits & also increases the efficiency of the business houses. Modernized technology helps the human workforce develop skills and knowledge in a particular domain. According to researchers, in the next few decades, the utilization of RPA will be more significant as it has already gained a lot of recognition worldwide.

[9] *Ibid*.

*2.1.4. Overview of Robotic Process Automation in Healthcare Sectors*

In terms of revenue and employment for large-scale workers, Healthcare Centres are one of the prominent sources.[10] It consists of medical equipment, Clinical trials, Mediclaim, medical instruments. Although it is healthcare 5.0 generation, yet certain challenging tasks are still there like appointment schedule of patients in accordance to the doctor, managing all the internal and external sources through Clinical applications, Mediclaim, etc. It is becoming complex as manual labourers cannot handle all the tasks single-handed; therefore, in this regard, RPA has been introduced in Healthcare Centres to increase the efficiency of the employees/staff in the various administrative department.[11] It also reduces the chances of errors caused by employees/staff due to lack of complex procedures like enrolment of patient details, appointment schedule of patients, Mediclaim, documentation, preparation of invoices. Further, RPA also sorts out the problem about the viability of drugs into the market for safety precautionary measures.[12]

**2.2. Benefits of RPA in Healthcare Sectors**

*2.2.1. Capability to make better use of Data*[13]

Being digital has its own set of advantages. They are using RPA in conjunction with Optical Character Recognition (OCR) aids in digitizing all paperwork, indexing it, and storing it for future reference. RPA assists in processing health claims, medical diagnosis reports, and updating the same set of information parallel to various healthcare enterprise systems, eliminating swivel chair operations. The initial digitized data is now available for slicing, dicing, and re-purposing in more creative and efficient ways to provide innovative healthcare.

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10 Grandview Research, *Report on Robotic Process Automation Market Size, Share & Trends Analysis Report by Type, By Service, By Application, By Deployment, By Organization, By Region, and Segment Forecasts, 2022 – 2030*, *available at*: https://www.grandviewresearch.com/industry-analysis/robotic-process-automation-rpa-market (last visited on August 06, 2022)

11 "Robotic Process for Automation Healthcare", *available at*: https://www.kofax.com/-/media/Files/Solution-Overview/EN/so_robotic-process-automation-for-healthcare_en.ashx (last visited on August 06, 2022).

12 A. Ethan, "Robotic Process Automation (RPA) in Healthcare", *available at*: https://medium.com/@lizheng.t94/robotic-process-automation-rpa-in-healthcare-5a27a0f8b6c2 (last visited on August 06, 2022).

13 S. Nakrani, "The Advantages of RPA for the Healthcare Industry", *available at*: https://blog.datamatics.com/the-advantages-of-rpa-for-healthcare (last visited on August 06, 2022).

*2.2.2. Enhanced Knowledge Repository*

RPA slowly and securely builds an information base while processing transitional work such as health claims. It aids in defining minimum and maximum thresholds in the system for accepting and rejecting claims. These thresholds will be applied upfront in all future claim processing, reducing turnaround time.

*2.2.3. Improved Customer Service*

RPA assists in automating routine tasks, synchronizing all digitized information, keeping track of appointments, and organizing all records in an up-to-date manner. Employees can focus more on their core competencies and customer service due to the extra hours. It is a well-coordinated effort to keep all customer information in one place aids in providing innovative service to patients.

*2.2.4. Enhanced Compliance*

The healthcare industry is highly regulated. Organizations must adhere to many statutory compliance and regulations in almost every process. RPA not only aids in the generation of audit trails and automated reports, but it also aids in the fulfilment of observations involving third-party systems by posting the required data and supporting documents to them regularly *via* role-based access. It ensures high accuracy, improved performance and compliance with regulatory bodies, and improved customer service.

**2.3. Benefits of Big Data in Healthcare**

By digitalization, integration, and effective use of big data, healthcare organization from a single network of medical practitioners creates a large group of the accountable network which has significant benefits. It has added benefits which have been stated below:

*2.3.1. R & D in Pharma Industries*

Analyse the health records of patients through clinical trials for identifying the indication of the discoveries before the product has been launched in the market.

*2.3.2. Public Health*

Big Data helps in the analysis of deadly virus/ any element which is the cause of the outbreak of the disease and helps in getting proper medications. It helps in managing the data with the help of the response based on detection of patient health status.

*2.3.3. Device Monitoring*

It helps in the analysis of large volumes of fast-transmission of Data for the safety of the patient with proper care and due attention on a real-time basis.

**2.4. Role of AI in RPA in Healthcare**

Artificial Intelligence has great importance in health care sectors,[14] with the rapid advancement of practical techniques in smart health care. Studies show that AI has great significance in smart health care. AI has provided a software program to elucidate data compilation, including images, sounds, and text, for a proper explanation. As a result, it becomes a boon to get success. Nowadays with the latest innovative techniques of Artificial Intelligence moving forwards pertain to the improvement in health care.

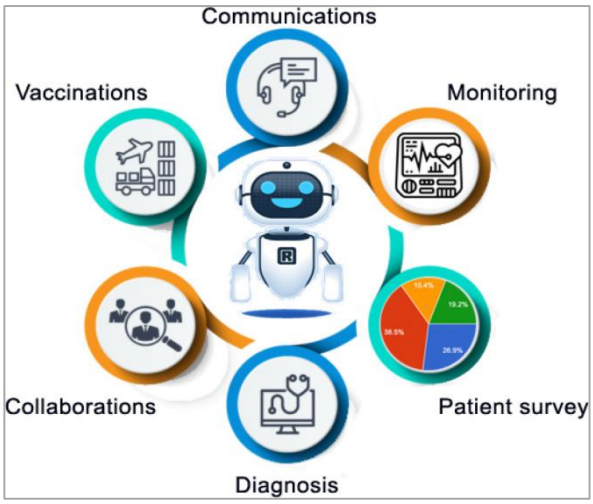
The technology fields of AI and Robotics have worked wonders in addressing the health sector's urgent needs during this pandemic. Researchers and inventors are coming up with innovative ways to address the growing issues in the healthcare industry as a result of pandemic. It has come into the picture that Covid-19 results in Speedy diagnosis[15] is emphasized to limit the outbreak and minimize virus transmission. Unfortunately, it is difficult due to a lack of medical resources and the inherent risk of infection from direct contact. It generally uses robotic technology to collect samples without having to touch them. Robots are also being utilized as a tool to allow physicians to diagnose patients, eliminating the infection risk remotely. While Artificial Intelligence applications make it easier to schedule suspicious long-suffering individuals and speed up the processing, using the least amount of people.

Early identification can aid in controlling the virus's rapid spread. It examines various AI-powered Covid-19 detection and prediction studies that have recently been

[14] M. Singh and D. Mehta, "Artificial Intelligence Systems and IP" *Lex Orbis*, *available at*: https://www.lexorbis.com/artificial-intelligence-systems-and-ip/ (last visited on August 06, 2022).

[15] A. Gorbalenya, S.C. Baker, *et.al.*, "Severe acute respiratory syndrome-related coronavirus: The Species and Its Viruses – a Statement of the Coronavirus Study Group", *available at*: https://doi.org/10.1101/2020.02.07.937862 (last visited on August 06, 2022).

published.[16] There has been a lot of analysis done to see a link between early Covid-19 indications and test results, which may help detect the disease from those minor symptoms.[17] A positive test for SARS-CoV-2 is used in the regular Covid-19 test. It is far more than just RPA. The main Significance of RPA during Covid-19 with artificial intelligence is that RPA automates the tedious, repetitive, and time-consuming operations that front-line staff typically perform, allowing for more efficient human resources.[18] During Covid-19, may leverage RPA to empower health care sectors by constructing software robots that can do the work of health professionals or medical personnel.[19] RPA boosts operational efficiency and scalability while cutting expenses rates, providing sophisticated governance services. Fig. 1.2 ,1.3 and 1.4.




**(1.2.)**

**Fig. 1.2. Demonstration of Software Robots that can do the work of Health Professionals or Medical Personnel**

**Image Source:** *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/ (last visited on August 06, 2022)*

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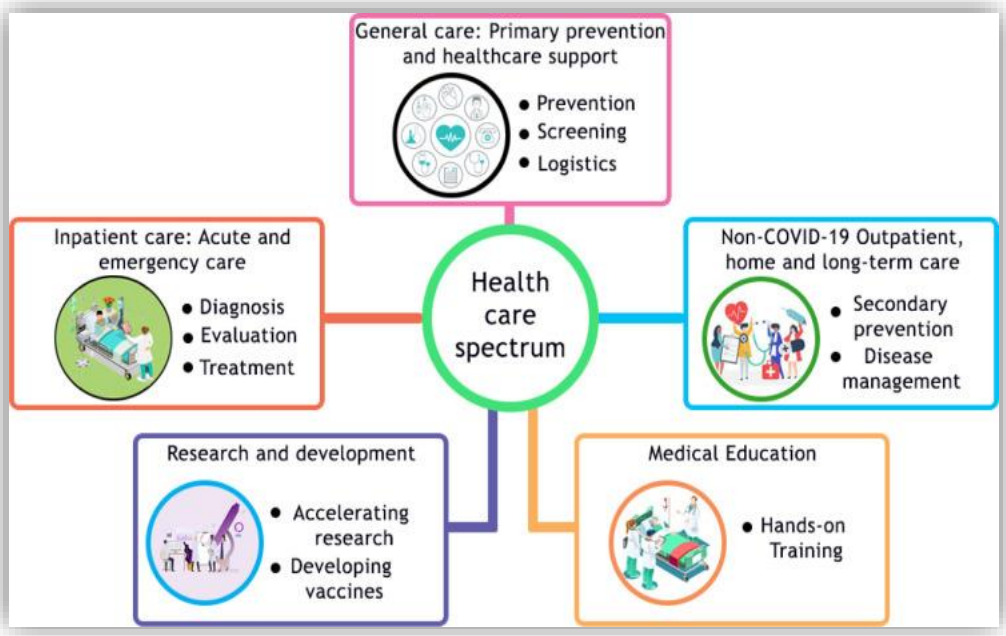
16 O.S. Albahri, A.A. Zaidan, *et.al*., "Systematic Review of Artificial Intelligence Techniques in the Detection and Classification of COVID-19 Medical Images in terms of Evaluation and Benchmarking: Taxonomy Analysis, Challenges, Future Solutions and Methodological Aspects", 13(10) *Journal of Infection and Public Health*, 1381–1396 (2020), *available at*: https://doi.org/10.1016/j.jiph.2020.06.028 (last visited on August 06, 2022).

17 H.A.S. Hashmi and H.M. Asif, "Early Detection and Assessment of Covid-19", 7 *Frontiers in Medicine* (2020), *available at*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7296153/ (last visited on August 06, 2022).

18 Datamatics, "Robotic Process Automation (RPA) Use Cases in COVID-19 Pandemic Situations", *available at*: https://www.datamatics.com/intelligent-automation/rpa-trubot/use-cases/covid-19 (last visited on August 06, 2022).

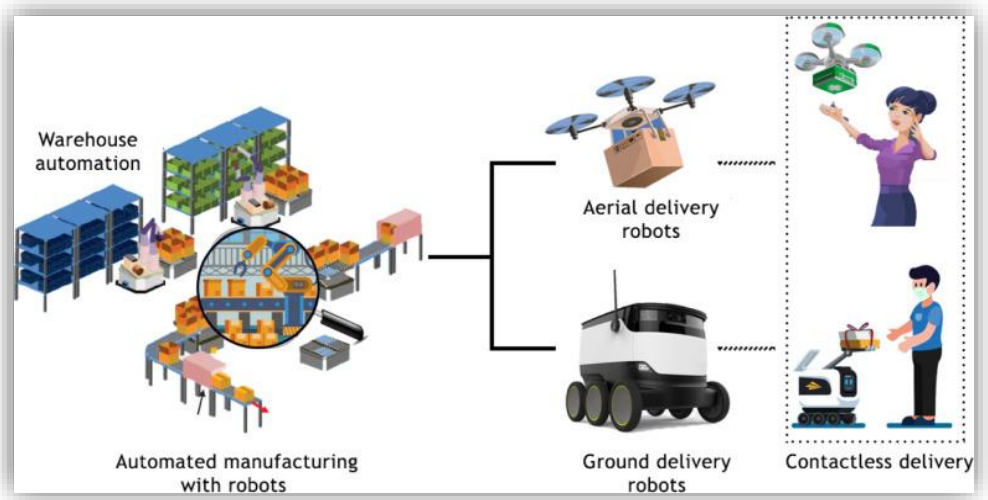
19 R. Saini, "How RPA can help Labs in COVID-19 Test Reporting Automation", *available at*: https://www.bigsteptech.com/rpa-helps-labs-in-covid19-test-reporting/ (last visited on August 06, 2022).




**(1.3.)**

**Fig. 1.3. Division of the Healthcare Spectrum During COVID-19**

**Image Source:** *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/ (last visited on August 07, 2022)*



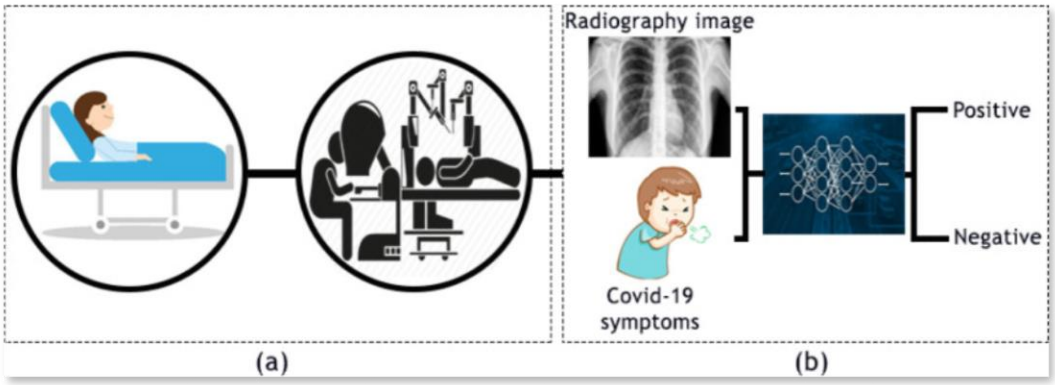

**(1.4.)**

**Fig. 1.4. Autonomous Robots in Supply Chain and Delivery**

**Image Source:** *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/ (last visited on August 07, 2022)*

Figures 1.3 and 1.4 demonstrate operational efficiency and scalability through RPA. AI has a lot of benefits in healthcare using RPA in solving problems in classification and the calculation of the risk of a specific event, making it an essential method for

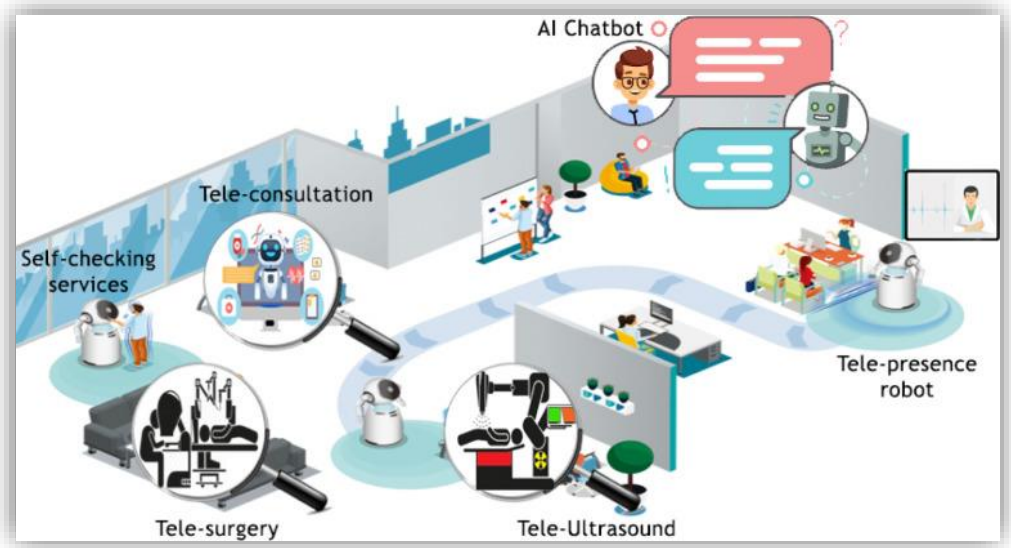
assessing and further assessing disease risk. As shown **in figure 1.5. below is the diagrammatic representation of RPA and AI in covid-19 diagnosis, and figure 1.6. shows the diagrammatic representation of RPA in Telemedicine with AI.**




**(1.5)**

**Fig. 1.5. COVID-19 Diagnosis Using Robots and AI Based Technologies: (A) Contactless Sample Collection Using Robots (B) COVID-19 Detection Using AI**

**Image Source:** *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/ (last visited on August 07, 2022)*




**(1.6)**

**Fig. 1.6. Telehealth Care Services During COVID-19 Pandemic**

**Image Source:** *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493645/(last visited on August 07, 2022)*

AI has various benefits in the health care sector, like in technological advancement, AI helps diagnose the patients remotely and helps provide the best treatment. AI helps in accessing the previous and present health issues through the data provided, and thus it saves the costs of the patient also. AI assures robotic surgeries

without any hassle. But every technique has both pros and cons. The main cons of this technique are privacy issues, errors that significantly impact patients. For instance, if any patient consumes any drug that AI wrongly recommends, it will lead to serious health issues.

### 2.5. National Standard of Utilization of RPA in Smart Healthcare during Covid-19

During Covid-19, however, one tool that will reshape the automation environment in the healthcare industry will be RPA.[20] RPA is a business process automated system that reduces interpersonal interaction by leveraging software robots or artificial intelligence (AI), often known as digital workers or software robotics. RPA uses a user interface and data capture to modify applications to interpret, interact, and prompt replies with other systems to do repeated activities. RPA robots may do tasks like editing and inserting data, shifting files, filing documents, accessing information, and so on. It helps companies reduce the tedious chores their workers complete, improves productivity and accuracy, aids in instant potential savings, enhances compliance, and boosts flexibility.

#### *2.5.1. Role of RPA in Social Distance during COVID19*[21]

RPA is a slashing technology for automating structured business procedures. It works like any other employee, interfacing with current application user interfaces and automating operations. RPA can help businesses and institutions make better use of their human resources. To avoid congestion in these times of social separation, several industries, such as healthcare, which has significant expenditures in human resources, must adopt alternative operating models, shifts, and staggered employee attendance. They indeed have an impact on working hours and workload. RPA, on the other hand, maybe trusted to do a variety of monotonous jobs, allowing the workforce to spend their human energy where it is most required. Allowing staff to automate operations with less physical

[20] S. Parikh, "RPA and COVID-19: Can automation help businesses to return to the 'new normal'?", *available at*: https://nividous.com/blogs/rpa-helps-businesses-return-to-new-normal-covid-19 (last visited August 06, 2022).

[21] A. Torgal, "Robotic Process Automation Revolutionizing Healthcare Industry during COVID-19", *available at*: https://www.ceoinsightsindia.com/industry-insider/robotic-process-automation-revolutionizing-healthcare-industry-during-covid19-nwid-3305.html (last visited August 06, 2022).

involvement helps even the most experienced personnel tackle the changing difficulties of Covid-19.

*2.5.2. Automation and patient care during COVID19*[22]

Healthcare organizations have historically emphasized patients by lowering costs and enhancing service quality. The market is built on human-centred services, and a tailored approach substantially influences patient experience and outcomes. Most hospitals' major issue is keeping track of information, document processing, patient information processing, billing, lengthy lines, complaint management, patient registration, reporting, and so on. Integrating and analysing this data becomes a tedious operation, where automation comes in and makes a big difference. On the other hand, hospitals have faced a substantial lack of human resources due to the epidemic. By letting medical personnel focus on patient care, RPA focused on hospital patient management systems can help hospitals expedite their digital transformation.

*2.5.3. Automation in RPA for health insurance during Covid-19*

RPA in healthcare is a method of streamlining procedures using automated robotic software. RPA helps reduce human labour in processing health insurance documents such as claims. Hospitals use blue Prism to reduce the workforce and skills required in Medicare operations. RPA in health insurance can work without conventional coding by integrating desktop programs like Excel, cloud-based software fields, and mainframe data into a standardized and automated process. RPA is not judgmental, but it makes things easier by automating tedious and repetitive administrative tasks and type-level paperwork. By automating these simple, repetitive tasks, your health insurance staff are free to focus on higher-level tasks that are more interesting, exciting, and important, letting the computer do what it does best: speed and precision. For example, natural language processing improves the technique of documentation. It can improve the efficiency and accuracy with which complaints are handled.

[22] T. Peterson, "12 Reasons why Automated Care is Helpful in the Healthcare Industry", *available at*: https://www.adsc.com/blog/reasons-why-automated-care-helpful-in-healthcare-industry (last visited on August 06, 2022).

### 2.6. National Utilization of Big Data in Smart Healthcare During Covid-19

Before the Covid-19 pandemic, China relied heavily on infectious disease case data reports for illness early warning and surveillance. In recent years, China has worked to develop the information of medical institutions and store medical data in computer network systems, effectively collecting a vast amount of medical service data. For example, the hospital information system (HIS) is a valuable medical health data source. A hospital management information system (HMIS), a laboratory information system (LIS), a medical image archive and communication system (picture archiving and communication system), radiological management systems (radiology information system), and systems for clinical decision support are the main components of HIS. The electronic medical record system (EMRS) in medical and health departments stores information on patients' names, treatment information, ailments, and test results.

Big data gives scientists, health professionals, and public health officials important information that enables them to make informed decisions in the fight against the Covid-19 virus. These data can track the infection worldwide and spark medical innovation. It can aid in forecasting the impact of Covid-19 in a specific location and the entire population. It aids in the study and development of innovative therapeutic methods. Big data may also give people potential sources and possibilities, assisting them in dealing with complex scenarios. This technology offers data for disease transmission, migration, health monitoring, and preventive system analysis.

The pandemic highlighted India's long-standing weak medical infrastructure. In a country of 1.3 billion people, about 75% of healthcare infrastructure is concentrated in urban regions, making essential services unavailable to rural communities.

Furthermore, India's overall healthcare spending (including private and governmental) is 3.6 percent of GDP, significantly lower than in other nations. It has resulted in a reduction in the infusion of value investments, a resource bottleneck, and a clogging of the healthcare system.

It is where technology can come in handy. It has the potential to close the gap between healthcare accessibility and affordability across the country. A fundamental overhaul of the healthcare industry guided by digital technology had been long overdue, and the pandemic provided an ideal opportunity to implement this shift. In the last year,

we have seen how critical technological solutions like Hospital Information Management System (HIMS) and telemedicine helped to improve the situation.

The moment has come for digital health to take the lead. Healthcare is already shifting away from clinics and toward mobile phones. We have seen how physicians and patients are increasingly using teleconsultations.

## 3. IP and Covid-19

IP is all about invention and ideas, and IP law deals with protecting or incentivizing these advancements. The World Trade Organization defines IPR[23] as those granted to individuals for their "creations". IPR give the inventor ownership over their ideas for a certain period, allowing them to restrict others from exploiting them and negotiate payments in exchange for permission to use them. Thus, creators of new technologies have the exclusive right to use their ideas throughout the term of such protection and are allowed to charge whatever price to cover their R&D expenditures while also earning financial gains.[24] The patent holder has the sole right to his innovation, and others prohibit from undertaking research, producing, or distributing such protected items or procedures. What does IP have to do with Covid-19, one would ask? The answer is nearly everything. When it involves global healthcare or dealing with pandemics, IP, especially patents, is an essential component. Vaccines, medical equipment, software packages, tracking systems, diagnostics, and other inventions, among others, have significant IP consequences in the context of Covid-19. The development of vaccines and other medical technologies is a crucial aspect of public health preparation, so the response to a pandemic is closely related to IP.

### 3.1. Is Patent Law Unsuitable for a Pandemic?

Patent law is essential to a country's national innovation system since it promotes technical advancement and creativity. However, during the outbreak, there was conflicting evidence and ambiguity about IPR regarding medical technology, thus impeding the efficacy of crisis-critical product research and development. As a result,

[23] World Trade Organization, "What are Intellectual Property Rights?", *available at*: https://www.wto.org/english/tratop_e/trips_e/intel1_e.htm (last visited on August 07, 2022).

[24] P. Stevens and M. Schultz "Why Intellectual Property Rights matter for COVID-19?", *available at*: https://geneva-network.com/research/why-intellectual-property-rights-matter-for-covid-19/(last visited on August 07, 2022).

while the patent law fostered scientific innovation and creativity in peacetime, it fell well short in dealing with the emergency circumstances of the outbreak. Patent law promotes the long-term development of novel ideas by delaying their spread in the short run. When an ongoing pandemic necessitates the rapid creation and distribution of medical technology, essential medicines, or equipment, such an assumption becomes irrelevant.

*3.1.1. Patent rights for COVID-19 vaccination are being waived*

India and South Africa initially suggested the proposal to waive IP temporarily and patent rights for Covid-19 vaccines at the WTO in October 2020. It was co-sponsored and supported by numerous low-income nations. The United States and the European Union both rejected the plan. However, on May 5, 2021, the United States modified its position and decided to support the requested waiver, prompting mixed reactions.

*3.1.2. Vaccine Patent*

Vaccine patents grant vaccine developers the exclusive right to manufacture the vaccine they created. It also allows them to charge whatever price they want to pay for their R&D expenditures while generating a significant profit.

*3.1.3. Why is a patent waiver necessary?*

The aim of seeking a waiver[25] is to restrict pioneering vaccine firms' ability to defend their patents, allowing generic manufacturers to manufacture the vaccine without fear of being sued. It would lead to the manufacturing of vaccines in underdeveloped nations, hence promoting the immunization campaign.

*3.1.4. Is a waiver a viable option?*

Those who oppose the waiver of patents on the COVID-19 vaccine believe that eliminating or deferring patent enforcement will disincentivize pharmaceutical companies to invest and innovate in vaccine research and development. It also articulated that abandoning patents is not the solution for dealing with vaccine shortages because the main barrier is a lack of infrastructure in underdeveloped nations to manufacture vaccines.

[25] World Trade Organization, "Waiver from Certain Provisions of the TRIPS Agreement for the Prevention, Containment and Treatment of Covid-19", IP/C/W/669/Rev.1, (May 25, 2021), *available at*: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W669R1.pdf&Open=True (last visited on August 07, 2022).

Therefore, IP Management is becoming essential in order to protect the collateral assets.

## 4. IP Asset Management in Healthcare

The authors would like to briefly overview IP assets before proceeding to the next chapter and why they are essential to managing them. Intellectual Asset Management (IAM) is a management method that focuses on exploiting patents, trademarks, trade secrets, copyrights, know-how, and other intellectual assets to support and improve overall business performance.

IP Asset is a collection of IP creations such as trademarks, patents, copyright, and trade secrets that entrepreneurs select based on their company needs.[26] For example, a publishing business will need to handle copyright and trademark to obtain economic worth since it increases financial value in the market. By adopting the word "assets",[27] business managers and legislators understand that IP is more than just a legal right; it also provides an economic benefit to all owners. IP is part of a broader economic environment where human capital defines a productive and competent workforce or a generation of academics and scientists.

Human capital has low economic worth in the absence of IP since, by definition, it is non-owned – human ingenuity cannot be held – and has no legal standing. IP will not generate safeguarded or developed without human capital. IP has been essential for monetary progress. With Present economic knowledge, the confluence of IP rights and human resources represents a substantial financial power.

The IP created is an asset having a theoretical economic worth. This value, however, cannot be realized in practice unless the IP has employed precise, tangible, and practical ways to generate money or other economic advantages. Strategic IP asset planning and development are required preconditions for the dynamic use of IP for micro and macroeconomic development. The best innovation in the world will not generate cash

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[26] T. Lutz, "Intellectual Property and Healthcare in 2020", *available at*: https://getreferralmd.com/2019/12/intellectual-property-and-healthcare-in-2020/ (last visited on August 06, 2022).

[27] World Intellectual Property Organization, "IP Asset Development and Management: A Key Strategy for Economic Growth", *available at*: https://www.wipo.int/edocs/pubdocs/en/intproperty/896/wipo_pub_896.pdf (last visited on August 06, 2022).

if it is not successfully promoted and exploited. IP asset management is all about making the best use of your human resources.

### 4.1. Why IP Assets are required to be Managed?

IP refers to speculative assets legally protected and controlled by a specific firm, implying that others may not utilize them outside the company. The most significant benefit of IP is that it gives businesses a competitive advantage. Speculative assets had protected to the same extent as physical objects. The significance is - (1) Competitors will be unable to infringe your efforts, which is necessary for web-based or mobile-based businesses. (2) It adds value to the company since it includes the goods and services offered to customers. The organization may enable external parties to utilize the property, but royalty rights or other legal constraints protect this privilege. Various approaches are employed to identify, protect, and enforce IPR. Multilateral treaty frameworks and international organizational structures are examples of this. As previously said, IP is essential for the economic growth of companies. Many accounting practices in the United States and other nations put pressure on businesses to categorize all intangible assets. After all, preserving assets is essential for today's organization. Ben Bernanke, a well-known US economist who recently spoke at an economic growth conference, understood this; the value of intangible capital, in particular, has been a driving factor for many US firms.

Intangible assets, human capital, and IP have increasingly been recognized as essential aspects of global development in the financial market. Consequently, lawmakers in governments, universities, and research institutions seek to develop constructive IP policies that encourage the production, accumulation, and use of IP assets as a critical tool in monetary strategy. There are methods for producing a company's IP portfolio, and there is growing acknowledgment that current proactive policies may increase a government's productive capacity and IP asset allocation.

"Knowledge is unlimited, and those who have supported and promoted the sharing of ideas and information have been at the heart of contemporary economic and social growth", stated former Romanian President Ion Iliescu, a member of the WIPO Policy Advisory Commission (PAC). "IP is at the centre of business strategies, as seen by its growing share of fixed assets in company value".

According to the National Knowledge and Intellectual Property Task Force, which is located in the United States, "a company's value in the knowledge era mainly defined by its capacity to turn individual and organizational knowledge into net worth in time to grab new market segments". As product cycles shorten and rivals lower the time to market, a competitive corporation's methods for developing and commercializing new ideas must be continually validated and improved. The administration of IP lies at the centre of this transition. It is a method for dealing with intangible asset growth and its influence on a company's strategic market position and shareholder value.

Trademarks, international patents, copyright allocation and utilization, trade secrets, geographical indication, domain names, registered designs, plant breeder rights, and technology are all examples of IP assets that must manage to generate value, special privileges, profits, and consumer goodwill and loyalty. An IP asset assists in the income generation of products through licensing or franchising; it also helps promote money for research and development, hence improving the end outcome. The product's value also rises, which aids in transfer pricing negotiation.

### 4.2. Emergencies in Public Health and Direct Government Assistance

IPR acknowledges the efforts of critical stakeholders who take enormous risks to bring innovations to the forefront by letting them reap the rewards of expending considerable resources in R&D with no guarantee of success. For example, a patent holder might prohibit others from using the protected technology without his permission, or he can allow it by incurring a fee. A patent holder has the exclusive right to his work for a set time (20 years in the USA and India). Therefore, patent rights delay innovation spread by limiting output, preventing rivals, and boosting prices. It is critical for promoting innovation and the advancement of modern technologies. However, this cost-based pricing for patents is useless in times of global emergencies, such as the current epidemic. Our current objective is to speed up the immunization process rather than slow it down.

However, this raises significant concern. Suppose patent protection is removed during a global health emergency. How can pharma companies be compelled to incur substantial R&D expenses for creating vaccines and other medical technologies while losing their exclusive rights to manufacturing and selling such technology? One of the ways to tackle this is through direct government support including public funding of

research and development to manage; IP Assets in the healthcare industry. Many companies rely on IP assets, including commercial healthcare transactions. This article provides an overview of how IP rights may be effectively secured, transferred, and kept throughout transactions. The authors' next thought is, "Who is eligible to hold IPR in healthcare?" Healthcare IP is a broad field. It also encompasses the IP of influential organizations, such as health centres performing clinical trials at universities and medical research firms for and biotechnology and pharmaceutical firms. The authors would now want to explain the notion of IPR in the healthcare industry. Patents, trademarks, copyright, and even trade secrets are all examples of IPR. A medical research board owns a method or system patent for a unique approach, whereas a pharmaceutical business has a medicinal or new drug patent. Health services and organizations can also provide trademark rights for books, rules, regulations, and processes.

## 5. Scope of Intellectual Property Rights in Robotic Processing Automation

As we have come across the concept of Smart health in the fifth generation of healthcare, Robotic Process Automation or RPA has a booming effect. RPA or software botnets help solve the medical field's miscellaneous works in the hospital. The primary purpose of using RPA is to solve human errors or mistakes that they usually make while enrolling the name of the patients in their databases and scheduling the appointment according to the necessity. An important question arises about the confidentiality of medical records and patient details carried out by RPA or software botnets. IPR thus came into the picture as we know that under the umbrella of IPR, we have Copyright, Trademark, Patents. Therefore, Copyright protects the data carried out by RPA or software botnets to enrol the patients' names in their databases and schedule the appointment according to the necessity and Medicare billing all are encrypted. Patents protect the novelty of RPA in innovative healthcare to protect from any infringement.[28]

Healthcare is one of the most inefficient businesses; eliminating inefficiencies would result in better healthcare delivery, beneficial to the industry and the general population. Every company has inefficiencies, but few confront the healthcare industry's issues, stringent laws around patient data, and a lack of resources to cope with them.

[28] L.J. Thayer and R.L. Emsley, "Be Competitive: Patent Planning for Robotics Companies", *available at*: https://www.finnegan.com/en/insights/articles/be-competitive-patent-planning-for-robotics companies.html (last visited on August 06, 2022).

Financial services are subject to comparable high levels of regulation, although banks have easier access to money and have historically invested more in technology. As a result, healthcare has more inefficiencies and manual procedures than nearly any other business. The capital for IT and healthcare services comes entirely from healthcare providers' earnings, so RPA enables healthcare providers to avoid expensive, long-running digital transformation implementation projects and gain quick results, allowing them to contribute to patient care significantly. Along with that, use of RPA in smart healthcare for patient scheduling, Claim Management, Regulatory Compliance, Data entry, Migration, Extraction, etc. These benefits the health care industry by reducing costs, increasing appointment turnout, eliminating human error, better patient experience, and better employee satisfaction.

In a larger sense of the technology sphere, Artificial intelligence and robotics have worked wonders in resolving the health sector's grave demands throughout the pandemic situation. Diagnostics, hazard identification, monitoring, mobile health, supply and distribution network, service automation, sterilization, faster research, and pharmaceutical development are available services. They have all benefited greatly from robotics and AI services during the pandemic.

### 5.1. RPA and IP Assets Management

When we talk about RPA, the first thing that comes to our mind is software bots. With the advancement of information science, RPA has gone far beyond our imagination and marked in different forms in various sectors. RPA is the science of developing software technology used to carry out repetitive works and minimize human errors intertwined with complicated business. From a healthcare perspective, RPA is used in different sectors to help people easily accomplish complex tasks, keep track of any data, schedule appointments of patients, client services, and simulate models and predictions that took years to complete. RPA helps streamline the front office support that is essential to provide better customer support. But every technique has both pros and cons. The main cons of this technique are the lack of proper investment in the initial development of RPA. As a result, IPR plays a significant role in the R&D investments of its competitors.[29]

[29] "Making Your Robotics Company a More Attractive Investment", *available at*: https://www.roboticsbusinessreview.com/unmanned/making_your_robotics_company_a_more_attractive_investment/ (last visited on August 06, 2022).

IPR law protects inventions, creative activities, and ideas, usually a large bag of intangible markets. It ensures they reach the right people and are put to proper use in saving lives. It is necessary to make patent innovations and inventions in the health sector. Therefore, it is clear that copyright and patents are needed to manage as an IP asset in RPA. Copyright helps protect the database records of every patient, and patents help protect the process of using the machines and the aesthetic aspect of the product. Since it bases on computer software, R&D of healthcare industries in valuation & economic benefit as valuation is an art that helps assess the value of the product through due diligence report. Due diligence is one of the essential aspects which is needed to be done by the team as it is helpful for the mathematical valuation of IP.

Firstly, we need to focus on the market-based value, which focuses on the valuation technique of the marketed product. Secondly, cost-based value, which focuses on the appraised value, defines the expenses of creation or replacement. Thirdly, values one of the criteria is predicated on an estimation of future financial advantages best economic benefits, which works on economic benefits for the future aspects. That helps in future earnings. So, in healthcare industries, it is one of the main aspects which talks about the ever-greening of product patents for future benefits.

### 5.2. Current Security Challenges through RPA in Healthcare

India's economy is expanding. Most individuals desire a health care file they can take with them wherever they go in the country. It is an urgent necessity and an idea that is rapidly expanding. Securing this data should go hand in hand with it. Security encompasses the protection of gathered data and the procedures and resources required to maintain, complete, and update it. While RPA and its "big brother" AI also are kinds of automation (where some form of automation system now undertakes a work previously performed by a human), there is significant differentiation between them. RPA is "robotic" because it is configured to execute a specific set of actions and will perform them frequently and consistently, exactly as planned.

Conversely, AI uses machine learning to adapt to results and changes in the environment. It improves when it generates less-than-ideal results or faces a situation it has not encountered before. As a result, AI is well suited to automating considerably more complicated jobs involving highly subjective judgments addressed by pattern analysis.

Unlike RPA, AI can analyse ambiguous, complex and complicated large datasets as RPA is pre-programmed. AI is being enhanced.

The following are some of the current data security problems:

*5.2.1. Lacking Better Understanding*

It may be a challenging issue to solve. Health care professionals who acquire patient data require some training in data security. Often a data leak happens because someone in the system clicked on a phishing email, allowing a defect in the system to exist. Owing to technological illiteracy, people are not always adequately taught to save data. If workers are not provided with fundamental instructions, it becomes challenging to arrest or, in certain situations, avert the breach. Health organizations should consider investing in this area, which is a lack of employment opportunities in the system.

Furthermore, the necessity of establishing new law to safeguard must commence with "why?" "why not?" "what and what not to?" and the consequences of these irresponsible actions.

*5.2.2. Position Accessibility*

Any infrastructure within the company that manages should configure patient data with role-based access. Role-based access operates on the premise that persons with restricted information accessibility will also grant limited access to data and other infrared.

*5.2.3. Digital Literacy*

Most health care personnel are not schooled in technology since it is not part of their daily job. However, anyone can learn how to use technology and software with minimal instruction. Digital literacy reveals the importance of internet security skills, such as choosing secure passwords, understanding and managing privacy settings, and knowing what to publish or not to share on social media, among other things. On the other hand, executives and managers must invest in technology that is easy to use. Most opt for glitzy technologies that might be difficult for most medical personnel on the ground. Whoever chooses the app should extensively evaluate the infrastructure in terms of usability, consumer access, and customer-centric considerations.

Overall, the effort and responsibility for a successful, safe, and secure system should share by the person who uses it and the executives who build the network.

*5.2.4. Ethical Issues in Research and Biomedical Medicine*

Like other new scientific approaches, biomedical ethical norms must be followed by AI in healthcare applications.[30] They are autonomy, advantage, non-crime, and justice. They manifest as permission, privacy, safety, voluntary involvement, independent decision-making, and so on, all of which should be considered.

In RPA, particular challenges are there, which are listed below:

Many of the jobs we undertake in healthcare are laborious and repetitive, resulting in hours upon hours of data input, with personnel frequently re-entering data that already exists and can be obtained elsewhere in the system.

It is frequently why the time lag between submitting a claim to a payer and getting reimbursement from them is so long. Healthcare workers also waste a lot of time gathering information from medical databases and clinical documentation for public health reporting. We are losing money and competitive advantage by significantly reducing the productivity of our human resources on boring jobs. RPA can solve a wide range of process difficulties in healthcare, encompassing invoicing and compliance, electronic health records, clinical documentation, banking institutions, outpatient appointments, and various internal and external customer contact areas.

**5.3. Intellectual Property- Safeguarding Challenge for RPA**

With AI challenging the boundaries of healthcare, there is an increasing need to safeguard decades of technology development and research. Inventions, creative works, and ideas are all protected by IP law, which forms a substantial pool of tangible markets. It is prudent to patent healthcare breakthroughs and technologies to guarantee that they reach the correct people and are put to fair use to save lives.

Robotics companies sometimes invest years of extensive (and costly) research before selling their products and achieving commercial success. The lengthy and expensive process of delivering lucrative goods underscores the importance of IPR, which

[30] G. Gopal, C. S. Crazzolara, *et.al.*, "Digital Transformation in Healthcare – Architectures of Present and Future Information *Technologies*", 57(3) *Clinical Chemistry and Laboratory Medicine* 328–335 (2019), *available at*: https://doi.org/10.1515/cclm-2018-0658 (last visited on August 07, 2022).

are required to recuperate up-front costs and ward off competitors attempting to capitalize on their rivals' R&D spending. We will now look at how acquiring and managing IPR in smart healthcare.

The ideal approach to the work of computer-related databases is to assess the compatibility between "data security" and "intellectual property regulation". The "practice, authority, and decision" parts of an individual's IPR are founded on the "practice, authority, and preference" aspects. The owner's work which involves literature, fiction, poetry, art, and film, needs protection as there's a chance of infringement. The Copyright Act makes it difficult to distinguish between data protection and security. Data protection aims to preserve people's privacy, whereas database protection is to protect the creativity and cost of gathering, validating, and displaying databases in novel ways. All partnerships follow the essential legal principles of entrance, anonymity, and confidentiality.

*5.3.1. Copyright*

What is an infringement in one country may not be so in another? When seeking to describe the complex cloud world in terms of copyright, the courts ought to be careful. In the cloud arena, the extent of copyright is in doubt. In this industry, the software is critical, with robots unable to function without underlying programming - robots without the software would effectively be unable to execute their intended jobs. While conventional robot functions include path-finding, control, locating, and exchanging data, some programming code tries to provide robots with the potential to generate artistic, literary, and musical creations. As a result, relying on copyright to safeguard such software is critical for the robotics sector. There is no specific liability for the copyright-protected content provided by intermediaries. Some countries encourage people and close friends and family circles to make copies of songs and movie files for private use.

*5.3.2. Trademark*

Trademarks are a fundamental means for AI and RPA in healthcare devices to express their identity to patients, medical professionals, and healthcare systems. Because trademarks are a unique method for customers to identify your company and its products, selecting trademarks that complement your company's current branding strategy is critical. Most likely, your organization pondered which trademarks to link with your

company, goods, and brand. Maintaining a reputable and very sound reputation as trustworthy and safe is especially vital in medical products. Patients may have to rely on the quality of your medical product to maintain their well-being, safety, and health for years to come. Thus, patients must learn to depend on it.

*5.3.3. Patent*

A design patent allows healthcare firms and experts to protect their AI-designed gadgets, goods, and equipment. Design patents provide the owner authority over a product's visual, aesthetic, and kinematic features. This will preserve the creator's rights in everything from the whole colour scheme of an AI-based user interface, information layout to the look and operation of a wearable activity monitor's touch notifications.

*5.3.4. Trade Secrets*

As few individuals have the technological know-how to reverse engineer these systems, firms usually rely on trade secrets to protect their concepts. The WIPO Copyright Treaty of 1996 makes it illegal to circumvent a technical protective measure to access copyrightable computer code.

## 6. Conclusion

Finally, the authors have contributed to the chapter about the role of RPA in smart healthcare with various advancements in smart healthcare management. Apart from RPA, Artificial Intelligence also meets the continuous requirements of pharmaceutical industries, therefore in the light of the Pandemic Covid-19. Now IPR has a significant effect that the authors have discussed in this paper, especially copyright. Patent and Trademark has a substantial aspect of RPA as it increases prospects for creativity and innovation. Since there is a lot of advancement in healthcare industries on RPA and Artificial Intelligence, various collateral data sets are available, termed as assets under IPR, known as IP Assets. The paper states the best ways to manage the IP Assets, which has significant inception.

# GI AND IMPACT ON AGRICULTURE

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**Abstract**

*Geographical Indication of Goods (GI) refers to "the name or sign used on commodities that have a specific geographical origin and contain characteristics or a reputation unique to that origin." A GI sign must be able to identify a product as originating from a certain area in order to work effectively. Additionally, it is critical that the product's features, characteristics or reputation originate from the source. Due to the product's distinctive characteristics, a direct connection exists between it and the location where it was manufactured. Individuals with the right to use a geographical indication can restrict the indication from being used by a third party whose product does not fulfil the required standards. For example, Darjeeling tea producers may restrict the use of the word "Darjeeling Tea" for tea not cultivated in their tea gardens or manufactured in accordance with the conditions stipulated in the geographical indication's code of practice in the countries where it is protected. To prevent others from utilising the same procedures defined in the standards for a particular indication, a protected geographical indication does not provide its owner the right to restrict their product from being sold under that indication. GIs can typically be protected by acquiring a right to the sign that serves as the indication.*

**Keywords:** Geographical Indication of Goods, Agriculture, Food Items, Reputation, Product Quality, Market Differentiation, Premium Pricing.

## 1. Introduction

In the field of Intellectual Property (IP), Geographical Indications (GI) relate to a sort of protection that associates items with a certain geographical region. In order to link the

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site of origin to the quality, reputation and other conspicuous characteristics of the commodity, geographic identification tagging is applied. The Geographical Indications (GI) tag for a product can only be used by genuine consumers and residents of the territory of origin. GI tags can be obtained for a variety of products, including agricultural products, handicrafts, textiles, manufactured goods and consumables. GI tags can take the shape of either geographical names or figurative representations of places, or they might be a hybrid of these two types. The geographical origin of a product should be conveyed by the tag assigned to it. The promotion of biodiversity conservation among rural communities is made possible in large part by the use of Geographic Information Systems (GIS).[1]

India continues to be a net agricultural exporter, with a significant proportion of its exports consisting of primary commodities such as rice, shrimps, beef, sugar, tea and spices. A large proportion of the country's imports are processed goods, primarily palm and sunflower oils. The primary source of concern is that the value of agri-imports has increased by four percentage points, reaching an all-time high of $25 billion in FY18, and is on track to surpass the value of agri-exports, resulting in India becoming a net agri-importer for the first time. The country's objective to accelerate the rate of agricultural growth and quadruple farmers' income by 2022-23 necessitates the use of exports as a critical component of the strategy. It is fully documented in the Agriculture Export Policy 2018, and it is also obvious in the changes made to tariffs and non-tariff measures in response to the policy change.[2]

## 2. Geographical Indication (GI)

Generally speaking, Geographical Indications of goods denote a geographical indicator that refers to an entire country or a specific location within that country and is used to identify that country or place of origin as the country or place of origin of a specific product in the context of industrial property. On the whole, a geographically specific name communicates an assurance of quality and originality that is mostly attributable to the fact

1 P.J. Sreedhara, *The Role of Geographical Indication in Sustainable Rural Development: Analysed through Real Life Example* (2019) (Project, Alliance School of Law, Alliance University), *available at*: http://nopr.niscair.res.in/bitstream/123456789/45825/1/JIPR%20%2023%284-5%29%20159-166.pdf (last visited on April 03, 2022).

2 S. Bathla and A. Jha, "Explained: How Geographical Indication Can Boost Agriculture Exports", *available at*: https://www.financialexpress.com/ (last visited on April 02, 2022).

that it originated in that particular geographical place, region, or country, among other factors. Specifically, the requirements of article 1(2) and 10 of Paris Convention provide that geographical indications are protected as a component of intellectual property rights. They are also covered by articles 22 to 24 of TRIPS, which was negotiated as part of Uruguay Round of GATT negotiations and finished with the signing of the Uruguay Round Agreements in 1995.

India being a member of the World Trade Organization (WTO), legislated the Geographical Indications of Goods (Registration and Protection) Act, 1999 which went into effect from Sept 15, 2003.[3] The Act is overseen by the Controller General of Patents, Designs, and Trademarks, who also serve as the Registrar of Geographical Indications. In terms of benefits to developing countries, one of the most advantageous aspects of the Indian Act is the comprehensive definition given to the term "generally accepted" (GI). Goods that are eligible for Geographical Indications (GI) includes agriculture, handicrafts and Manufactured commodities.

Seed or planting material is essential to the creation of all agricultural products. Seed is the least expensive component of the total cost of crop production, but it has the greatest influence. Farmers quickly realised the importance of healthy seeds of new and improved crop types after reaping the benefits of the green revolution through the use of seeds from green revolution kinds. Farmers were even more willing to pay a greater premium for such superior seeds than they were previously. Seed businesses and technology developers recognised this as an opportunity to turn popular plant types and key plant genes into profit-making goods, and they jumped at the chance. Global strategies, pesticides and seed firms have united in order to centralise capital and technology in order to control the marketplace. There has been an attempt to protect biodiversity, farm-level variation (including crediting farmers for their traditional crop varieties), access to benefit sharing (including access to farmers' varieties), consumer assurance (including geographical indications), traditional knowledge and access to benefit sharing. The global commodity

[3] IP India, "Geographical Indications (GI)", *available at*: https://ipindia.gov.in/about-us-gi.htm (last visited on April 02, 2022).

trade is now controlled by a number of such new concerns, which are now being understood and applied in India as well. Another component of GI in agriculture is related to plant-based products or by-products, which are discussed in detail below. Plant-based goods can be used as raw materials for manufacturing, as well as for processing and preparation. Following the implementation of the GI on September 15, 2003, Darjeeling Tea became the first GI-tagged product in India in 2004 when it was introduced. Following that watershed moment, a slew of GI-labeled agricultural goods have been introduced in India.[4]

### 2.1. Historical Backdrop

Owing to of the success of the green revolution in agriculture, farmers quickly realised the advantages of high-quality seeds obtained from newly developed and improved crop types. Having the opportunity to pay a premium for these exceedingly rare seeds made the farmers very happy. As a result, seed companies and technology developers recognised a chance to profit from vital plant types and genes. In addition, the pesticide and seed businesses have joined as part of a global push to centralise finance and technology in order to obtain control over the marketplace. Around the world, debates are taking place about the importance of biodiversity conservation, protecting farmers' access to traditional crop varieties, crediting farmers for their cultivars, facilitating benefit sharing between farmers and consumers, and increasing consumer assurance through the use of geographical indications and appellations of origin (GIA/AOC). Several new concerns are beginning to exert a growing amount of influence on commodity markets around the world, many of which have gotten little attention in India until recently. During the early years of independent India, there was a misunderstanding of imperial agriculture, which resulted in the transfer being overly simplistic.

The relevance of using these procedures and putting them into effect in the context of land consolidation, irrigation/water resource sharing processes and fertiliser and pesticide-related Acts and Rules was brought to the attention of the participants during the discussion. Their purpose was to ensure that farmers received high-quality inputs, which

[4] N. Nanda, "The Protection of Geographical Indication in India: Issues and Challenges", TERI Briefing paper, New Delhi 12 (2013).

they did by conducting certain tests. A number of efforts, including cooperatives and mandi/market reforms, have been adopted to reduce food injustice and guarantee that all people have access to nutritious food in the country. Their combined efforts were important in the success of the green revolution, which led in a huge growth of agriculture and allied industries.

According to the Indian Parliament's 1999 passage of the "Geographical Indications (GI) of Goods (Regulation and Protection) Act", registration of geographical indications connected with goods as well as greater protection for these indications are required. GI refers to a product that is differentiated from others by its geographic origin, which can be defined as a product that originates from a country, region, or locality within that territory and whose quality reputation or other characteristic is attributable in large part to its geographic origin. To the extent that it is permissible under the Act, a commodity's great reputation or other characteristic can be traced back to its geographic source.

Thus, the geographical domain can encompass the full territory of a country as well as a specific region or neighborhood inside it. In many cases, the geographical origin of products has a substantial impact on the quality of those products. For example, if a product is a manufactured good, all of the raw ingredients must be manufactured in that location before being processed and prepared therein.

## 3. GI and Law

The Indian Parliament passed the "Geographical Indications (GI) of Goods (Regulation and Protection) Act" in 1999,[5] providing registration and greater protection for goods/products. This law became effective on September 15, 2003. According to section 1(e), a "Geographical Indication" is a label that identifies agricultural products, natural resources and manufactured goods as having their origin or manufacture in a country or a region or locality within that country, and in cases where such goods have a quality reputation or other characteristic that is largely attributable to their geographic origin. The Act is concerned with the quality reputation or other distinguishing feature of such items,

[5] Geographical Indications Registry, Chennai, 2018, *available at*: http://www.ipindia.nic.in/registered-gls.htm (last visited on April 04, 2022).

which is largely determined by their geographical origin. As a result, the geographic domain can encompass the entirety of a country's territory or a particular region or neighbourhood inside it. The majority of the time, the quality of a product can be traced back to its origin. If a product is made from raw materials, it must be manufactured or prepared in that particular area. The Registry of the GI is responsible for interpreting the GI in the Registry. A Geographical Indication can be protected in one of three ways:

i. Sui generis systems include the use of proprietary systems,
ii. Collective or certification marks, and
iii. Corporate procedures, such as administrative product approval techniques.

### 3.1. Examples of GI

*3.1.1. Kalanamak Rice*

The famous, significant and historic rice of eastern Uttar Pradesh is called Kalanamak. The new Kalanamak KN3 variety has been released and made available to the public. Kalanamak was also protected by Gorakhpur's Participatory Rural Development Foundation (PRDF) under PPV and FRA. A Siddharth Nagar based NGO demanded a GI on Kalanamak. There was a three-month window announced on the internet during which anyone could protest to or offer advise against the application. To their credit, PRDF, a Gorakhpur-based non-profit organisation, collaborated with them to highlight the plan's flaws. The Kalanamak variety's morpho-agronomic traits were utterly incorrect. A second issue was that the selected territory for GI included only five villages in the Naugarh municipality of Siddharth Nagar district. The settlements were not connected. This would have been a disaster for Kalanamak rice, a disaster for the surrounding area, and a spark for public strife. However, PRDF Gorakhpur's prompt response averted disaster. Kalanamak rice was granted GI designation on September 8, 2013 and was included in the 2013-2014 GI News issue. Kalanamak, a district in Uttar Pradesh's Agroclimatic Zone 6, currently holds GI status. It comprises of 11 districts: Bahraich, Balrampur, Bhati, Gorakhpur, Deoria, Kushinagar, Mahrajganj, Sant Kabir Nagar, Siddharth Nagar and Sravasti. These districts are located north of the Nepal border and south of the Ghaghra river.

*3.1.2. Tirupathi Laddu*

There are proposals to trademark the "Tirupati Laddu" by the Tirumala Tirupati Devasthanam (TTD), the organisation that oversees activities at India's wealthiest and most revered Hindu temple. The famous Tirupati Laddu, which Tirumala temple distributes to millions of people as 'prasadam' or a sacred offering, has previously been granted protected status by India's Office of the Registrar of Patents, Trademarks, and Geographical Indications. TTD sought for GI in order to safeguard its intellectual property. The Confederation of Indian Industry's Andhra Pradesh Technology Development and Promotion Center supported with the GI registration (APTDC). According to APTDC and its network partners, small-time crooks to well-known sweet shops have been selling "laddus" with names that sound like "Tirupati Laddu". The Madras High Court barred a Chennai sweet shop from selling "laddus" under the trade name "Tirupati Laddu" in December of last year. The TTD maintains that because "Tirupati Laddu" is served to Lord Venketeshwara prior to being made available to worshippers, it possesses inherent sanctity. The laddu, cooked with wheat, sugar, ghee, oil, cardamom and dried fruits, is a popular snack among temple pilgrims. Each year, temple authorities prepare over 50 million 'laddus'. Prasadam sales are likely to generate Rs.190 crore for the TTD, which approved Rs. 2,401 crore annual budget for 2014-15 last week.[6]

## 4. GI and Food Items

In India, a wide variety of food items have been labelled as GIs. Hyderabad Haleem and Ratlami Sev are GI-labeled delicacies that are available in addition to Tirupathi Laddu and Bikaneri Bhujia.[7] If one travels to India, one will be able to sample a wide variety of

[6] "Now, Geographical Indication Rights for 'Tirupati Laddu'" *Business Standard* (Feb. 28, 2014), *available at*: https://www.business-standard.com/article/news-ians/now-geographical-indication-rights-for-tirupati-laddu-114022800969_1.html (last visited on April 04, 2022).

[7] Government of India, "GI Registry", *available at*: http://www.ipindia.nic.in/writereaddata/Portal/Images/pdf/GI_%20Application_Register_10-09-2019.pdf (last visited on April 03, 2022).

dishes throughout the country. There has recently been some debate about the origins of the mouth-watering sweet "rasgulla"[8] between Indian states of Odisha and West Bengal.

There are, however, a number of reservations about the GI labelling of food products that have been raised. Simply by adding a regional prefix to a food label, one can call into question whether or not it qualifies for a GI certification. A food item's geographic prefix, on the other hand, does not automatically qualify it as a GI. In southern India, the most popular sweet is known as "Mysore pak", yet it is not made just in Mysore; rather, it is prepared all across the region. Although the major focus of this discussion is on the sweet recipe, the inclusion of a geographical prefix does not indicate support of any other qualities or attributes associated with the relevant geographic region.[9]

At the smallest distance, the distance between a recipe and a food label is just a few millimeters. A culinary item may be created anywhere in the globe if the recipe is known. A GI tagged item, on the other hand, must have come from a particular geographic area. It should also have unique features or a positive reputation in the neighborhood. When buying a food product with a Geographical Indication (GI) label, the buyer should have no problem figuring out where it comes from and differentiating it from other similar food products.[10]

## 5. GIs and Market Differentiation

It is difficult for agricultural producers in emerging and least developed nations to get access to profitable markets in rich countries by distinguishing their goods from those of other agricultural producers. Geographically diversified niche markets allow agricultural product manufacturers to diversify their goods from broad commodity categories such as rice, coffee and tea.[11] GIs collect environmental elements and indigenous knowledge, hence removing origin items from commodity markets.[12] Origin-based marketing has a long history, its contemporary significance is growing in part due to the necessity for local

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8 P. Agarwal, "GIs for Foodstuffs: IP or Recipe?", *available at*: https://spicyip.com/2018/04/gis-for-food-stuffs-ip-or-recipe.html (last visited on April 03, 2022).

9 *Ibid*.

10 *Ibid*.

11 F. Galtier, G. Belletti, *et.al.*, "Are Geographical Indications a way to 'decommodify' the coffee market?", *Paper presented at 12th Congress of the European Association of Agricultural Economists* 26-29 (2008).

12 S. Reviron and M. Paus, "Special report: Impact Analysis Methods. WP2 Social and Economic Issues", SINER-GI Project 3 (European Commission Sixth Framework Program, 2006).

manufacturers to differentiate their product from generic competitors.[13] Consumers in newly urbanising emerging countries regard the products of an area or ethnic group as reliable and well-known. As more merchants and consumers gain awareness of the superior quality of these regional items, their business reputation improves. Indian Basmati rice, Darjeeling tea, Kintamani Bali coffee and Muntok White Pepper originate in Indonesia; Blue Mountain coffee originates in Jamaica; Rwandan coffee, Rooibos tea and Karoo lamb originate in South Africa; Buon Ma Thuot coffee and Me'o Vac Mint Honey originate in Vietnam; Man mountain rice originates in Côte d'Ivoire; Mamou pepper and Boké palm oil originate in Guinea.[14]

## 6. GIs and Premium Pricing

Numerous academics and researchers have mentioned origin labelling as a reason for charging premium charges. Reviron *et.al*.[15] asserts that a combination of economic, cultural and social characteristics results in the capture of a premium price. Marette and Williams[16] assert that customers place a premium on products with distinct origins.

In France, chicken meat from Bresse bird fetches a fourfold premium; Italian "Toscano" oil fetches a 20% premium over the commodity price; and milk used to make French Comte cheese fetches a 10% premium. According to Gerz and Dupont's research,[17] "farmers in France earn an average of 14% more for milk used to make Comte cheese, and dairy farms in the Comte region have been more profitable since 1990, and are today 32% more profitable than comparable farms outside the Comte region." Annual increases in retail Comte prices have averaged 2.5 percent, while wholesale Comte prices have averaged 1.5 percent. Producers and other stakeholders in the Comte supply chain only earn a little

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13 K.V. Ittersum, T.G.M. Mathew, *et.al*., "Consumers' Appreciation of Regional Certification Labels: A Pan European study", 58(1) *Journal of Agricultural Economics*, 1-23 (2007).

14 M. Blakeney, "The Role of Geographical Indications in Agricultural Sustainability and Economic Development", 6(1) *Annuals of Agricultural and Crop Sciences* 2 (2021).

15 *Id*. in S. Réviron, E. Thévenod-Mottet, *et.al*., "Geographical Indications: Creation and Distribution of Economic Value in Developing Countries", *Working Paper No. 2009/14 NCCR Trade Regulation - Swiss National Centre for Competence in Research* (2009).

16 *Supra* note 14 in S. Marette, "The Collective-Quality Promotion in the Agribusiness Sector: An Overview", *Working Paper 05-WP406 Centre for Agricultural and Rural Development, Iowa State University* (2005).

17 A. Gerz and F. Dupont, "Comte Cheese in France: Impact of a Geographical Indication on Rural Development" in P. van de Kop, D. Sautier, *et.al*. (eds.), *Origin-Based Products: Lessons for Pro-Poor Market Development* 75-86 (KIT Publisher, Amsterdam, 2006).

portion of the increased value, while retailers keep all of the 0.5 percent increase in Emmental retail price.[18] O'Connor and Company[19] credit Lentilles vertes du Puy with increasing lentil output from 13,600 quintals in 1990 to 34,000 quintals in 1996 and 49,776 quintals in 2002, with the number of growers nearly tripling from 395 in 1990 to 750 in 1996 and 1,079 in 2002. Teuber[20] discovered that people are willing to pay a premium for Hessian apple wine if they believe GIs benefit the local economy.

It is less typical to study premium prices for items originating outside of Europe than it is within the European Union. Kireeva *et.al*.[21] analyse several cases of certification marks in use in the People's Republic of China. When the certification mark was issued in 2009, the price per kilogram of Zhangqiu Scallion increased from 0.2-0.6 to 1.2-5 yuan. Following the approval of "Jianlian" lotus seed as a GI in 2006, the price of a kilogram nearly doubled from 26-28 yuan to 32-34 yuan. Despite the fact that New Zealand lamb is protected as a Geographical Indication, Clemens and Babcock report that it only commands a premium price for a small proportion of exported supply. Menapace *et.al*. discovered that Canadians are willing to pay a premium for olive oil with a label indicating its provenance.

According to a study of the GIs "Basmati" and "Jasmine" rice in India and Thailand respectively, the potential for these items to command premium prices is also regarded an incentive for attracting foreign investment.[22] While studies indicate that GI products can command a premium price, it is difficult for developing countries and least developing countries (LDCs) to pass on these benefits to producers. For example, producers of Zanzibari cloves get $5 per tonne, but European market merchants earn $40 per tonne. According to Hughes, producers in Africa have often had a negative experience when the

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18 *Supra* note 14 in Maapar, "Impact d'une indication geographique sur l'agriculture et le developpement rural: le fromage de Comte-France", *Ministère de l'agriculture, de l'alimentation, des peches et des affaires Rurales Paris* (2004).

19 O'Connor and Co., "Geographical Indications and the Challenges for ACP Countries", *Agritrade*, CTA 2 (2005).

20 R. Teuber, "Producers' and Consumers' Expectations towards Geographical Indications - Empirical Evidence for Hessian Apple Wine", *European Association of Agricultural Economists*: *113th Seminar Chania, Crete, Greece* 7 (September 3-6, 2009).

21 I. Kireeva, W. Xiaobing, *et.al*., *Comprehensive Feasibility Study for Possible Negotiations on a Geographical Indications Agreement between China and the EU*, EU-China IP2 22 (Brussels, 2009).

22 P.R. Jena, C. Ngokkuen, *et.al*., "Geographical Indication Protection and Rural Livelihoods: Insights from India and Thailand", 29(1) *Asia Pacific Economic Literature* 174-185 (2015).

benefits of premium prices associated with Geographical Indications (GIs) are concentrated in the hands of central marketing bodies. According to Gopalakrishnan *et.al*.,[23] Indian traders have a greater proclivity to obtain the largest share of GI premiums than producers and this has been documented in a similar method.

## 7. Certification of Product Quality

GIs have been shown to influence consumers' perceptions of product quality.[24] Two characteristics of a product that GIs communicate are the integrity of the product's origin and sustainable production practices.[25] This is especially true when the GI is based on a registration and certification system that enables producers to show their product's quality and associated reputation over time. Producers are allegedly compelled to maintain product quality as a result of an origin label. Everyone involved in the supply chain has an interest in the reputation of a product as a result of the origin label.

The demand for food products with credibility characteristics (e.g., origin, organic, locally grown, and environmentally friendly) has been steadily increasing [26] as people have grown more concerned about the quality, safety, and production characteristics of food. Consumers in developed countries have placed a greater premium on credence-based food preferences. Consumers are willing to pay a premium price for organic food products due to their concern about the presence of chemicals and pesticides in commercially produced food. Consumers are becoming increasingly concerned with the integrity of agrifood products, including social and environmental standards in their production and processing.[27] This is especially true in the aftermath of a series of food crises. These crises erode consumer confidence in products, as food is grown, processed, and packaged in multiple

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23 N.S. Gopalakrishnan, P.S. Nair, *et.al*., "Exploring the Relationship between Geographical Indications and Traditional Knowledge: An Analysis of the Legal Tools for the Protection of Geographical Indications in Asia", *ICTSD* (Geneva, 2007).

24 T. Becker, "European Food Quality Policy: The Importance of Geographical Indications, Organic Certification and Food Quality Insurance Schemes in European Countries", 10 *The Estey Centre Journal of International Law and Trade Policy* 111-130 (2008).

25 J.L. Dahlhausen, C. Rungie, *et.al*., "Value of Labeling Credence Attributes Common Structures and Individual Preferences", 49(6) *Agricultural Economics* 741- 751 (2018).

26 D. Dentoni, G.T. Tonsor, *et.al*., "The Direct and Indirect Effects of 'Locally Grown' on Consumers' Attitudes towards Agri-Food Products", 38(3) *Agricultural and Resource Economics Review* 384 (2009).

27 H. Renting, T.K. Marsden, *et.al*., "Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development", 35(3) *Environment and Planning A*. 393-411 (2003).

locations. According to research, consumers will pay a premium for producers who are upfront and honest about the ingredients and origins of their products. Increased product quality or safety may necessitate the use of origin labelling, as was the case with meat labels in Europe following the BSE outbreak and dairy product labels in China following the Melamin disaster.[28]

Due to the prevalence of organic processes in their manufacturing processes, developing and least developed countries are well positioned to meet the demand for credible products. As a result, Darjeeling and Kenyan tea marketing emphasises the absence of pesticides in their cultivation and the use of hand-picked leaves rather than machine-picked leaves.[29] Consumers may value GI-marked products more than homogeneous commodity products due to their exoticism and extra work involved in their manufacture. GIs applied to normally manufactured objects instill confidence in their traceability, another increasingly recognised quality. These items are frequently free of pesticides and herbicides.

Rural product certification programmes have developed since the mid-1990s. Some examples of these certifications include fair-trade items from developing nations, organic farming and food prepared in accordance with hygienic and traceability requirements.[30] At a time when agricultural and forestry commodity prices are declining, certification provides quality market niches for smallholder producers in developing countries.

Consumers are protected from deception regarding the origin of products, manufacturing practices and specific quality of products through the application of Geographical Indications (GIs).[31] There is some empirical evidence that consumers and producers in Europe, where GIs have been most substantially developed, have high expectations for the quality of imported goods.[32]

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28 M. Lees (ed.), *Food Authenticity and Traceability 600* (Woodhead Publishing, Cambridge, 2003).

29 M. Blakeney and G. Mengistie, "Case Study: Kenya Tea", in M. Blakeney, T. Coulet, *et.al*. (eds.) *Extending the Protection of Geographical Indications. Case Studies in the Protection of Agricultural Products in Africa*, 213-234 (Routledge, London, 2012).

30 G. Giraud and C. Amblard, "What does traceability mean for beef meat consumer?", 23(1) *Science Aliments* 40-46 (2003).

31 A. Tregear, F. Arfini, *et.al*., "Regional Foods and Rural Development: The Role of Product Qualification", 23(1) *Journal of Rural Studies* 12-22 (2007).

32 *Supra* note 20 at 8.

### 8. Aggregation of Market Power

Farmers must join together to distinguish their goods and share their market power, in order to avoid sliding into the commodity trap. When it comes to agriculture, this is particularly true for farmers in developing and LDCs. According to Yeung and Kerr,[33] GIs can be an effective strategy for small enterprises to consolidate their market position. GIs may assist producers in capturing a greater share of the profits associated with the production of origin-based goods by establishing grounds for competitive advantage based on territorial specifics and reducing competition from undifferentiated products.[34] Barjolle and Sylvander suggest that higher production and marketing expenses, especially promotional expenditures, may be recouped *via* increasing sales volumes and premium product pricing, notwithstanding the increased production and marketing costs. Many of Tuscany's Protected Geographical Indications (PGIs) and Protected Designation of Origin (DOP), including olive oil, Chianti, pecorino, and prosciutto all have their origins in the concentration of market dominance among a variety of small enterprises, as explained by Belleti and colleagues (2001).[35]

While it is true that the EU's trademark system has a long history and was established through local industry initiatives, this is not the case in developing countries and LDCs, where GI initiatives are driven by state-owned enterprises, non-governmental organisations, or agricultural universities, rather than by local producer groups. The absence of a collective action history is cited as a significant impediment to developing a GI strategy by developing countries and LDCs.[36]

### 9. Sustainable Use of Natural Resources and Biodiversity Conservation

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33 *Supra* note 14 at 3 in M.T. Yeung and W.A Kerr, "Are Geographical Indications: A Wise Strategy for Developing Country Farmers? Greenfields, Clawbacks and Monopoly Rents",14(5) *The Journal of World Intellectual Property* 353-367 (2011).

34 *Ibid*.

35 G. Belletti, T. Burgassi, *et.al*., "The Effects of Certification Costs on the Success of a PDO/PGI", in L. Theuvsen, A. Spiller, M. Peupert (eds.) *Quality Management in Food Chains* 107-121 (Wageningen, Wageningen Academic Publishers, 2007).

36 E. Bienabe, M. Leclercq, *et.al*., "Le Rooibos d'Afrique Du Sud: Comment La Biodiversité S'invite Dans La Construction D'une Indication Géographique", 50 *Autrepart- Presses de Sciences Po* 117-134 (2009).

As GIs are so closely linked to local natural resources and therefore have a positive impact on the environment, environmental sustainability is increasingly being recognised as an important externality.[37] Policymakers have also cited environmental stewardship as a reason for GI protection.[38] Biodiversity goals are often included in the rules of practice that are adopted in relation to GI labelling. Reflect the South African Rooibos industry, which has product criteria that expressly consider the environmental sensitivity of its manufacturing location.

European olive oil production, which is heavily influenced by genetically modified organisms (GMO), is an example of agriculture with numerous positive environmental effects, including reduced soil erosion, improved fire risk control, water efficiency, lower pollution and higher levels of biodiversity and genetic diversity in olive-tree varieties. Furthermore, since the certified Comte cheese GI standards restrict the intensification of farming, farmers use less inputs and the environment is better protected, according to Kop *et.al*.[39] This helps to conserve the open environment of the Jura area of France, which is known for its meadows and woods. Unlike other cheese-producing areas, the Comte region has only lost 7 percent of its pastureland due to successful conventional cow farming.[40]

Tequila's Agave sugar originates from wild or forest Agave species in Mexico's Mexcal area, where it is grown and maintained to keep the Agave species diversified. Furthermore, by controlling the scale of output and the techniques employed to create it, GIs may be utilized to encourage sustainable farming practices. In the construction of GIs, the public sector represents agriculture communities. The Karnataka Department of Horticulture (DoH) in India has awarded the Kodagina Kittale (Citrus reticulata) ecotype of the mandarin orange a GI.[41] As a result of disease and farmers' preference for more valuable cash crops like coffee and pepper, this variety had practically vanished. There is a "Coorg Orange" that

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37 E. Thevenod-Mottet, "Geographical Indications and Biodiversity", in S. Lockie and D. Carpenter (eds.), *Agriculture, Biodiversity and Markets: Livelihoods and Agroecology in Comparative Perspective*, 201-213 (Routledge, London).

38 European Commission, *Conclusions from the Consultation on Agricultural Product Quality*, (Directorate-General for Agriculture and Rural Development, Brussels, 2009) 22.

39 *Supra* note 17 at 84.

40 *Ibid*.

41 C. Garcia, D. Marie-Vivien, *et.al*., "Geographical Indications and Biodiversity in the Western Ghats, India", 27(3) *Mountain Research and Development* 208 (2007).

was registered in 2004 thanks to DoH filings. Protecting and reviving a traditional crop type and providing disease-free plant material were among the goals of the DoH, which also sought to bring economic development to the region and safeguard the ecosystem in which the orange is grown. The DoH's plan was to teach the local farmers about the GI before forming a society to which the GI would be transferred.

An origin product's success should be taken into consideration when it comes to sustainability goals, as increased demand for the product may lead to increased pressure on local resources. There must be consensus on sustainable production guidelines through a participatory process in order to avoid stressing fragile environments and to make sure that the GI does not lead to "genetic erosion."[42]

### 10. GI and Agricultural Export

India remains a net agricultural exporter, accounting for a sizable portion of basic commodity exports such as rice, shrimp, bovine flesh, sugar, tea and spices. The majority of its imports are processed goods, most notably palm and sunflower oils. The fundamental issue is that the value of agri-imports has climbed by four percentage points, reaching a record high of $25 billion in FY18, and is on track to surpass the value of agri-exports, converting India into a net agri-importer. Exports must play a critical role if the country is to accelerate agricultural growth and treble farmers' income by 2022-23.[43] A growing emphasis on agricultural exports is reflected in the Agriculture Export Policy 2018, as well as in changes to tariffs and non-tariff measures.

India should make a concerted effort to trademark agricultural products through processes such as Geographical Indication (GI), particularly for organically grown commodities that generate better returns on global markets. Establishing strong agricultural brands can assist farmers in gaining a competitive edge in global markets that are 'buyer-driven'. Certain internationally recognised brands (California almonds, Chilean wines and

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42 V. Boisvert, *From the Conservation of Genetic Diversity to the Promotion of Quality Foodstuff: Can the French Model of Appellation d'Origine Controlee Be Exported?* Collective Action and Property Rights Working Paper, International Food Policy Research Institute 49 (Washington DC, 2006).

43 "Agri exports play important role in doubling farmers' income; need to boost farm shipments: Govt", *available at*: https://www.financialexpress.com/economy/agri-exports-play-important-role-in-doubling-farmers-income-need-to-boost-farm-shipments-govt/2325861/ (last visited on April 04, 2022).

Swiss chocolates) enjoy a high level of recognition in their particular product categories. Branded items typically command a premium price added to brand loyalty and are viewed as a step towards building a strong client base. Branding adds value to items by differentiating them and also because consumers believe that branded products are of higher quality than unbranded things.

India has over 300 recognised geographical indications, but just a few have been employed for economic value addition. Darjeeling tea and Basmati rice are two of India's most well-known GIs, yet both appear to have little commercial significance when compared to Chilean wine or Danish cheese, for example. While the Directorate General of Foreign Trade Policy has initiated a campaign to promote the branding and commercialisation of GI products for export between 2015 and 2020, it is critical to take it to the next level.

India can elevate the Alphonso Mango, Darjeeling Tea and Basmati Rice to the level of California almonds or Swiss chocolates in terms of global acceptance. Indian embassies abroad can act as a catalyst for marketing and guiding such items through culinary festivals, exhibits at busy airports, and by encouraging renowned chefs and aficionados to promote them. The Agriculture Department of the Dutch Embassy in New Delhi aids Dutch food producers in gaining access to Indian markets and promoting their expertise in that country.[44] Indeed, the tactics taken by other countries to promote brands can serve as a good example for our own. Clustering has been embraced as the foundation for agricultural commodity branding and the development of their monetary value by a number of countries. Numerous countries immediately followed France's lead, including Japan for Kobe steak, Colombia for Juan Valdez coffee and New Zealand for Manuka honey. Malaysia's Best is a well-known example of a commodity branding initiative that was successful. This umbrella trademark, which covers a variety of horticultural products, adheres to Malaysian standards and best agricultural practices. Only a year later, exports of

[44] "Netherlands Trade Mission to India", *available at*: https://www.rvo.nl/sites/default/files/2019/09/Missieboekje-handelsmissie-India-13-18-oktober-2019.pdf (last visited on April 04, 2022).

Guava, Mango and Mangosteen increased dramatically, from $21.73 million to $51.29 million.[45]

Adherence to the government's 'green box' of support, rather than the 'amber box', is another justification in favour of aggressive agri-product branding. Indian exporters currently enjoy tariff exemptions and the Merchandise Export from India Scheme, which may be in violation of WTO rules. Significant budgetary commitments for aggressive branding and packaging are required to stimulate manufacturers and exporters.

## 11. Conclusion

In the field of intellectual property protection, GIs are critical tool for identifying and preserving intellectual property rights associated with agriculture and food items that originate in certain geographic locations. Many Indian institutions and agencies have now taken major steps to ensure that India's cultural legacy is legally protected. Also important is the implementation of appropriate promotional techniques in order to maximise the commercial potential of GI-tagged items. It is critical to recognise the different cultural traits of rural populations affected by GI in order to acquire a deeper understanding of these people and their circumstances. In order to ensure that food items that are historically produced in certain regions are not subjected to GI labelling, they should not be manufactured in another region because they will not be identical when produced in another location. Experts believe that GI ratings should not be assigned to food items that are easily replicated over the world.[46]

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[45] M.J. Prabhu, "Palani Guava Growers Export to West Asian Countries", *available at*: https://www.thehindu.com/sci-tech/science/palani-guava-growers-export-to-west-asiancountries/article 5117065.ece (last visited on April 04, 2022).

[46] *Supra* note 8.

# REDEFINING THE COMPLEXITIES BETWEEN COPYRIGHT AND COMPETITION LAW – AN ANALYSIS

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**Abstract**

*In some countries, including India, the intersection between intellectual property rights and competition law has remained a contentious issue. There have been differing views on the competition commission's authority to exercise jurisdiction over an IP owner's right to prevent rivals from exploiting his or her intellectual property. Because there are no precise rules for dealing with the intersection of competition and intellectual property law, the issues are decided by the courts on a case-by-case basis. The authors of this study investigate how other jurisdictions, such as the United States and the European Union, deal with the intersection of competition and intellectual property (in particular, copyright) laws. This study also looks at how Indian courts have dealt with similar situations, as well as how international judgements have impacted them. The author of this article explores not only the current law on this topic, but also potential future concerns that may arise, and how they might be addressed in order to enable and preserve the delicate balance between copyright law and competition law.*

**Keywords**: Competition, License, Anti-Competitive Agreements, Market, Complementarity.

## 1. Introduction

There is increasing interest in the relationship between intellectual property (IP) and competition law, particularly as IP protection has grown in scope globally. Preliminary considerations need to be made before moving on to a more in-depth discussion of IP and competition law. When it comes to IP, many countries around the world appear to be influenced by the question of whether or not they are in conflict with each other. In contrast, we believe in the modern understanding according to which IP and competition law are not inherently in conflict with each other. IP and competition laws are intended to promote a system that encourages dynamic competition for better

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and more diverse processes and products by preventing imitation and enhancing substitution for it. Consequently, the theory of "complementarity" states that copyright law and competition law should be viewed as promoting complementary goals. When competition law is used to limit copyright exclusivity, there may be conflicts on the level of application. This modern view of competition law shows that the question is not "whether", but "how" competition law should be applied. For the latter question, a careful consideration of both the positive and negative effects of copyright on market competition is necessary.[1]

As a result, in the broader debate on copyright law and competition law, this conflict between exclusive rights and free competition is the primary focus. Competition law has a "restrictive" role in this regard because it could possibly restrict the right of the Copyright owner to use their own Copyrighted Assets.

Due to its "proactive" nature, the relationship between competition and copyright law has gotten short shrift in recent discussions. The purpose of copyright law is to ensure that the creators of works receive a fair reward for their labours of art. However, the willingness of customers to pay, not the exclusive right, is what generates this kind of revenue.

Customers may even be enticed to switch from lawful copies to unlawful ones if these markets for authorised use aren't functioning properly. Creating and maintaining an efficient and competitive distribution market depends on competition law. The Report is the best example of this feature in action. Distribution-related competition law cases are plentiful. Most of this is due to the fact that copyright-related markets often have to rely on the bundling of works into appealing repertoires and the use of centralised platforms for licencing and distribution, even though works are usually increasingly variable and have the ability to compete most effectively for consumers. As a result, the intermediaries who control these repertoires and platforms have a tendency to gain market power. According to this proactive role, competition law should not be viewed as an "enemy" of copyright law but rather as a key component of a more holistic copyright policy at the national and international levels.

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[1] P. S. Mehta, U. Kumar, *et. al.*, "Interface between Competition Policy and Intellectual Property Rights" 21(2) *Journal of Sustainable Development Policy Institute* 136-162 (2020).

## 2. Legislative Framework

In the vast majority of cases, copyright is not addressed in specific terms. Certain aspects of copyright have been dealt with under competition law in a significant number of jurisdictions. According to these sub-rules, trademark licencing agreements in the context of vertical distribution agreements like franchising agreements,[2] or technology transfer[3] and research and development (R&D)[4] agreements tend to be the most common. Such restrictions may encompass copyright concerns to the extent that technology transfer rules also extend to software licences.[5] As an example, consider the European Union's (EU) technology transfer restrictions. EU technology transfer guidelines specifically say that the European Commission will not apply European technology transfer standards to other copyright licences, such as those that govern the performance or reproduction and sale of works.[6] In contrast, the US antitrust agencies' IP Licensing Guidelines also apply to the licencing of copyrights in general.[7] Although EU law does not distinguish between the refusal to licence patents and copyrights[8] in its Guidance Paper on the Abuse of Market Domination, it is clear that the most serious refusal to licence instances under EU law relate to copyright.[9]

There is a broad rule of thumb that copyright-related cases be handled under competition law. To allow for a specific evaluation of a case's pro and anti-competitive impacts, generic exemption provisions tend to be read in a restricted manner. As a result of these general exemption rules, several younger jurisdictions, particularly in the United States, have not had such copyright-related litigation. Sub-rules, regulations and

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2 European Vertical Agreements Block Exemption Regulation and the Vertical Agreements Guidelines: Commission Regulation 330/2010 of 20 April 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices, [2010] OJ No. L 102/1; Commission notice – Guidelines on vertical restraints, [2010] OJ No. C 130/1.

3 Commission Notice - Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, [2004] OJ No. C 101/2.

4 European R&D Block Exemption Regulation: Commission Regulation No 1217/2010 of 14 December 2010 on the application of Article 101(3) of the Treaty on the functioning of the European Union to categories of research and development agreements, [2010] OJ No. L 335/36.

5 G. L. Bustin, P. Werdmuller, *et. al*., "2003 Annual Review of European Union Legal Developments", 38(3) *The International Lawyer* 639–664 (2004).

6 *Ibid.*

7 US Department of Justice and US Federal Trade Commission, Antitrust Guidelines for the Licensing of Intellectual Property, 1.0 (1995), *available at*: http://www.justice.gov/atr/public/guidelines/0558.htm#t1 (last visited on July 14, 2022).

8 Communication from the Commission: Guidance on its enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, [2009] OJ No. C 45/7.

9 *Supra* note 5.

guidelines can provide more particular guidance on IP-related cases. As with patent law, there is a propensity to treat copyright in the same manner. When it comes to the applicability of competition law to copyright-related matters, it appears that the approach of patent and innovation can serve as a useful guide.

### 3. Practice

It is common in most jurisdictions to stress on administrative enforcement of competition law and private regulation of IP through the courts when it comes to copyright and competition law. Some notable exceptions exist, such as in Latin America and Asia, where IP offices may also have administrative enforcement ability. In Peru (INDECOPI), for example, the competition agency and the IP agency are both parts of the same government entity.

The particularities of each jurisdiction have a significant impact on both the volume of activity and the types of matters handled. They explained this by citing institutional restrictions, such as a lack of people knowledge about IP or a desire to focus on more urgent matters. Some developing and emerging economies provided a significant argument, namely that copyright-related issues will not be brought before agencies as long as copyright enforcement is weak. This appears to be logical and enticing. Many countries are likely to see an increase in copyright respect and enforcement in the not-too-distant future. As a result, these countries could see a rise in these lawsuits in the near future as well. Other comparable jurisdictions have shown that minimal enforcement does not always mean that copyright-related industries, such as the music and film sectors and the media, are not growing. This might lead to competition law challenges. However, the premise that competition agencies will not be required to control Collective Management Organisations (CMOs) as long as CMOs need to be built up as efficient organisations for copyright enforcement and licencing is valid. This explains why EU law and European jurisdictions continue to provide the majority of CMO cases.

Resource individuals cited broad exemption clauses that preclude enforcers from applying competition law to IP-related disputes as a very concerning factor for a lack of practice in several jurisdictions. According to the experience of other countries, these laws are rarely used as absolute exemptions. Most of the time the agencies and courts prefer a very restrictive view of these laws or even appear to ignore them when big IP-

related matters arise. Exemption provisions like this might therefore be harmful in younger jurisdictions by providing enforcers with incorrect information or an easily available rationale for avoiding complex IP issues for which they do not have sufficient knowledge.[10]

## 4. Practice in the Copyright Market

Individual copyright-related industries, aside from software, are not dependent on economic development levels but often depend on cultural specificities of the given jurisdiction in terms of their relative prominence and relevance relative to other sectors.

As an example, in nations like India and Egypt, the film business is becoming important to the national economy, although this may not be the case in Europe or Canada or Australia. However, even countries in the same region may have established their own unique strengths in some areas of creative expression. While Columbia is famed for its music, Chile may be better known for its fiction. Sweden has recently become a major exporter of crime stories and related television programmes in recent years, whereas the music industry has mostly left the nation for tax reasons. If an industry's significance is high enough, the amount of practise a jurisdiction creates in that area may change. The amount of focus, though, may be even more critical. Copyright-related disputes frequently come from the media sector, which in most countries has a significant degree of concentration in this area. It does not matter if the country in question is also a major location for the production of audio-visual works. Competition enforcers should keep a watch out for the dissemination of cultural and creative content, in particular, according to a study. When it comes to foreign educational publications, for example, the Hellenic Competition Commission found a high level of concentration on the wholesale level. The two largest companies in this industry have a combined market share of 55.8 percent to 61.7 percent.[11] Likewise, only two businesses dominate the distribution of newspapers in Greece.[12] Generally speaking, the Bulgarian competition agency has shown a high level of awareness of competition issues in markets related to copyrights.

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10 N. Wyzycka and R. Hasmath, "The impact of the European Union's policy towards China's intellectual property regime" 38(5) *International Political Science Review* 549–562 (2017).

11 Max Planck Institute for Intellectual Property and Competition Law, "Copyright, Competition and Development", 31-32 (December, 2013).

12 Hellenic Competition Commission, Judgments in Cases 252/III/2003 and 519/VI/2011, Argos SA and Europi SA (reported by the Commission).

A great number of authorities have stated that they are obligated to uphold the law against any and all impediments on free competition. As a result, many organisations use an essentially reactive strategy to investigating cases, rather than proactively searching for new ones. There is no way to know for sure whether or not these complaints will lead to a string of significant judgements involving remarkably similar situations. Many of these practises may have occurred in India, where the Competition Commission recently handed down a series of decisions on regional film business associations' practises restricting access to local cinemas and placing unreasonable restrictions on the exploitation of films, such as unreasonable holdback periods for the exploitation of films on DVDs.[13]

## 5. Provision of Competition Act and Interface with IPR

Anti-competitive agreements that have a significant negative impact on the market are addressed under section 3 of the Competition Act. Contrary to this, clause 5 of the same section states that any agreement formed with the goal to preserve the right holder's Intellectual Property Right (IPR) is an exception to section 3.[14] "Reasonable limitations as may be required for preserving IPRs," according to section 3(5) of the Act, will not be subject to section 3. This implies that, although some of the right holder's acts may be monopolistic in character, they will not be considered anti-competitive agreements since they are fair. It should be emphasised, however, that the term "reasonable conditions" is not defined elsewhere in the Competition Act. The same may be applied so as to differentiate and infer whether the agreements have an unfavourable impact or not, and furthermore a rigorous case-by-case examination may also be required. The Competition Committee of India (CCI) is a specialised Court/Tribunal established in India to administer and enforce competition law. The CCI is a key player in the fight against anticompetitive behaviour and in competition advocacy. This quasi-judicial authority has ruled on a number of precedent setting matters involving the intersection of competition law and copyrights.

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13 *Reliance Big Entertainment Ltd*. v. *Karnataka Film Chamber of Commerce* (2015) 5 SCC 1.

14 P. Berwal, "Section 3(5)(i) of The Competition Act – An Analysis", 27(2) *National Law School of India Review* 168–184 (2015).

### 5.1. *United Producer/Distributors Forum v. Multiplex Owners*[15]

A conflict erupted in 2009 between multiplex owners and numerous Bollywood film producers/distributors. The conflict arose because the film producers/distributors requested a larger portion of the income collected by multiplexes. The multiplex owners claimed that manufacturers and distributors were colluding unfairly and causing anti-competitive difficulties. After producers/distributors placed pressure on multiplex owners to boost their revenue share, the multiplex owners' share grew by 2% in the first week and then increased further in the following weeks. The owners claimed, among other things, that the producers/distributors had created a cartel in order to induce them to compromise. They banded together to decrease the supply of movies to multiplex owners, resulting in lower income for the multiplex owners. The producers/distributors were acting in a cartel-like manner. Some of the producers'/distributors' arguments focused on copyright, claiming that cinematographs/feature films are protected by copyright, and that section 14 of the Indian Copyright Act, 1957 permits the right holder to exploit his works in whatever way he sees proper.[16] They also argued that it is up to the producers to determine how their films are transmitted to the public, and that it is not up to the owners to decide when the films are released and on what conditions they are sold. They further argued that the CCI lacked jurisdiction to hear the matter since the Copyright Act allows for alternative compulsory licencing.

Since section 3(5) of the Indian Competition Act is a non obstante provision that states that nothing shall impede people from placing reasonable limits in order to defend their rights given by the Copyright Act, 1957, the producers/distributors' activities are fully legitimate. After a thorough hearing of all parties, the CCI came up with their own interpretation of how copyright rules should be applied in the situation at hand. First, the CCI determined that copyrights are just statutory rights, not absolute rights. Furthermore, if any action is taken to assist multiplex owners, such as granting the producers the right to exclusively show the films via them, it would amount to forced licencing, over which the CCI has no authority to decide. The CCI found indications of cartel-like behaviour by

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15 J. Handoll, "Establishing Breach of Section 3 of the Competition Act, 2002 - The Indian Bid Rigging Cases", 27(2) *National Law School of India Review* 147–156 (2015).

16 B.T. Kaul, "Copyright Protection: Some Hassles and Hurdles", 46(2) *Journal of The Indian Law Institute* 236–268 (2004).

the producers/distributors and concluded that section 3 of the Competition Act had been violated. Section 3(5) of the Copyright Act was likewise found to be inapplicable since there was no actual violation of copyright.[17] The ruling that the Copyright Act has no overriding influence over competition rules was one of the most important components of the CCI's judgement. This implies that in the event of a conflict between competition and copyright laws, the competition laws will always win, however as per section 62 of the Competition Act, the application of other laws is not barred.

## 6. Copyright & Anti-Competitive Agreements

In this section, we shall discuss the two recent orders from CCI which deal with anti-competitive practices in film market. First one is the case of *K. Sera Sera Digital Cinema Ltd.* v. *Pen India Ltd.*[18] (hereinafter "the K. Sera case"), which dealt with the allegation of formation of cartels by opposite parties to monopolize and dominate the digital market for cinema in India by entering into an agreement that was anti-competitive in nature. The second case was the case of The Confederation of *Real Estate Brokers' Association of India* v. *Magicbricks.com*[19] (hereinafter "the Real Estate Brokers case"). In this case, the opposing parties were accused of, "abusing their dominant position by advertising a 'No Brokerage Policy' (NBP) on their websites, mobile applications, newspapers, and other media, as well as imposing unfair and discriminatory conditions" on traditional real estate brokers who work on a commission basis.

### 6.1. *The K. Sera case*

The decision in this instance clarifies when the exemption under section 3(5) of the Act may be used. The conflict erupted between a digital cinema exhibition service and the makers and distributors of the film "Kahaani 2". The informant said that the film's producers and rivals had engaged into anti-competitive arrangements such as tie-in agreements, exclusive supply agreements, and reluctant to interact with the informant in order to restrict the film's distribution. It was also claimed that the producers had advised against screening the films at any theatres associated with the informant. The distributors were also accused of stealing the informant's theatres for the installation of

[17] M. M. Sharma, "Economics of Exemptions from Competition Law", 24(2) *National Law School of India Review* 62–74 (2013).
[18] 2018 SCC Online Bom. 9789.
[19] [2016] CCI 19.

their technology/equipment, claiming to be the sole provider of the film "Kahaani 2". The opposing parties countered the informant's assertions by claiming that there was no proof of an anti-competitive agreement. The distributors maintained that it is up to the producers to decide whether or not to display the film solely on their platform. They also noted that quality and security are important considerations when selecting whether or not to distribute a film, and that the informant has previously caused copyright infringement. Investigations into a prior instance involving the informant revealed that they had engaged in internet piracy which was also claimed. There had been no counter arguments to contradict or contest any of the claims made by the opposing party, according to the Commission. The simple fact that they remained silent strengthened the legitimacy of the opposing parties' arguments. It was also noted that since the film's producers had put in significant effort to make their picture, they had every right to choose the economic plan for its distribution. Applying section 3(5)(i)(a) of the Competition Act, it is clear that as the proprietors of the picture, they have the right to impose "reasonable conditions" in order to safeguard their product from being used improperly.[20] Given that the informant has previously been accused of internet piracy, the producers' decision to limit the distribution of their film to the informant seems reasonable. The substance of section 3(5), as well as the confluence of Copyright and Competition Law were highlighted in this case. The Commission was effective in protecting the rights of the film's owners while also increasing competition in the market.

### 6.2. *The Real Estate Brokers case*

The CCI rejected claims of monopolisation of the real estate brokerage sector in India by Magicbricks.com and four other real estate websites. The Confederation of Real Estate Brokers' Associations of India has submitted an information with CCI. In addition to the above charges, it was claimed that opposition websites were using "No Brokerage Policy" tactics such as property auctions or "buy directly from owners" ads to remove competitors and real estate agents from the market. According to the report, conventional real estate brokers are being displaced from the market as a result of online real estate listing portals offering NBP or charging significantly less than the usual brokerage charge

[20] R. Sethi & S. Dhir, "Anti-Competitive Agreements Under the Competition Act, 2002", 24(2) *National Law School of India Review* 32–49 (2013).

of 2% of the sale/purchase value of a property. As no licence or registration is required in India to conduct real estate brokerage business, the large number of listing sites and traditional brokers in the relevant market pose competitive restraints on each other, and thus no specific player can act independently of market forces and affect consumers or other players in its favour. The Commission also reviewed the Association's website ranking data from Alexa.com and noticed that the rating only included websites/portals and did not include off-line brokers. The CCI further said that none of the five real estate websites can be found in violation of section 4 of the Competition Act since none of the five real estate websites had market dominance.[21]

## 7. Blanket Licenses – Violation of Competition?

The music business has traditionally been one of the most vocal in claiming copyright. It is often subject to copyright protection, resulting in a complicated legal relationship. A blanket licence is one that is granted to a music user, such as a radio station or television station, that permits them to use the music in any manner throughout the duration of the licence.[22] This is a more logical alternative since obtaining separate licences takes time. Blanket licences, which are issued by performing rights organisations, allow the use of any work in the granting society's repertoire for the life of the licence. Although this strategy is increasingly often adopted, its legality is believed to be in conflict with competition rules. The crux of the problem is a conflict between the encouragement of creative endeavours and the prohibition of unfair commercial practises.

### 7.1. *Broadcast Music, Inc.* v. *CBS, Inc*.[23]

Broadcast Music Inc. (BMI) was formed as a market middleman for musical works. Previously, thousands of owners of musical composition copyrights struggled to negotiate licencing with individual users and to find and prosecute infringers. BMI and American Society of Composers, Authors and Publishers (ASCAP) helped alleviate these concerns by enabling copyright owners to licence their works collectively under a blanket licence. Any work covered in the licence might be performed under the blanket licence. With BMI and ASCAP's blanket licencing, practically any copyright protected work in

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21 *Supra* note 14 at 10.

22 I. L. Pitt, "Superstar effects on royalty income in a performing rights organization", 34(3) *Journal of Cultural Economics*, 219–236 (2010).

23 441 US 1 (1979).

the United States (US) may be used. Columbia Broadcasting System (CBS), i.e. the "plaintiff", bought blanket licences for its TV and radio content. CBS sued BMI and ASCAP for antitrust breaches, claiming that the blanket licences constituted to price fixing and that BMI and ASCAP monopolised the composition market. The District Court ruled that blanket licences were not *per se* infractions, but the court of appeals ruled that they were and thereafter BMI appealed.

The Supreme Court overturned the ruling and remanded the case for a rational licence evaluation. A blanket licencing scheme for copyrighted musical works does not constitute price fixing in violation of the Sherman Act.

The criterion of analysis used to determine whether the blanket licencing system violated the Sherman Act was the "rule of reason", which the Court of Appeals might have used on remand if the question of blanket licencing in the television industry had been retained.[24] Courts only categorise some commercial interactions as per se breaches of the Sherman Act after extensive experience. Despite the intense antitrust examination of ASCAP and BMI's blanket licencing, the Court should not ban them as a per se trade constraint. The "Copyright Act, 1976" opted to use blanket licences and similar tactics. Thus, the assumption that blanket licences constitute a kind of price fixing susceptible to automatic condemnation under the Sherman Act is not nearly widespread.[25]

## 8. Future of Copyright & Competition in Digital Era: How Data-Driven Distribution may allow anti-Competitive Practices

The creation of content is merely one facet of the equation. Content distribution is another important commercial operation in the film and television industries. This sector of the company strives to find the best answers to the problems of when, where, and how to deliver information. When it comes to determining when material gets delivered, the film industry has already adopted a data-driven approach. The author has first-hand experience developing models that take into account aspects that vie for audience attention in certain jurisdictions, as well as employing algorithms to recommend the most financially advantageous release date. However, the where and how questions are more difficult to answer. To comprehend this, we must first examine the process of

[24] E. D. Cavanagh, "The Rule of Reason Re-Examined", 67(2) *The Business Lawyer* 435–469 (2012).
[25] *Ibid.*

film distribution. The Hollywood Antitrust Case of 1948,[26] which separated the operation of theatres from film studios, created the framework of movie distribution in the United States. As a result, US film makers have only had a tangential connection with their viewers, and distribution choices have mostly been based on gut instinct (for dates) or personal contacts (cinema pricing). With the noteworthy exceptions of France and South Korea, where studios and distributors are vertically integrated, this model is widely adopted across the globe.[27] As a result, theatres and film distributors typically have a fractious relationship. Distribution corporations (big studios) must persuade theatres to show their films by offering them rental payments, which is normally negotiated weekly per piece of material. As a result, film distributors are fighting for screen space and bidding against one other on the rental price. The exhibitors, not the audience, are the consumers and deciding where a picture will be released becomes a choice about how much to bid at a certain cinema. Distributors and exhibitors would need data on local demographics (including personal data, as described above, possibly acquired via loyalty programmes with the cinema, which we already see today), as well as data on other local factors competing for audience attention, in order to implement a data-driven distribution strategy. Both exhibitors and distributors would need to use the same information in order to reserve the best screens for the best movies. This data would have to be fed into an algorithm, which would then propose the best time to book. At first look, this seems to reduce anti-competitive activity, particularly pricing collusion. However, databases may be skewed by nature or on design, and algorithms are dark boxes that might hide unethical purposes. Even before the advent of big data, in the 1990s, it was clear that authorities would have a tough time detecting pricing collusion in digital systems.[28]

Data-driven, machine-learning systems may be skewed by their input data, allowing organisations to participate in automatic pricing collusion without having to communicate directly with one another. In this approach, using machine learning algorithms for critical business activities without regulating or inspecting the underlying data might generate (or obscure) significant competition concerns under current laws.

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26 *U.S.* v. *Paramount Pictures, Inc.*, 334 U.S. 131 (1948).

27 D. W. Davis, "Marketization, Hollywood, Global China", 26(1) *Modern Chinese Literature and Culture* 191–241 (2014).

28 S. Borenstein, "Rapid Price Communications and Coordination: The Airline Tariff Publishing Case", 236 *The Antitrust Revolution: Economics, Competition and Policy* 562-572 (1994).

There has already been academic research towards detection measures for Artificial Intelligence (AI) enabled collusion.[29]

## 9. Conclusion

It is undeniable that innovation is an indispensable part of human history. With each passing day, the importance of human ingenuity grows more and more. The existence of both competitive policies and copyright laws in the contemporary world is necessary to preserve the welfare of consumers while also enhancing market competitiveness. Both branches of law, which have arisen independently of one another, serve an important role in preserving the interests of artists by giving exclusivity and also by ensuring a healthy level of competition. Because copyright works to the artist's favour, the artist is able to proceed with his or her creative process without fear of infringement or harm to either his or her professional reputation or financial well-being. The copyright laws are only intended to safeguard the rights of the creator and are not intended to clash with the competition legislation. But it is necessary to distinguish between exclusivity and monopoly throughout the application of the laws by using the rule of reason approach to each individual instance in order to identify the thin line between them. The current legislative framework of our country provides a plethora of opportunities for those who are curious.

[29] A. Ezrachi & M. E. Stucke, "Artificial Intelligence & Collusion: When Computers Inhibit Competition", 5 U. *ILL. L. REV*. 1775 (2017).

# COMMERCIALIZING INTELLECTUAL PROPERTY RIGHTS & SIGNIFICANCE OF COMPETITION LAWS

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**Abstract**

*After globalization, the world has altered dramatically. Whether developed or developing, markets play a critical role in all economies. As technology is rapidly improving, the danger of original work being copied and losing its competitive edge is a significant concern, which is necessitating increased protection requirements. Intellectual property rights grant exclusive rights over Intellectual Property, which is intangible. Intellectual property can be a profitable asset for a business product, and service, therefore commercialization of IPR happens at the functional, business, and global levels of companies. Through commercialization, one may get the benefit of a competitive edge, but as this process includes sharing some information with others, it raises concerns among the owner of specific products or services. The law of intellectual property rights and competition are closely connected, and compliance with both is required for effective market functioning. As a result, a regulatory balance must be maintained between the two. IPR creates a monopoly, but competition law prevents it. This research paper examines how an IPR is beneficial, the primary components and concerns of commercialization in Intellectual Property legislation, key business concerns related to IPR, and the relationship between competition and intellectual property law. When it comes to enterprises, the importance of effectively considering and managing the intellectual property problem cannot be stressed. It is a crucial time for corporations or businesses to recognize the value of these rights and put them to work efficiently.*

**Keywords:** Business Concerns, Competition Laws, Commercialization, Intellectual Property Rights, Market.

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## 1. Introduction

Intellectual Property Rights (IPR) have become an essential component in generating and implementing ideas translated into knowledge and technology to promote innovation and economic success. The goal of competition law[1] is to prohibit businesses from abusing their market dominance by developing, increasing, or retaining it in ways that stifle competition without providing economic advantages.[2] The efficient operation of the marketplace necessitates the application of both intellectual property and competition law. IP laws on one hand grant exclusive rights to the original work and help in getting remuneration as well, and on the other hand, competition law ensures that businesses do not stifle competition or abuse market power in anti-competitive ways.[3] It is essential to highlight that intellectual property impacts a company's commercial growth. With the help of commercialization, an IPR can get promoted and profit can be earned out of it. Unfair competition in the intellectual property field is addressed in several multilateral agreement transactions involving intellectual property. In India, laws govern trade restrictions, patents, and competition. This study will help us understand the critical components of IPR commercialization, how it is linked with competition, and critical business concerns.

## 2. What is IPR?

Intellectual Property (IP) refers to the creation of particular works which is tangible.[4] A few examples of IP are symbols, names, images, literary work, artistic works, designs, and so on.[5] Exclusive rights to the creation of the original work are granted under intellectual property rights. The rights include prohibiting others from unauthorized use, reproduction, or selling of such work; it also provides an opportunity to get remunerated out of such work by legal means and grant license of that work. These rights can be either

1 The Competition Act, 2002 (Act 12 of 2000).

2 S. Jain "Competition and Intellectual Property Rights: Interface and Interdependence in Indian Context", *available at*: http://dx.doi.org/10.2139/ssrn.3677720 (last visited on August 24, 2022).

3 L. Jajpura, B. Singh, *et.al*., "An Introduction to Intellectual Property Rights and their Importance in Indian Context", 22 *Journal of Intellectual Property Rights* 32 (2017).

4 *Ibid*.

5 R.M.K. Alam and M.N. Newaz, "Intellectual Property Rights Commercialization: Impact on Strategic Competition", 8(3) *Business and Management Review* 22 (2016).

possessed by an individual or a corporation.[6] IPR has a significant impact on a country's economic development as it helps in promoting a good level of competition and encourages industrial and economic growth. There are several benefits of IPR when it comes to its nature. It is tangible, which means it protects the ideas, creation, information, and many other similar forms from getting used in an unauthorized manner and making it available to use commercially, and getting remuneration out of such IP. In legal terminology, Intellectual Property is an asset of the original creator which means it consists of property rights, which can be used in any way by the creator, subjected to a specific condition.[7] The creator has the right to sue in case of unauthorized use under IPR.[8] As the technology is growing at an incredible pace, several alterations, and new terminologies are being added to broaden the scope of IPR.

Two classification modes are used to determine the scope of IPR concerning copyright property and industrial property.[9] Copyright property covers the original literary, dramatic, musical, artistic works, cinematograph films, music and audio-visual works, whereas; industrial property includes patents, trademarks, industrial designs, geographical indications, etc.[10] IPR creates a balance between the interest of the public and the creator of work and opens the door to opportunities is increasing, the market value of such work, making that idea into an asset that can give remuneration in return, differentiation from one product to another is done more easily through it. It is pertinent to note that different IPRs have different benefits and qualities. The types of IPR are mentioned below:

### 2.1. Copyright

These are the rights given to creators for their works in the artistic and literary fields. As stated earlier, IPR can be owned by an organization and an individual as well, similarly, copyright can also be held either individually or by an

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6 A. Prakash, P. Sarma, *et.al.*, "Intellectual Property Rights and Indian Pharmaceutical Industry: Present Scenario", 50(2) *Indian Journal of Pharmacology* (2018), *available at*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6044128/ (last visited on August 24, 2022).

7 WIPO, *What is Intellectual Property*? (WIPO, 2020) 2.

8 *Supra* note 3.

9 "Scope of Intellectual Property Rights: Everything You Need to Know", *available at*: https://www.upcounsel.com/scope-of-intellectual-property-rights (last visited on March 25, 2022).

10 Y. Bhatia, "Intellectual Property Rights and The Digital World", 1(3) *International Journal of Legal Science & Legal Innovation* 1-6 (2019).

organization.[11] Copyrights by law are not generally required to be registered, but the option for writing it is open for the creator. Therefore, even if the work is not registered, it is protected by copyright law.[12]

### 2.2. Trademark

It is a sign created on a product or service to make it distinguishable from the other options available. It helps maintain good quality, standardization, and uniqueness.[13] These rights are granted for a certain period but are extendable as per the requirements by paying off the renewal charges. These rights are valid only in the country where it is filed.[14]

### 2.3. Patent

It is a right granted for a specific product or service invention for its uniqueness to do something.[15] To obtain a patent, one must demonstrate that the invention is one-of-a-kind. A patent gives the right to the creator, to choose how others can use such creation. The term for which a patent is granted in India is 20 years,[16] different countries have different tenures for granting a patent.

### 2.4. Trade Secrets

This consists of confidential information and can be sold or licensed. Unfair trade practices would be considered if such information was disclosed in a way that was not by sound business practices. Unless the trade secret is revealed in the public domain, it can last for the entire period.

### 2.5. Geographical Indications

These are the indicators that states from where the product originates. It includes the name of the place. Generally, the period of such registration lasts up to 10 years, which is extendable as per the conditions of the section.[17]

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11 E. Verkey, *Intellectual Property: Law and Practice* 18 (Eastern Book Company, Lucknow, 2015).
12 *Supra* note 10.
13 *Supra* note 11.
14 *Supra* note 10.
15 *Ibid*.
16 *Supra* note 10.
17 E. Narasimhulu, A.A. Hindustan, *et.al.*, "Need of Intellectual Property Rights in India and Other Developing Countries: A Novel Approach for Global Recognition and Economic Development", 5(2) *National Journal of Advanced Research* 18 (2019).

### 2.6. Industrial Designs

It consists of aspects of a product's appearance which are not covered under patents. It is to be noted that the creation has to be unique and no other composition similar has to be available in the market.[18] The nature of Industrial Design should be aesthetics, not utility. The tenure of such a right last up to 10 years.

## 3. What is the Commercialization of IPR?

Commercialization in simple words refers to introducing new products or services in the market. Around the world, several rules and regulations are made to ensure that Intellectual Property is commercialized and protected. The main motive of the commercialization of IPR is to encourage people to bring new ideas and creations into the market and make it marketable and profitable.[19]

### 3.1. Tools Involved in the Commercialization

The owner can make money from their IP rights by selling them, assigning them, or engaging in various licensing agreements.[20] IPR serves a critical role as the legal vehicle through which information is transferred or contractual relationships are formed. Internally, knowledge can also be used, in which case IP laws serve to prevent clone competition. There are two main legal paths *via* which IP owners can monetize their work:[21]

i. Assignment of Intellectual Property
ii. Licensing of Intellectual Property

### 3.2. Assignment

An assignment is a type of direct sale of IP in which the owner transfers their property to another company in exchange for an advanced payment. It is a legal instrument that transfers IP ownership from one person to another. A formal assignment

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18 WIPO, "Industrial Designs", *available at*: https://www.wipo.int/designs/en/#:~:text=What%20is%20an%20industrial%20design,as%20patterns%2C%20lines%20or%20color (last visited on August 24, 2022).

19 *Supra* note 5.

20 KPPB Law, "Assignments and Licensing of Intellectual Property, available at: https://www.kppblaw.com/intellectual-property/assignments-licensing-intellectual property/#:~:text=Assignment%20of%20Intellectual%20Property%20Rights,gives%20up%20the%20rights%20entirely (last visited on August 24, 2022).

21 *Ibid*.

is frequently used to transfer IP ownership. Moreover, an IPR can be transferred in its entirety or part and it is pertinent to note that assigning IP owners should always be done in writing through a legal agreement. Without a written instrument, many IPRs cannot be legitimately transferred.

Assignment agreements are crucial in IPR because they allow intellectual property owners to transfer their intellectual property for Commercial benefits, guaranteeing that the intellectual property may be used for profit. They make use of and utilize the developed IP by allowing the purchaser or assignee to benefit from the assignment rights. These assignment agreements give rise to legal and equitable rights in law and may generate difficulties if they are not carefully worded as required by law.

In addition to abiding by the Rules, to avoid ambiguity, it is crucial to ensure that the agreement clearly defines to whom ownership is vested. The assignment must be lawful, and it must specify the length of time for which the individual will be the IP owner. In the event of a future IP ownership dispute, this would serve as a safeguard.

When IP rights are sold, the ownership of the IP is legally transferred to the new owners.[22] This is because IP legal rights are granted on a country-by-country basis. If the seller (the "transferor") is assigned, the IP that benefits the seller (the "transferor") is a sales agreement, and the commercialization process is completed. An assignment's lump-sum payment must be regarded as a purchase price.

In addition, the owner must consider the following criteria:

i. All expenses, including direct and indirect research and development expenditures, materials, any outsourcing, and IP protection costs;
ii. A component of gain; and
iii. The technology's or IP's potential market worth.

### 3.3. Licensing

Licensing IPR instead of selling them through one or more licensing agreements is a common technique of commercialization.[23] This indicates that the owner has given

[22] S. Ambadipudi and S. Srikanth, "Transfer of Intellectual Property: A Primer", *available at*: https://www.mondaq.com/india/trademark/961790/transfer-of-intellectual-property--a-primer (last visited on March 24, 2022).
[23] *Ibid*.

authority to another party to use IP under the agreed-upon terms. The license might be a suitable choice if the owner lacks the resources or skills to develop and sell the product or service. In general, the licensee (the IP owner) requires each licensee to pay the licensee a percentage of their outstanding number of sales at regular periods. "Property rights" are the terms that describe these payments.[24]

Assignment agreements transfer ownership of IP from the assignor to the assignee, whereas license agreements only allow the licensee to use the IP for a set length of time. For any licensing agreement, several variables can be negotiated, including:

i. If the licensee agrees to the supplementary license,
ii. If the licensee's rights are confined to that licensee or are not exclusive,
iii. What "territory" (as in any country/country) is relevant?
iv. What constraints (if any) exist in the fields of IP application (*i.e.*, uses)?
v. What (if any) constraints exist on exploitation techniques (commercialization, production, R&D)?
vi. What are the time restrictions (maturity criteria) that apply?
vii. What sums should be paid by the licensee (if any)?
viii. What is the royalty rate, and what are the terms and circumstances for other concessions?

The licensee achieves quick company development with minimal capital expenditure by utilizing this, Tool. The licensee's capacity to use IP, on the other hand, is dwindling.

## 4. Competition Law and IPR

Competition law and IPR manage the market in two primary areas, consumer welfare and technology transfer. Competition law is controlled by the Competition Act, 2002. The rapid growth of the commercial environment has led to a great impact when it comes to the linkage of IPR and Competition law and made common goals of both the laws. Although both the laws are different, IPR grant exclusive rights to the owner of the work, and on the other hand, competition law prohibits such practices which may decrease

[24] Obhan and Associates, "The Dos and Don'ts of Licensing Intellectual Property in India", *available at*: https://www.mondaq.com/india/trademark/800938/the-dos-and-don39ts-of-licensing-intellectual-property-in-india (last visited on March 24, 2022).

the competitive environment and advocates for protecting the general interest of the consumer.[25] Section 3(5)(i) of the Competition Act, 2002 deals with IPR in Competition Law.[26] Competition law keeps consumer welfare the utmost priority and focuses on limiting the monopoly in the market, IP Laws give priority to the rights of creators and grant exclusive rights to them but these are not extended to grant a status of monopoly to the creator. If the IPR holder engages in any anti-competitive behavior or activity, it will be held liable under competition law.[27]

IPR assists consumers in choosing diverse choices among goods and services by making its appearance distinct and different from the rest of the accessible products, while competition law maintains healthy competition. Therefore, we can say that both laws ensure competition in the situation of commercial environments. But the word "competition" in both laws is used in a different context in IP laws, it is used for competition among innovators or creators and in competition law, it is used to encourage competition and put an end to unfair trade practices. Moreover, it can be concluded that IPR are mere rights that are provided and Competition Law is a regulatory body. It is pertinent to note that competition law creates a balance between the choice of the consumer and the production of such goods and services.

## 5. Confidentiality Issues and Its Maintenance

IPR is termed as a valuable asset. As previously stated, many types of IPR exist to give suitable protection for such IP. It nowadays consists of confidential business data, trade secrets and crucial business relationships.[28] Due to the nature of such information, it needs to be secured from the competitors as such information can be a valuable asset for them too, due to these many reasons trade secrets are considered very important. In

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25 H. Stakheyeva, "Intellectual Property and Competition Law: Understanding the Interplay", in A. Bharadwaj, V. H. Devaiah, *et.al*., (eds), *Multi-dimensional Approaches Towards New Technology* 3 (Springer, 2018).

26 *Supra* note 1.

27 Sanjana, "Analyzing The Intersection of Competition Law and IPR", *available at*: https://www.mondaq.com/india/trademark/1117244/analyzing-the-intersection-of-competition-law-and-ipr (last visited on 27 March).

28 C.N. Saha and S. Bhattacharya, "Intellectual Property Rights: An Overview and Implications in Pharmaceutical Industry", 2(2) *Journal of Advanced Pharmaceutical Technology & Research* 89 (2011).

simpler terms, a trade secret is something that is going on inside the organization that should not be shared with the outside world, it can be licensed or sold.[29]

Disclosure and departure are considered as the two main sources by which confidential information may get leaked. Disclosure means that through accidental or deliberate disclosure by corporate officials, trade secrets can be leaked to competitors or third parties, either knowingly or unknowingly.[30] Departure refers to a situation when executives or key staff from the company exit, which may lead to sensitive business information leaks.[31] Once the employee exits, he has the right to use skills and knowledge that he has acquired in the due course of time of employment for his living. But it is essential to note that he is not entitled to use such confidential information unless authorized by the employer.

### 5.1. Employee Confidentiality

To safeguard from the threats of getting the confidential data leaked, the employer must provide employment agreements and get it signed by the employees. This agreement can be signed by the existing employees as well but they cannot be compelled or forced to sign such agreement. Under this agreement, the clauses related to confidentiality must be appropriately mentioned, in which the terms and conditions of disclosure or non-disclosure must be provided keeping in mind the confidential information.[32] It is important to remember that after signing such an agreement, the employee must not discuss any information with anyone during or outside of work. The course of employment refers to situations when an employee comes up with an inventive idea while working on the job, the employer might claim it if it was already stated in the contract and the employee had agreed to it. An employer, on the other hand, cannot claim ownership of such IP that is generated outside of the scope of employment. The type of agreement that is to be provided, may depend upon the nature of the disclosure of such confidential information. While there is no formal rule in India that governs confidential

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29 M. Noroozi, L. Zahedi, *et.al.*, "Challenges of Confidentiality in Clinical Settings: Compilation of an Ethical Guideline", 47(6) *Iranian Journal of Public Health* 875-883 (2018).

30 WIPO, "Trade Secrets", *available at*: https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_panorama_4_learning_points.pdf (last visited on March 26, 2022).

31 *Ibid*.

32 "Employee Confidentiality & The Rules", *available at*: https://businessadvice.co.uk/legal-advice/employee-confidentiality-the-rules/ (last visited on 25 March).

information and trade secrets, it is vital to note that a person can be held contractually liable for leaking sensitive information. Moreover, agreements of these kinds are always advised to be in written format. The acknowledgments that are to be mentioned in a well-framed agreement are:

i. The information is confidential; the disclosure is provided in confidence to the recipient; the recipient will not reveal the information to others or use it for their benefit without the prior permission of the information's owner; and
ii. Unauthorized disclosure of information may result in loss and damage to the information's owner, for which the recipient will be held accountable.

The clauses which can be added to make it a well draft are the Assignment clause, Disclosure clause, and Power of Attorney Clause.

## 6. Restrictive Practices under IP Licensing

The word "restrictive practice" refers to illegal methods taken by companies to improve their market position. These tactics can stifle or affect competition in a specific market regarding IPRs. Antitrust and competition laws regulate such corporate activities and ban them when it is proven that they distort or hinder competition in a particular market.[33]

Unfair competition is recognized by the Paris Convention for the Protection of Industrial Property, which encompasses not only IP violation but also any other conduct that disrupts a person's commercial relationships. The Paris Convention has a wide specification that any act of competition in industrial and commercial affairs that is opposed to honest practices constitutes unfair competition. These articles declare that the cornerstone of fair competition is honest practices or good morals, and they define three types of conduct that are considered to be normally illegal in international trade and must thus be forbidden.[34]

[33] WIPO, *Successful Technology Licensing: IP Asset Management Series* (WIPO, 2015), 41.
[34] Paris Convention for the Protection of Industrial Property, 1883, art. $10^{bis}$.

### 6.1. Kinds of Restrictive Practices

As previously stated, competition authorities can always remedy restrictive trade practices disguised as intellectual property licensing. Some of the most common restrictive techniques employed in intellectual property license agreements are listed below.

#### *6.1.1. Representation Arrangements and Exclusive Sales*

Such tactics restrict the licensee company's ability not just to organize its distribution system, but also to engage in exclusive sales or representative contracts with any third party other than the licensor or a licensor-designated party. To put it another way, the licensee firm is hampered and reliant on the licensor's distribution channels.

#### *6.1.2. Grant-back Provisions*

The grant-back clauses allow the licensor to receive technical information and improvements. These rules allow the licensee corporation to provide any invention or improvement made in the imported technology to the technology licensor at no cost. The grant-back clauses are categorized as exclusive, nonexclusive, and unilateral.

#### *6.1.3. Restrictions on Field of Use, Volume, or Territory*

Restrictions on the field of use allow the licensor to limit the use of the technology or reserve some applications for self-exploitation or third-party exploitation. Minimum production standards or maximum output are two examples of volume limits practices. Higher royalties may be paid beyond a particular production limit, or produced items in a defined container with a certain weight which may be used to regulate production output. As a result, such production constraints may prohibit the licensee business from manufacturing enough to export.

#### *6.1.4. Price Fixing*

A Price-Fixing clause in an IP license refers to the practice of the licensor reserving the right to set the sale or resale price of a product made using imported technology. The price-fixing provisions may cover the price fixed by the licensor on items produced using transferred technology. Horizontal pricing cartels involving numerous technology providers or recipients may likewise be involved in price-fixing.

*6.1.5. Export Restrictions*

Export restrictions may include limitations or prohibitions on the export of items made with the transferred technology. These requirements impose restrictions on the export of such items to certain markets, as well as permission to export to specific markets and the necessity of prior export approval. The limitations that have a direct impact include a total ban on goods exports. The licensor may put limits on the licensee, such as prohibiting or allowing export to one or more designated countries or locations. Exporting just certain items may be prohibited or permitted under certain limitations.

*6.1.6. Tie-in Arrangements*

The licensee must get raw materials, replacement parts, and intermediate goods for use with licensed technology exclusively from the licensor or its nominees, according to tie-in terms in intellectual property licensing. These provisions also require the licensee to use the licensor's staff. The primary motivation for the licensor's employment of tie-in clauses appears to be to maintain an exclusive right to provide essential processed or semi-processed materials, maintain quality control, and increase their profit margin.

*6.1.7. Non-Competition Clauses*

In intellectual property licensing, the non-competition provision restricts the licensee's ability to engage in agreements to use or acquire competitive technologies or goods that are not provided or designated by the technology supplier. These provisions have an impact on the acquiring company's capacity to compete directly or indirectly. Some non-competition provisions, which may have an immediate impact, require the licensee business to refrain from manufacturing or selling competitive goods or from acquiring competing technology. Non-competition provisions, which may have an indirect impact, obligate the licensee not to collaborate with competitor businesses or pay higher royalties if it sells or makes competitive goods.

*6.1.8. Restrictions on R&D*

The licensee's research and development policies and activities are usually restricted under such constraints. The employment of such provisions impacts the licensee's technical development potential, either directly or indirectly. Such constraints also limit a licensee's ability to conduct its research and development programs. These

prohibitions also apply to provisions that compete directly with the licensor's research and development efforts.

*6.1.9. Restrictions after Expiry of Arrangements*

Such tactics restrict the licensee company's ability not just to organize its distribution system, but also to engage in exclusive sales or representative contracts with any third party other than the licensor or a licensor-designated party. To put it another way, the licensee firm is hampered and reliant on the licensor's distribution channels.

*6.1.10. Restrictions after the expiry of Industrial Property Rights*

When a patent term expires under an intellectual property licensing agreement, the knowledge and innovation protected by the patent become public domain, and any interested party can utilize the patent without restriction. When a technology provider imposes any limitation after the period of intellectual property rights has expired, the restriction is judged to be a restrictive trade practice.

## 7. Auditing of IP

IP audit is a systematic examination of a company's IP that it owns, uses, or acquires to assess and manage risk, correct errors, and apply best practices in IP asset management.[35]

IP audit assists a company in creating or updating an inventory of its IP assets, as well as analyzing the following:

i. How the IP assets are used or underused?
ii. Whether the business's IP assets are held by the firm or by third parties?
iii. Whether these IP assets infringe upon others' rights or others infringe upon these rights?
iv. What measures must be done about each IP asset, or a portfolio of such assets, to support the company's relevant business goals?

It may be beneficial for the lawyer to begin by giving management and key staff a broad review of IP and finding strategies to protect and strengthen a company's current

[35] M. Nemana, "Intellectual Property Audit", *available at*: https://www.mondaq.com/india/trademark/593644/intellectual-property-audit (last visited on March 27, 2022).

IP rights. The IP audit then transfers IP-related information from firm management in charge of research, development, sales, and marketing. Any important personnel who develop or are familiar with the company's technology are also encouraged to participate.

Discussions can begin with a review of the company's IP portfolio and competitive position in the marketplace for firms with advanced IP expertise, followed by a more detailed investigation of IP problems of special concern for companies with advanced IP knowledge. The most thorough audits include monetary worth estimations for IP and procedures and extensive suggestions for dealing with IP in the future.

### 7.1. Types of IP Audit

IP audits are divided into three categories:[36]

i. General-purpose IP audits
ii. Event-driven IP audits
iii. Limited purpose targeted IP audits

#### *7.1.1. General-purpose IP audits*

A general-purpose IP audit[37] can be performed at various times, such as when the firm is forming or when new policies or marketing strategies are being implemented. In this approach, the general-purpose IP audit is more appropriate in all situations. The results will help the company to get a better direction and approach, in case the company is new or planning major re-organization.

#### *7.1.2. Event-driven IP audits*

The scope of an event-driven IP audit is often substantially narrower than that of a broad or general-purpose IP audit. Furthermore, the nature and scope of an audit are determined by the event in question, as well as the time and resources available to do it. An event-driven IP audit is commonly dubbed "IP due diligence"[38] when done to analyze, as objectively as feasible, the worth and risk of all or a part of a target company's IP assets. Later in the session, "IP due diligence" is covered.

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36 WIPO, "Intellectual Property Audits", *available at*: https://www.wipo.int/sme/en/ip_audit/ (last visited on March 27, 2022).

37 *Ibid*.

38 A. Damodaran, "IP Asset Management, IP Audit and Due Diligence", 18, *available at*: https://www.wipo.int/edocs/mdocs/sme/en/wipo_smes_bwn_13/wipo_smes_bwn_13_14_damodaran.pdf (last visited on March 27, 2022).

*7.1.3. Limited purpose targeted IP audits*

A limited purpose audit has a significantly smaller scope than the other two categories and is carried out on a tighter timeline. These audits are usually conducted on a case-by-case basis. They are usually employed to support a legal stance or the value of a piece of IP.

**7.2. Who Conducts an IP Audit?**

The question of who should perform such an audit has no hard and fast rules. Nevertheless, for an audit to be effective, it should be conducted by a team that comprises IP experts and representatives from key technical areas of the organization as needed. The IP audit team should have a basic understanding of the product lines, the relevant business environment, and the company's future aspirations so that the audit remains focused on IP assets with the greatest economic value.[39]

External expertise may or may not be included in the audit team. If it does, then all external members of the audit team and all internal audit team members should sign non-disclosure agreements before beginning an IP audit.

**7.3. Preparation of an IP Audit**

*7.3.1. Clarity towards the Purpose*

Before an IP audit can begin, everyone involved must clearly understand why the audit is being undertaken. The circumstances that lead to an audit and the form and scope of the audit are all influenced by the reason for the audit. Furthermore, the amount of time and money available for performing an audit will impact how the audit is handled and the final result.[40]

*7.3.2. Background Research*

Once the purpose of the audit and the resources available to carry it out are apparent, one of the most important steps in performing the audit is to learn about the

[39] S. Chaturvedi, "Importance of Intellectual Property Audits for Corporates", *The Economic Times* Nov. 13, 2021, *available at*: https://economictimes.indiatimes.com/news/how-to/importance-of-intellectual-property-audits-for-corporates/articleshow/87679108.cms?from=mdr (last visited on March 27, 2022).

[40] *Supra* note 38 at 17.

organization, what it does, and where it wants to go. It is a prerequisite for drafting an audit plan, which will serve as the audit's foundation.

*7.3.3. Putting Together a Plan for IP Audits*

After conducting the essential background research, the audit strategy must be prepared. This will outline the audit plan's aim, scope, duration, budget, and who will be accountable for certain aspects of the audit. In general, it will cover the following areas:

i. The specific areas of the business to be covered, such as divisions, lines of business, affiliated or non-affiliated agency operations;
ii. The audit scope, such as only registered assets or a broader scope;
iii. The audit timetable;
iv. The responsible individual for each part of the audit;
v. The layout of the final audit report to be produced.

**7.4. Conducting an IP Audit**

*7.4.1. Begin with a thorough checklist*

A typical IP audit begins with a thorough checklist that is customized for the kind and scale of the company's operation, applicable IP laws of the relevant countries, the audit's desired purpose(s), and the audit's expected outcome(s). Using a checklist reduces the odds of missing one or more important phases in the process. The relevant section of the thorough checklist should be given to each member of the audit team. The audit team should gather, examine, and arrange data to generate a thorough, company-wide IP audit report that reflects the whole development and decision-making process for each of the company's products and operations.[41]

*7.4.2. Examining various contracts and agreements*

Identifying and assessing the sufficiency of relevant clauses in all agreements that impact IP protection is an important aspect of an IP audit.[42] The following agreements may be included, Licensing agreements; Assignment agreements; Employment and Independent Contractor Agreements; Joint Venture & Collaboration agreements; R & D

41 *Supra* note 36.

42 S. Ambadipudi and S. Srikanth, "Drafting Intellectual Property Rights Transfer Agreements - Part II", *available at*: https://www.mondaq.com/india/trademark/974154/drafting-intellectual-property-rights-transfer-agreements--part-ii (last visited on March 27, 2022).

Grants; other agreements; Technology transfer agreements; Design and Development agreements; Settlement agreements; Franchise agreements; Royalty agreements; Marketing agreements; Distribution/Distributorship agreements; and Sales representative agreements.

*7.4.3. Auditing IP Assets*

This level consists of four phases:

i. Identifying and documenting IP assets;
ii. Determining ownership and legal status of IP assets;
iii. Detecting IP rights violation; and
iv. Taking the appropriate procedures to create and preserve IP assets.

*7.4.4. Procedure Post IP Audit*

Applying the recommendations of an IP audit. Assess and examine if the company's IP assets are achieving its strategic objectives, and if not, what should be done to alter that, at this point, one technique that might be useful is to divide the IP inventory results into three groups:

Group 1: Techniques, inventions, and ideas critical to your products and services, as well as the markets one has chosen to serve.

Group 2: Intellectual assets that have tremendous promise but are not essential to one's business.

Group 3: 'Assets' that, on the whole, appear to be of little value to one's organization or anybody else.

**7.5. Building IP Value**

Dynamic IP asset managers have utilized IP audits to increase business value in a variety of ways.[43] The following are some of the most prevalent methods:

i. Increasing the value of IP assets.
ii. Increasing the value of existing intellectual property assets.
iii. Lowering the expense of third-party intellectual property disputes.

[43] J.D. Mills, "Building IP Value through IP Audits", *available at*: http://www.buildingipvalue.com/n_us/146_149.htm (last visited on March 26, 2022).

iv. Using IP assets to create value from product marketplaces.
v. Developing non-core revenue sources.
vi. Increasing income by licensing key business assets.
vii. Increasing the value of corporate deals
viii. Lowering the cost of inactive IP assets.
ix. Getting tax deductions for donating IP assets.
x. Lowering the cost of new product development (product clearance).
xi. Assessing an acquisition or investment target's intellectual property assets (due diligence).
xii. Evaluating the direction and strength of the company.
xiii. Identifying previously untapped business potential.
xiv. Finding new business opportunities

## 8. Due Diligence of IPR in a Corporate Transaction

IP due diligence is part of a bigger due diligence audit to assess a company's viability. Before purchasing or investing in a target company's IP portfolio, the financial, commercial, and legal benefits and risks are assessed. In simple words, IP due diligence provides in-depth insight into the risk and value of intangible assets. Therefore, IP due diligence is important as it maximizes the valuation of these kinds of assets, helps in maintaining and boosting the balance sheet of the business or company, and also reduces the chance of risks involved by revealing such issues.[44] Generally, IP due diligence is conducted in many situations some of which are as follows:

### 8.1. Mergers and Acquisition

In a planned acquisition or sale of IP, an IP audit provides a foundation for evaluating the risk and value of applicable IP assets.[45]

### 8.2. Financial transactions

Before engaging in a financial transaction involving IP, such as an initial public offering or private placement of shares, substantial stock acquisition, or before acquiring

[44] S. Katarki and A.V. Thakur, "Intellectual Property Due Diligence", *available at*: https://www.mondaq.com/india/trademark/448686/intellectual-property-due-diligence (last visited on March 26, 2022).
[45] *Supra* note 38 at 6.

a security interest in IP, IP due diligence is critical, as all of these have an impact on IP ownership.[46]

**8.3. Purchasing or selling a corporate division, or transferring Intellectual Property**

IP due diligence ensures that the transfer or assignment fits the respective business objectives of both parties when conducted separately by both.[47]

**8.4. Introduction of a new product or service in the market**

It helps in addressing any potential infringement or freedom to operate issues associated with the introduction of such a product or service.

**8.5. IP Licensing**

IP due diligence helps in making sure that no similar license exists, necessary rights are given and the scope and extent of such license are maintained.[48]

**8.6. How IP due diligence is conducted?**

To get the most effective results, more time is required in this procedure and the involvement of professionals in this field. Each transaction is unique, the requirements of conducting IP due diligence depend on case-to-case bases due to the uniqueness of transactions.[49] There is a need to set up a proper team of professionals to conduct this test, a checklist of essential terms and clauses must be prepared beforehand with good research and knowledge. A proper verification test has to be performed to safeguard any discrepancies that may arise. Some basic requirements that are generally required to be involved are:

*8.6.1. Identifying IP assets*

The assets are intangible; it is essential to identify the kind of asset.

*8.6.2. Check for IP ownership and existence*

Several questions concerning ownership and existence must be asked to determine IP asset transferability and available rights.

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46 *Id.* at 21.
47 *Ibid.*
48 *Supra* note 44.
49 *Supra* note 38.

*8.6.3. Awareness of the appropriate territory and terms*

There is a need to check the validity or tenure of the rights available and identify the type of territory limitations.

*8.6.4. Third-Party claims*

Make sure there are not any third-party claims, as at times third parties may get many benefits out of it unknowingly.

## 9. Conclusion

The protection of IPR is a great concern. It has to be made sure that the right laws are enforced on IP. Registering and protecting IPR is both expensive and time-consuming. These procedures, however, are critical in nature because they set the groundwork for IPR commercialization. Most intelligent businesses understand the need to safeguard confidential data, trade secrets, and know-how. However, preserving and securing confidential information receives scant attention. According to research, many organizations are unaware that their most valuable intellectual assets are walking out of their front doors and over the street to rival competitors. They must acknowledge this fact and take steps to safeguard the company's most significant strategic assets. As a result, it is necessary to comprehend all the advantages and disadvantages of IPR and competition legislation.

# TRADITIONAL KNOWLEDGE IN NORTH EAST INDIA: A PERFECT CASE FOR SUI GENERIS LEGISLATION

*Ravindra Singh*[*]

**Abstract**

*With ever-growing field of Intellectual Property Regime where India is gradually progressing to become world leader and a player there is a need for strong protection of various industrial properties not only under conventional laws but also with an inclusive approach for recognizing the same. Intellectual Property not only covers inventions, designs, literary works, artistic work and performance plant varieties, symbols etc. but also the ancient traditional process, procedures and knowledge which have been a part of cultural heritage of India for centuries. For years developed countries had tried to take advantage of conventional IP laws which consider traditional knowledge as publicly available knowledge however it has been strongly opposed by countries in developing state for protection of skills, innovations, procedures and processes of communities who have been for ages making use of natural resources and preserving traditional knowledge. The contention that traditional knowledge is freely available for anyone or is a public domain has been rejected by these communities and indigenous people and nations on grounds of wrongful misappropriation and abuse. With global warming and slow gradual depletion of natural resources there is a strong thrust on developing traditional knowledge and innovations due to it. This is also a long-term goal of achieving the United Nations Sustainable Development Goals and in India from time immemorial TK of North East have assumed immense heritage. The paper analyses the protection which should be offered by suitable constitutional provisions and by sui generis legislation to Traditional Knowledge in North East India.*

**Keywords:** Traditional Knowledge, Intellectual Property, Bio-piracy, North East India, legislation

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## 1. Introduction

*The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom.* ***Isaac Asimov***

Traditional Knowledge (TK) unlike other Intellectual property has not been defined anywhere in definite words not because it can't be but because it includes a wholesome basis of elements which makes it difficult to define in absolute words. TK are those knowledge of older generations, skills of elders, medical knowledge, practices, procedures which have been rooted in community from time immemorial and have been passed from generation to generation linking them to each other with a spiritual and cultural bond of knowledge.[1] While TK in strict sense entails knowledge emancipating from a particular or specific practice, procedure and skills concluding in an intellectual activity, in broader sense it means the knowledge in itself engulfing traditional factors associated to it such as expression, signs and symbols. TK is a living knowledge which has been transferred from one generation to another orally and informally, hence, though it is found in agriculture, scientific or medicinal procedures it enjoys no established protection under current law of intellectual property regime. It not only limits itself to traditional knowledge but also adds in innovation and advancements which are gained during the passage of this knowledge from a period. In North East India, these information and traditional knowledge is developed under customary laws and hence considered as sacred and secret. In this part of country, the passage of knowledge from generation to generation creates rights as well as obligations which decides its usage, sharing of profits and benefits as well as settlement of any dispute which arises due to usage of this knowledge. This all is governed by way of customary law and do not find any protection under current legislation in force. Hence there is a great need for law under intellectual property regime for provisions to protect traditional knowledge.

TK innovations are mostly protected as Patent and Geographical Indication protection but it can be protected as Trademark as well as Trade Secrets also. Traditional Knowledge is a subject matter including the intellect, heritage, skills,

[1] World Intellectual Property Organization, "Traditional Knowledge", *available at*: https://www.wipo.int/tk/en/tk/ (last visited on July 25, 2022).

practices and procedures of indigenous communities and others. Most of TK comprises of practical knowledge collectively owned and found in traditional architecture, designs, traditional music, performances, arts, rituals, fabrications, traditional dress, handicrafts production and artifacts. It also includes various procedures of food preparation, food preservation, and meat processing and cutting. A large usage of traditional knowledge is in the area of medicine and health which includes medicinal herbs, plants, healing, child delivery procedures and orthopedic procedure. Traditional designing of material made of gold, stone, precious metal or any work of any of this and wood is also TK. It also encompasses the custom old tradition of preying and hunting wild animals; fishing and skills required for it; incense, aromatic, perfumes, cosmetics which are manufactured and produced by traditional ways; weaving and dying of clothes and specifically produced gum, resins, dyes, paints etc.; traditional ways of conservation of water bodies, conservation of soil, usage of natural resources, biodiversity sustainability management and conservation; traditional farming and agricultural practices etc. In developing India, North East development is also major part of developmental agenda and knowledge of such indigenous practices can go a long way for making efficient use of available natural flora and fauna. In North East India traditional knowledge is not only used in farming, irrigation and sustainable practices but also used in allied things such as good germination, ways of increasing yield naturally, water management, soil conservation, protecting crops from pest and diseases to post harvest storage and management.

Some North East organic agriculture[2] includes forest litter which spread over like bedding in the field used as compost; terrace farming of rice and other crops; locally made drying kilns of mud for cardamom crops; use of cow dung for germination and yield of seeds. Leaves of many plants are used for protection from insects and protection of crop fields. Traditional form of ritual and worships like *Dibin, Tachi, Ampu and Mari* take place and sacrifices are made to please God to save crops from rains and diseases. About 30 fishing techniques are practiced in Arunachal Pradesh alone which are completely harmless to aquatic organism. Bamboo is being used for making water streams for continuous irrigation and to cultivate betel. Special recipes

[2] Neelotpal Deka, "Traditional Knowledge in North-East India: Scope for a Sui Generis Protection", 3(1) *The Clarion* 92-97 (2014).

from cooked rice fermentation known as apong are also a tradition in Arunachal Pradesh.

These TK having been carried over for generations have developed a new set of ideas, innovation and inventions with a cultural attached to community thereby setting up a platform for this community to ask for exclusive ownership rights over this knowledge. Many of this traditional knowledge are basis of new patented inventions. However, there are instances wherein genuine communities who have these TK are not even aware that this is being patented by another person. Wherein TK is a community right which from time immemorial conserve and promote interest of collective community patents on other hand are used for promoting individual business and multiplying profits and monopolistic market. The reality is modern world needs a combination of both.

## 2. Traditional Knowledge-Types and Variety

Since TK is considered to be oral, informal and unrecorded form of Intellectual Property it is unprotected by conventional legal system in place. The diverse and complex form of TK makes it difficult to identify a TK as Intellectual property. TK is classified in various diversified way as: oral and written, fixed and variable, closely held by community and publicly available, religious sacred TK and available to all TK, documented and undocumented TK, TK held by indigenous community and the indigenous knowledge.

TK is said to be fixed when it is available in some tangible form such as recorded song, recipe book, printed book, movie or documentary which gives it a subtle form. It can also be said to be a documented TK. Documented TK is not only way of giving it a legal protection but it is also a means for wider preservation and dissemination. Most of the fixed TK are said to be verbal or unwritten like a song or a movie or written like recipe book and also as a figure or art which impliedly express some form. Variable TK is not available in any recorded form whether written or unwritten and is only found by way of oral history. Music, performances, healing skills and techniques are some variable TK.

The most complex part of granting protection to TK is for the oral part of TK since it is orally passed on information and the same is in contrast to the requirement of

patenting wherein it requires documented or written TK to determine its validity as patent. The problem which arises is if the documented TK can be exploited for misuse. The issue which arises have a dichotomy, as on one hand it undermines the interest of community with oral tradition and on the other hand it raises a concern of recognizing TK as a prior art. This challenge still remains for future conventions. One way of preservation and keeping the information safe is to keep it reserved for the concerned community only.

### 3. North East India Indigenous People Traditional Knowledge

Most of the population in North East India which is approximately 12-15% of population in India lives in hills and plains of North East and are majorly dependent on flora and fauna of remote hills and forest which they consider their home for centuries. The population of NE India depends heavily on plants and indigenous system of medicines which they have developed since ancient times. This is because of the presence of extremely rich biodiversity with several species found only in this part of the world. Traditional folk medicines, folk culture and dresses of muga silk, jhum cultivation practiced by hill farmers using all available natural resources to minimize risk and maximize output.[3] Wetland rice cultivation by Apatani in Arunachal Pradesh, Zabo farming and Alder agriculture in Nagaland, large cardamom plantation in Sikkim and some traditional mixed cropping etc. are some examples of sustainable farming which are less risky, more productive and cost effective.

While the knowledge and usage of the traditional folk medicines have also developed by deep understanding of ecosystem, some of it has found its place in formal system of medicines and some are still guarded secret of community which has remained a secret throughout oral passage confined to members of family only. Secrecy of such knowledge creates an informal regime since the usage of these practices is only limited to the innovator and it is a secret as long as it is kept secret by the innovator and only then benefit arises to him. However, with time it becomes difficult to keep this knowledge a secret within community.

[3] L.C. De, "Traditional knowledge practices of North East India for Sustainable Agriculture", 10(1) *Journal of Pharmacognosy and Phytochemistry* 549-556 (2021).

## 4. Patenting Capability of Traditional Knowledge

Modern patent law is based on surmise that entire innovation and patent process has to be disclosed before a patent can be granted which renders that it is no more a secret. Even when the process is not patented the innovators manages to derive fair share of profits in way of monetary compensation and other ways like commodities. Since TK is mostly studied under patent laws it is described as existing information or knowledge which is passed from one generation to another by written or unwritten/oral form. The written or documented TK forms the basis of prior art and is patentable under patent laws and since it is publicly available information it cannot be prohibited for commercial usage or any limitations. As per section 3(p) of the Patents Act, TK cannot be considered as an invention or innovation for purpose of patenting.

In order to guard the interest of TK so that Multinational Corporation (MNCs) do not patent traditional knowledge of communities in India, a library called as Traditional Knowledge Digital Library (TKDL) has been established wherein details of traditional and scientific knowledge available from ancient literature and scriptures is arranged according to classification of patents. This was a milestone by the Indian Government to challenge the US patent granted by the United States Patent and Trademark Office (USPTO) to turmeric for its healing characteristic and neem for the antifungal characteristic, which was retracted and eventually revoked. The granting of patent by USTPO was also due to the fact that the ancient Indian texts contain so much literature on medicinal value of plants and resources in Indian languages like Hindi, Sanskrit, Pali and other ancient languages that it cannot be comprehended that foreign patent offices have taken note of the same. Nearly 2000 patents were granted to Indian Ayurveda and Unani medicines worldwide and to resolve this issue in 2005 India published these in five different languages.

### 4.1. Neem Patent Case[4]

An application for patent was filed in the European Patent Office (EPO) for patent on neem on grounds of the anti-fungal property of neem which was granted. For the novelty and inventive step, it was produced before the EPO a method of using neem

[4] "India wins Neem Patent Case" *The Hindu*, March 9, 2005, *available at*: https://web.williams.edu/AnthSoc/native/neem.htm (last visited on July 22, 2022).

oil in combination with fungus resulting in control of growth of fungus in plants. India filed an objection on ground of ancient text available in Ayurveda and also contended that neem has been used in India for centuries for its antiseptic and other medicinal properties such as antifungal and antidiabetic. Neem wood is used for making tooth brush as well as combs. Its seeds are also used for its antifungal properties. EPO thus revoked the patent on ground of non-obviousness, existing prior art and lack of inventive step.

### 4.2. Turmeric Patent

Turmeric herb is a yellow-colored root which is mainly used as spice and also known for home remedies owing to its healing properties such as blood purification, old cough and cold and various skin disease. University of Mississippi got it patented for its wound healing properties in 1995 which was objected by India. India proved its opposition by presenting evidence in ancient literature in various languages. Eventually the USPTO revoked the patent as it was held it was obvious and known.

TK has various elements to it, so a proper examination is required if it can be patented or not. Simply because there exists a certain traditional knowledge it cannot be assumed that it is non-patentable. The uniqueness of TK lies in the traditional passing of information from one generation to another. This very fact does not make it non-patentable. Hence it can be patented and attributed to the true inventor with rights to its true successor. The question that arises is how to establish non obviousness, inventive step and utility for commercial application in claimed inventions for TK developed or invented in Traditional Knowledge system. Also, the bigger question is as to whom the patent has to be granted *i.e.,* identification of appropriate applicant.

In case of TK which is of limited common knowledge within a local or indigenous community, it is whether it can be considered “undisclosed” or not “publicly disclosed” is a legal dilemma. The commercial interest arising out of TK are those of community or individual representing community or state on behalf of its people or community. TK has unique features of ownership rights, custodian rights and equitable rights. Nowadays through bio-piracy traditional knowledge is misappropriated by getting it patented for commercial gains. Due to absence of proper established laws, TK is vulnerable to exploitation.

Indigenous knowledge is more specific and precise knowledge than TK, as it is maintained, disseminated and developed by recognized indigenous people while TK on other hand is said to be held by communities other than those which are non-indigenous. United Nations Declaration on the Rights of Indigenous Peoples has identified and stated the rights of communities and people relating to traditional knowledge.

## 5. Existing Obligations, Provisions and Possibilities for Protection[5]

Intellectual Property issues regarding protection to TK can be broadly classified under two aspects:

### 5.1. Defensive Protection

Defensive protection means strategic steps to avoid and deter unrelated third parties to exploit and abuse TK by gaining IP rights over TK. For the same many countries are developing database of TK and classifying them with a purpose to raise an objection to any illegitimate mean to gain a patent on it on grounds of prior art. WIPO has also been extending support by development of toolkit for documentation of TK. WIPO had also amended its "International Patent Classification System" and the "Patent Cooperation Treaty Minimum Documentation."

### 5.2. Positive protection

Positive protection is studied in two aspects firstly IP rights for TK to avoid being used in an unauthorized way such as Unauthorized usage by patenting of traditional remedy or medicine by pharmaceutical company or any folksong adapted in any documentary or a movie without credit being passed to the community or fair share of profits being shared. Positive Protection also entails active exploitation by originating community itself.

IP protection entails recognition of exclusive rights of rightful holder of TK to the exclusion of those who are prohibited to use it for commercial use without proper authorization. The shielding also includes other nonproprietary forms of protection like

[5] World Intellectual Property Organization, "The Protection of Traditional Knowledge: Updated Draft Gap Analysis;" *available at:* https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=411448 (last visited on July 18, 2022).

incentives for creativity, control over commercial exploitation, moral rights, fair distribution of profits or compensation and legal protection from rivals using unfair means.

Various other conventions, protocol, treaties, declaration can be enunciated as follows:

### 5.3. Convention on Biological Diversity[6]

Requires that a Contracting Party shall: "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices."[7]

### 5.4. Nagoya Protocol[8]

Article 7 states that "In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established."[9]

Article 5.5 states: "Each Party shall take legislative, administrative or policy measures, as appropriate, in order that the benefits arising from the utilization of traditional knowledge associated with genetic resources are shared in a fair and equitable way with indigenous and local communities holding such knowledge. Such sharing shall be upon mutually agreed terms."

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6 The Convention on Biological Diversity, 1992.

7 *Id*., art. 8(j).

8 IUCN, "UN Convention on Biological Diversity (CBD)", *available at:* https://www.iucn.org/theme/global-policy/our-work/convention-biological-diversity-cbd/nagoya-protocol (last visited on July 15, 2022).

9 Secretariat of the Convention on Biological Diversity Montreal, "The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity", *available at*: https://www.cbd.int/abs/ (last visited on July 14, 2022).

Article 16 adds:

"1. Each Party shall take appropriate, effective and proportionate legislative, administrative or policy measures, as appropriate, to provide that traditional knowledge associated with genetic resources utilized within their jurisdiction has been accessed in accordance with prior informed consent or approval and involvement of indigenous and local communities and that mutually agreed terms have been established, as required by domestic access and benefit-sharing legislation or regulatory requirements of the other Party where such indigenous and local communities are located.

2. Each Party shall take appropriate, effective and proportionate measures to address situations of non-compliance with measures adopted in accordance with paragraph 1 above.

3. Parties shall, as far as possible and as appropriate, cooperates in cases of alleged violation of domestic access and benefit-sharing legislation or regulatory requirements referred to in paragraph 1 above."

### 5.5. FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

It provides that "each Contracting Party should, as appropriate, and subject to its national legislation, take measures to protect and promote Farmers' Rights, including: (a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture; (…)[10]."

### 5.6. UN Desertification Convention

It states that "parties shall protect, promote and use relevant traditional and local technology, know-how, and practices and, to that end, undertake to make inventories of such technology, knowledge, know-how and practices and their potential uses with the participation of local populations, and disseminate such information, where appropriate, in cooperation with relevant intergovernmental and non-governmental organizations" (Article 18.2(a)). It provides further those regional activities may include "preparing inventories of technologies, knowledge, know-how

[10] International Treaty on Plant Genetic Resources for Food and Agriculture, 2001, art. 9.

and practices, as well as traditional and local technologies and know-how, and promoting their dissemination and use" (Article 6(b) of Annex II).

### 5.7. The Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of their Utilization

This Guideline is described in the Executive Secretary's Introduction to the Guidelines as "not legally binding (majority of countries accepted) … a clear and indisputable authority" provide for some protection of traditional knowledge in recommending that "providers should: … Only supply genetic resources and/or traditional knowledge when they are entitled to do so" and that "Contracting Parties with users of genetic resources under their jurisdiction … could consider, inter alia… measures to encourage the disclosure of the country … of the origin of traditional knowledge, innovations and practices of indigenous and local communities in applications for intellectual property rights."

The objective is to "contribute toward the development of access and benefit regimes that recognize the protection of traditional knowledge" (paragraph 11(j)) and encouragement of "cooperation between Contracting Parties to address alleged infringements of access and benefit-sharing agreements."

### 5.8. United Nations Declaration on the Rights of Indigenous Peoples

Article 31 of the Declaration stipulates that: "Indigenous peoples have the right to maintain, control, protect and develop their … traditional knowledge (…), as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such (…) traditional knowledge (...)It further provides that "in conjunction with indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights."[11]

[11] United Nations Permanent Forum on Indigenous Issues, "Declaration on the Rights of Indigenous Peoples", *available at*: https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html (last visited on July 20, 2022).

While TK banks on promoting community interests, patent focus on individual monopoly and to maintain a balance for TK innovated patents its necessary that profits are shared for same. Biodiversity Act, 2002 of India tries to strike a chord by section 2 (a) of the Act read with section 6 (2), by bring forth the concept of "benefit sharing" with respect to the product or process derived or made with the help of traditional knowledge for commercial purpose. A patent was granted for Jeevani drug which is manufactured by the plant of same name known for its energy enhancement effects. This plant is planted at western ghats and used by people of Kani tribes who use it for energy and to reduce their weariness. A revenue sharing was done by patent holder to the tribe of an extent of fifty percent.[12]

### 5.9. Interlaken Declaration on Animal Genetic Resources

It "affirms the desirability, as appropriate, subject to national legislation, of respecting, preserving and maintaining traditional knowledge relevant to animal breeding and production as a contribution to sustainable livelihoods. Linked to the Declaration is the Global Plan of Action for Animal Genetic Resources which aims, among other things, to promote a fair and equitable sharing of the benefits arising from the use of animal genetic resources for food and agriculture, and recognize the role of traditional knowledge, innovations and practices relevant to the conservation of animal genetic resources and their sustainable use, and, where appropriate, put in place effective policies and legislative measures."

Internationally[13] options identified for protecting TK can be summarized as following:

i. Internationally binding instrument or instruments with strong coordination by way of guidelines, laws and conventions;
ii. Nation should frame laws and focus of capacity building, innovation encouragement and initiatives for practical usage of TKs;

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12 *Ibid.*

13 WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998–1999), "Intellectual Property Needs and Expectations of Traditional Knowledge holders", *available at*: https://www.wipo.int/edocs/pubdocs/en/tk/768/wipo_pub_768.pdf (last visited on July 20, 2022).

iii. Clear legal interpretation of existing guidelines for protection of traditional knowledge;

iv. Internationally passed resolution establishing a norm against abuse of TK and establishing the rights of TK holders on such knowledge.

## 6. Specific Provision from Indian Legislation Protecting TK in India

i. Patents Act 1970 (Amendments of 2002 & 2005) sections 3 (b), (c), (d), (f), (h), (i), (j) and (p) - The major shortcomings of the Act are its very far off from idea of patenting of TK. This might be because of the reason that while enacting this Act there was very less emphasis on TK and it was an evolving field in Intellectual property arena. Legislature can now revisit and provide amendments which will help and strongly protect TK by specific provisions in this Act which directly help in developing medicines using TK or in various other type of treatment or agriculture systems technologies;

ii. Geographical Indications Act 1999 sections 11, 24 and 25 - It is a very new and nascent area of IP regime in India and this field is still developing and will keep on evolving with time. Over a period of time we can expect TK to be protected and strengthened by strong legislations;

iii. Trademarks Act 1999 section 29 - Not all the marks used in development of TK can be registered as Trademarks as in case of major developed countries hence there is a need to revisit the act by legislature;

iv. Biodiversity Act 2002 section 6(1) - Needs very strong implementation in order to provide support and protection to TK. There is still very little action taken for its strict enforcement even after passage of the act to protect the very essence for which it was enacted. There is a need to strictly enforce the act which will also help in protection of TK wherein many elements of traditional treatment are obtained from.

Many of the medicines used in North East India have been in public domain for centuries therefore negating them to be patented on grounds of prior use. Patent law requires novelty and non-obviousness therefore patent law examines it as a prior art. However, with new innovations and techniques developed over a period of time in medicinal use the methods could be patented. In a *sui generis* system of protection of

the invention like Peruvian law where it defines collective knowledge under article 2(b). In Panama, the community rights of indigenous people are recognized on their traditional work, methods, process and procedures.

The Peruvian[14] law is one of the most comprehensively drafted laws on prior informed consent (PIC) which implies for obtaining prior informed consent from the indigenous people possessing the traditional knowledge only for purpose of commercial, scientific and industrial application. The collective group or community will inform the traditional knowledge holders of the negotiations and keep interest of the community priority. Peruvian laws and Panama laws can be used by law makers and legislators for framing of legal framework for protection of traditional knowledge of North East India.

## 7. Conclusion

TK has been contributing to our culture and society from time immemorial. Not only it's a national and cultural heritage but also a treasure of resource which can be developed more and more to benefit the society and country as well as providing economic benefits to the contributing community or indigenous people. However, a check and balance need to be maintained for its exploitation unlike patent wherein its entire motive is profit multiplication and commercial exploitation. These rights should be protected by every nation as its solemn duty for maintain socio-economic balance and rights of the native communities. For protecting TK of North East India, the only ways are *sui generis* system of protection of industrial property from western world who want to exploit the same by way of patenting. Though in sue generis system it often poses a challenge that some TK can be protected under existing provisions while some cannot. Existing legislative provisions are inadequate to protect traditional knowledge in current intellectual property regime. The need is to study the aspect of the protection of some TK under existing IP laws and to make legislative amendments for the others which are no protected by current laws thus bridging any gap which is left. Though it seems a mirage but the way world is developing and major thrust is being given on intellectual property and its value it will be made possible soon. For that to be

[14] Law Introducing a protection Regime for the Collective Knowledge of Indigenous Peoples Derived from Biological Resources, Peru- Law No. 27811, art. 6.

achieved till that time there is a need to address the socio-economic impact of misuse of TK owing to differential gap in TK and IP framework. The legislature should strive to protect the interest of traditional knowledge holders only then TK can be preserved and protected by its misuse by multinationals.

Though with establishment of TKDL[15] and creating provisions for protection of TK it has emerged to be a real useful resource which needed to be exploited at the same time in no way the rightful ownership of indigenous communities or holders of traditional knowledge should not be jeopardized. India has long way to go in the protection of these rights because it's a nation with its roots in ancient knowledge not only in field of medicine and remedies but in other aspects of traditional knowledge also.

[15] "Bio-piracy of Traditional Knowledge", *available at:* http://www.tkdl.res.in/tkdl/langdefault/common/Biopiracy.asp?GL=Eng (last visited on July 12, 2022).

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| 3. | **Printer's Name** | : | **National Law University and Judicial Academy, Assam** |
| | **Nationality** | : | **Indian** |
| | **Address** | : | **Hajo Road, Amingaon, Guwahati – 781031, Assam, India** |
| | **Contact Number** | : | **+91-361-2738891** |
| 4. | **Publisher's Name** | : | **National Law University and Judicial Academy, Assam** |
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| 6. | **Address** | : | **Hajo Road, Amingaon, Guwahati – 781031, Assam, India** |
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