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EDITORIAL

E-JAIRIPA (E-Journal of Academic Innovation and Research in Intellectual Property Assets) is a Peer Reviewed E-Journal of the Centre for Innovation Research and Facilitation in Intellectual Property for Humanity and Development (CIRF –in-IPHD) of Chanakya National Law University the JAIRIPA is a half yearly journal of Academic Innovation and Research on the issues related to copyright, Patents, Trade Marks, Geographical Indications, Plant Varieties and Farmer's Rights, Bio Diversity, Layout design and integrated circuits, Industrial Design, Traditional Knowledge, on current Academic issues. It is a half-yearly e- Journal, Vol. V, Issue 2 (July-Dec, 2024). This E-Journal shall have open access to all the world-wide concerns for Common Good. The ISSN will be obtained later as per Rule.

This journal welcomes publications from law students, professionals, academicians for academic research and study in the field of Intellectual property and the assets produced by it. Academic research is the medium of fostering understanding of the latest contemporary developments in the field.

In today's world where the generation of data in the online world is so abundant it becomes essential to protect the originality of the content and grant due credits to the creator of that content which can only be possible through Intellectual Property Rights. The main goal behind the publication of this journal is to promote creativity and innovation among people. Human minds have been the source of intellectual property for years but now an urgent need emerges for a designated protection of work created on digital platforms like Metaverse or Artificial Intelligence.

The role of AI in current times in this horizon of law has gained highlight and the development of Meta verse and non- fungible tokens. Many Brands have created their own NFTs which they aim to protect through copyright law but there has not been any enactment of a provision keeping that in notice and thus the issues for consideration require discussion and deliberation. This edition of E-JAIRIPA has articles pertaining to such contemporary developments in this field.

Issues of safeguarding personality right, moral and economic right, ownership of AI generated contents, Conservation and Management of Wetlands Biodiversity under Ramsar Convention, Critical Analysis of The Patentability of Designer Babies in Indian Context, Manipulation of IPR as a strategic tool in Addressing Live Streaming Music and Video Infringement in the Digital Era have been the highlights of the issue.

All the papers have been peer reviewed and similarities checked. The editors and reviewers have tried their best to allow the best possible papers before the readers. The comments, criticism, and advice of the readers are most welcome for further improvement. Hence this half- yearly E-Journal (JAIRIPA) is hereby submitted with all humility before the readers.

PROF. (DR.) SUBHASH C. ROY

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BALANCING CREATIVITY AND COMMONS: INDIAN ANALYSIS OF MORAL AND ECONOMIC RIGHTS OF CREATORS IN FREE ART LICENSING CULTURE

Diya Gohil[1] *& Avani Joshirao*[2]

Abstract

To invite inventiveness and free sharing, creators are increasingly uploading their art to the public domain, fostering collaborative efforts that yield advanced results. Traditional copyright laws, based on the idea/expression dichotomy, aim to protect creators' rights. However, they have been criticised for creating monopolies that stifle creativity and restrict access to knowledge. Copyleft, exemplified by licences like the GNU General Public License, offers a balanced alternative that sustains digital commons, encourages participation, and democratises knowledge access. This paper traces the intricacies of free art licences, examining their historical roots, legal implications, and impact on the creative landscape. Through semi-formal interviews with developers and artists, the research illustrates how copyleft licences have impacted innovation, democratised information access, and challenged traditional notions of intellectual property. Free licences, such as those based on the Creative Commons model, expand access to creative works but face legal ambiguities within India's Copyright Act of 1957. While considering the moral and economic implications of free licensing in the Indian art market, assessing its impact on artists' livelihoods, traditional authorship notions, and the balance of creative expression, the authors advocate for an approach that fosters a vibrant creative ecosystem in India while ensuring fair recognition and compensation for creators. This research aims to provide various suggestions as well as how free art licences can practically function within existing legal systems and explore their potential to shape the future of artistic creation and dissemination.

***Keywords*:** Copyleft, Copyright, Free Art Licensing, Creative Commons, Open Access.

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Introduction

Intellectual property (IP) encompasses copyrights, patents, and trademarks/ service marks, each governed by distinct laws. Generally, while each country has its own IP system, the core principles are similar. Copyrights protect original works in tangible forms, such as literature, music, art, and architecture. Copyright holders have exclusive rights to reproduce, distribute, and display their works, and to create derivatives.[3] Brief, non-commercial use for criticism, news, education, or research is allowed under "fair use."[4] Works not under copyright fall into the public domain, free for public use.

"Copyleft is 'an agreement allowing the software to be used, modified and redistributed freely on the conditions that a notice to this effect is included with it."[5] First appearing in "Dr. Dobb's Journal" in 1976, copyleft licensing began with software. Pioneered by Richard Stallman in 1983, a "complete Unix-compatible software system" that he intended to give away for free and exemplified by licences like the GNU General Public License copyleft leverages copyright law to ensure that software and its derivatives remain freely accessible and modifiable.[6] In 1985, he founded the Free Software Foundation (FSF) to support the burgeoning free software movement centred around the GNU Project.[7]

In analysing the interplay between copyright and copyleft "software" merits special attention. The root of these two terms can be seen in the question of whether one seeks primary knowledge to expand the public knowledge or to generate rents out of it by private exploitation. The conceptions of both the terms are opposite to each other. Copyright is more restrictive in nature as it restricts the copy, distribution and modification of the work, on the other hand copyleft allows the use and modification of the software subject to the terms of the copyleft licence.

Copyleft is a practical safeguard to protect any software developments and open-source projects as it promotes innovation in these domains as it has become the need of the hour to evolve technology for benefit of the public at large. The duration of the copyleft licence lasts as

[3] The Copyright Act,1957 (Act 14 of 1957), s. 14.
[4] *Id.*, s. 52.
[5] Michael Stutz, "Applying Copyleft to Non-Software Information," *GNU Allegrius* (Oct. 29, 2005), available at http://gnu.allegrius.com/philosophy/nonsoftware-copyleft.html.
[6] Jeffrey Pomerantz & Robin Peek, Fifty Shades of Open, 21 First Monday (2016).
[7]Gordon D. S., Almeda M. V., & Cukurova M., "Scaffolding Group Work in the Classroom," *Journal of Educational Technology Systems*, 43(2) (2016), available at https://files.eric.ed.gov/fulltext/EJ1073128.pdf.

long as the copyright on the original work lasts, which is lifetime and 60 years more after the death of the original creator of the work in India.[8] Through copyleft scope of the rights expands benefitting the general public rather than single individuals.

Back in 2005 in the case of *Tata Consultancy Services v. State of Andhra Pradesh*.[9] The supreme court of India states 'Software as an Intellectual Property' which will be covered under section 2(o) of the copyright Act 1975 under the definition of literary works which includes computer programs. Further the Act permits the creator of a computer program to issue copies of the work to the public not being copies already in circulation.[10] Taking the section into consideration it is ambiguous as to whether the distribution should be free or not. This creates a way for software developers to further licence and re-distribute their software for free. Recognizing the ambiguity of the term "free," the FSF defined what it means for software to be free. The "share and share alike" principle, as articulated by Stallman himself, has influenced the free culture movement, extending its reach beyond software to encompass various creative domains.[11]

Impact of Copyleft on The Free Culture in Artistic Works

As Coleman points out, *"modern free and open-source software groups are probably the largest single association of amateur intellectual property and free speech legal scholars ever to have existed.*" Thus, to know about the ground reality of the free culture, we interviewed Mr. Vraj Gohil, founder and CEO of DevSquirrel Technologies Pvt. Ltd., involved and responsible for all software development in the company. Mr Vraj highlights a common issue in the software development industry i.e. many developers are unaware of compliance requirements due to limited exposure to licensing. Typically, developers prioritise functionality and only consider licensing types after achieving their development goals.

When a codebase involves numerous or complex compliance requirements, developers often seek alternative licences, which are relatively easy to find. The legal consequences of non-compliance vary depending on the project's scale. If a major company's code is affected and their commercial interests are harmed, developers may face legal repercussions. Mr. Vraj believes that the persons in the field should at least have some basic knowledge of the

[8] *Supra* Note 3, s. 22.
[9] *Tata Consultancy Services v. State of Andhra Pradesh*, A.I.R. 2005 S.C. 371.
[10] The Copyright Act,1957(Act 14 of 1957).
[11] Richard M. Stallman, "What Is Copyleft?" *GNU's Bulletin*, Vol. 1, No. 6 (1988).

conditions, natures, and legalities of such licences. For example, changing a software license from one with less compliance and more openness, such as the MIT license, to a more restrictive one is not straightforward and that all users must be informed of the change, and existing users can continue using the software under the original licence terms. For example, AWS's Elasticsearch changed its licence from open source to Proprietary. While new users must comply with the new terms, existing users continue under the old licence.

Mr Vraj confirms that while copyleft found its genesis due to software, a concept that has emerged due to it, Creative Commons (CC) is being used by creators to amplify collaboration in the digital era. The free culture movement has evolved significantly not only in the world of software development and licensing but also in other disciplines such as content creation, art, music, literature, etc. to collaborate with the likes of each other. Artists benefit from the Free Art License by being able to share their work without restrictive barriers, encouraging collaboration and creativity by allowing others to build upon their creations.

Unlike traditional copyright, which often restricts access to creative content, the Free Art License promotes openness and collaboration. Creative works such as literature, music, sound recordings, digital art, graphics, and educational materials can be licensed under FAL. The licence aims to enable the use of a work's resources while promoting principles of copyleft, such as the freedom to use, copy, distribute, and transform, while prohibiting exclusive appropriation. These licences don't always align seamlessly with the systems from which they originate and can be more complicated than they appear. Several companies provide stock images and audios which often are free from the bounds of traditional copyrights. Freepik, adobe stock, YouTube Music Library, etc. are some examples where other creators can use the ‘Free Creations’ along with rights such as modification and distribution. These tools often have their own licences and their terms overlap with existing CC licences. This creates confusion among the creators as it is back-breaking being able to adhere to every term of hundreds of licences. Free culture can either subjugate practitioners to a particular hegemony or open new possibilities for those who understand and create new techno-legal templates.

Free Art Licence: Unleashing Creativity Through Shared Ownership

In the digital age, the landscape of artistic creation and dissemination has undergone transformation. The rise of the internet and digital technologies has democratised access to creative tools and platforms, enabling artists to reach global audiences with unprecedented

ease. New era of artistic expression through Free art licence has emerged as a tool for creators seeking to navigate this evolving landscape, fostering a culture of sharing, collaboration, and innovation.

One of the earliest examples is the 1994 "Free Music Philosophy (FMP)" by musician and computational biologist Ram Samudrala.[12] FMP advocates for the unrestricted creation, copying, and distribution of music for personal, non-commercial purposes, similar to the concept of Free Software. Another notable example is Michael Stutz, who in the mid-nineties published his entire website under the GPL, extending its use beyond software. Stutz believed in *"the freedom provided by the copyleft license for all digital information."* He argued that certain copyright restrictions were not beneficial to the "cyberia" community, advocating for the GPL's application to non-software information[13].

"GNUArt and the FAL two types of cultural appropriation of the free software template applied to the artistic domain."[14] For the purpose of this paper lets focus on Free Art License. Vidovic was the first to articulate the term *"art libre"* and wrote about the need for a FAL as early as 1998. However, it wasn't until 2000 that *Mélanie Clément-Fontaine,* David Geraud, Isabelle Vodjdani, Antoine Moreau, and participants from a free art mailing list created the *Licence Art Libre (LAL),* also known as the Free Art License.[15] This document was designed as an artistic equivalent to the GPL, specifically for creating free art under French law, tailored to the French copyright system, le droit d'auteur.

The FAL serves as a critique and a method for creating art, inheriting the "playful cleverness" of copyright hacking. It is akin to the Ouvroir de littérature potentielle (OuLiPo) group, which used constraints to inspire creativity. Like OuLiPo "Cent mille milliards de poèmes," the FAL sets rules for the Copyleft Attitude community to produce, and remix works collectively. Unlike GNUArt's bottom-up emergence, the FAL is a top-down approach inviting artists to engage in a structured game.[16] It aligns with broader artistic practices using contracts for

[12]Aymeric Mansoux, *"Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production"*(2017) (Ph.D. thesis, Goldsmiths, University of London) available at https://research.gold.ac.uk/id/eprint/22606.

[13] Essay, 'Applying Copyleft to Non-Software Information' 1997.(Last visited on Aug 5, 2024).

[14] Mirko Vidovic, GNUArt (2000),*available at:* http://gnuart.org.(Last visited on Aug 5, 2024).

[15] License Art Libre 1.0 (2000), Copyleft Attitude.(Last visited on Aug 5, 2024).

[16] Aymeric Mansoux, *"Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production"*(2017) (Ph.D. thesis, Goldsmiths, University of London) available at https://research.gold.ac.uk/id/eprint/22606.

institutional critique, such as Duchamp's Monte Carlo Bond and Siegelaub's the Artist's Contract. Artists like Carey Young and Jill Magid have similarly used contracts to challenge norms. Moreau sees the FAL as a practical legal tool, emphasizing its role in facilitating free art practices, though it can also be viewed as an artistic document.

Famous artists and institutions use C.C. licences to share their work while maintaining control over its use. For example, The J. Paul Getty Museum dedicated the iconic painting 'Irises, 1889' by Vincent van Gogh to the public domain using the CC0 (Creative Commons Zero) licence. This means the digital image of the artwork is unequivocally in the public domain, allowing unrestricted use and sharing.[17] At the forefront of this movement is C.C., a non-profit organisation that provides a suite of free licences designed to empower artists and expand access to creative works.

Founded in 2011, C.C. offers licenses that let authors decide which rights to retain. Authors select a license based on which of these terms they want to include, resulting in the label "Some Rights Reserved" on C.C. works. With their standardised formats and user-friendly approach, they have become the gold standard for free art licensing. These licenses are built upon a modular system, allowing creators to mix and match various conditions to create a license that aligns with their specific preferences. The four core conditions, which form the building blocks of C.C. licenses are Attribution, ShareAlike, Non - Commercial and No Derivatives.

By combining these conditions, creators can choose from a range of C.C. licenses, each offering a different set of permissions and restrictions. For example, the Attribution-Non-commercial licence allows for non-commercial use and adaptation of a work as long as the original creator is credited. 'Move Under Ground', A horror novel mashup by Nick Mamatas, released under the CC BY-NC-ND (Attribution-Non-commercial-NoDerivs) license.

The Attribution-ShareAlike license, on the other hand, permits both commercial and non-commercial use and adaptation, provided that any derivative works are released under the same licence. 'Meat Atlas, A collection of graphs and 27 essays on meat consumption and production, created by Friends of the Earth and the Heinrich Böll Foundation. It's available under the CC BY-SA (Attribution-ShareAlike) license. Moreover, an ancient manuscript 'Archimedes Palimpsest', dating back to the 3rd century BC, was reconstructed and released by

[17] Art, Creative Commons, *available at*: https://creativecommons.org/tag/art/.(Last Visited, Aug 5, 2024).

OPenn as a Free Cultural Work under the CC BY (Attribution) licence. It's a fascinating glimpse into history and mathematics.[18]

Navigating Complexities of Free Culture in Digital Age

Traditional copyright laws, while intended to protect the rights of creators, often erect barriers to accessing and reusing creative content. The influence of free and open-source software (FOSS) on cultural production and practices has been significant, but adopting free culture licences can be complex. The Free Art License (FAL), or Licence Art Libre (LAL), is a copyleft licence that allows for the free copying, distribution, and transformation of creative works. The "all rights reserved" approach can stifle innovation, limit collaboration, and restrict the free flow of ideas. Free art licences, in contrast, embrace a "some rights reserved" model, allowing creators to grant specific permissions to the public while retaining certain rights. This approach empowers artists to determine how their work is used and shared, fostering a more open and collaborative creative environment.

The adoption of free art licences, particularly C.C. licences, has had a profound impact on the creative landscape. By lowering barriers to access and reuse, these licenses have fostered a culture of remixing, collaboration, and innovation. Artists can build upon each other's work, creating new and exciting forms of expression. Educators can incorporate freely licensed content into their teaching materials, enriching the learning experience for students. Researchers can share their findings more openly, accelerating the pace of scientific discovery. At present there are no specific provisions for copyleft in existence in any of the Laws governing Intellectual property rights in India, however copyleft licences are validated by the existing copyright Act.

Compatibility of FALs with the Indian Copyright Act of 1957 (as amended)

In India, particularly, the usage of copyleft is not managed by any of the statutory provisions, however the Indian Copyright Act does not expressly recognise open-source software, but it does protect the work by allowing the copyrighted work to enact a copyleft agreement to avail the benefit of copyleft licence in regard to the work. Section 14 of the Copyright Act regulates functioning of copyleft licensing agreements in India. A computer program's copyright holder

[18]Art, Creative Commons, *available at:* https://creativecommons.org/tag/art/ (last visited Aug. 5, 2024).

has the ability "to issue copies of the work to the public not being copies already in circulation" under Sections 14(a) (ii) and 14(b) (i).[19]

The creators may obtain licences for re-distribution of their work for free under a copyleft agreement by using the ambiguity in Section 14, which is whether the distribution should be restrictive or free. Additionally, section 30 of the act grants the holder of the copyright with authority to licence "any interest" in his creations.[20] The rights which the holder transfers to the licensee are similar to the rights that the copyright assignee acquires. Though the copyright Act does not explicitly recognize open-source software, it provides adequate protection for the holder of the copyright to make a copyleft agreement within the legal framework of the country. Section 19(3) explicitly provides the licensor the option to licence his work.[21] This is further safeguarded by Section 19(2) which requires the licensor to specifically mention the rights licensed, with the duration and the extent of it.[22]

The issue is whether these copyleft agreements comply with contract law standards. A valid contract must contain the following elements: free consent, competent to contract, lawful consideration, lawful object and not specifically declared to be void.[23] Whether copyleft agreement satisfies each of these criteria is the question at stake. Certain facts must be met for the first two requirements free consent and contract competence to be met. The laws pertaining to the two previously mentioned topics are provided by contract acts with case laws and are case-specific. Whether or not the copyleft licence agreement contains consideration is the main point of disagreement. In general, consideration means the actions taken in exchange for the benefits outlined in the contract.[24]

It is evident from this definition that consideration need not always take the form of money. In *Bhattacharjee v. Gorilla Mahomed*, in this case, the court stated that the agreement was binding, holding that the "consideration of faith was a valid consideration."[25] A contract is not voidable for lack of sufficient consideration.[26] Therefore, valid consideration for the rights to use, modify, and distribute the software can be identified in a copyleft agreement that grants

[19]*Supra* Note 3, ss.14(a)(ii), 14(b)(i).
[20]*Supra* Note 3, s. 30.
[21]*Supra* Note 3, s. 19(3).
[22]*Supra* Note 3, s. 19(2).
[23]Indian Contract Act, 1872 (Act 9 of 1872), s. 10.
[24]*Id*., s. 2(d).
[25]*Bhattacharjee v. Gorilla Mahomed*, (1886) 14 Cal 64.
[26]*Supra* Note 23, s. 25.

later users the same rights as granted by the copyright holder and prohibits the creation of a proprietary model of the program. The contract act is satisfied because neither copyright law nor any other law in India has declared the copyleft licence to be invalid or unlawful. It is evident that a copyleft licence satisfies every prerequisite for being a legitimate contract. This renders any such licence legally binding as a contract. A licensee could be sued by the licensor for contract breach. The licensee can be sued by the owner of the copyright for copyright infringement.

Overview, rules and obligations regarding Free art licence (FAL)

Without violating the rights of the author, the Free Art License (FAL) permits free copies, distribution, and modification of creative works. These rights are recognized and safeguarded by the Free Art License. The Free Art License aims to enhance creative freedom by allowing unrestricted use, sharing, and modification of works, in contrast to traditional copyright laws that restrict access. It supports copyleft principles, enabling collaborative creation and broad distribution while ensuring the creator's rights are respected. With the rise of digital technologies and the internet, this license facilitates the integration and transformation of creative works, promoting shared contributions and preventing exclusive ownership.

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The license does not allow sublicenses, meaning that creators are directly responsible to anyone who wishes to use the rights it grants. An original copy of the work can be retained without any commitments, but once the Free Art License is applied, others cannot be prevented from using a copy of the work. Openness, not restriction and control over a work's future according to exclusive principles, is what free art is all about. During the Copyleft Orientation meetings at "Access Local" and "Public," two locations of contemporary art in Paris, FAL was created in July 2000. The Berne Convention for the Protection of Literary and Artistic Works (1886), which created a worldwide legal framework for literary and artistic rights, is ratified by all nations where FAL is in effect.[27]

Facing Challenges: Moral, Economic and Legal

"There is always a well–known solution to every human problem — neat, plausible, and wrong." -H.L. Mencken[28]

The Free Art License (FAL) emerged from an ongoing dialogue about art's nature, economics, and values. The license's constraints liberate artwork and artists from unauthorised appropriations. This approach is an attitude, not a movement, termed Copyleft Attitude for the meetings that birthed the FAL. The license encourages a collectivist approach to art production, providing an alternative to the traditional gallery system.

The Challenges of Moral Rights under Free Art Licence

Moral rights[29] aka*"Droit Moral"* in French,[30] do not provide direct financial benefits but prevent unauthorised modifications, preserving the integrity of the creator's work. first recognized in France and Germany, are enshrined in Article 27(2)[31] of the Universal Declaration of Human Rights, 1948. The right of paternity ensures that creators are correctly attributed and protects against false attribution. Moral rights are inherent to the creator and their connection to the work. They exist whether a contract explicitly mentions or overrides them.[32]

[27] Berne Convention for the Protection of Literary and Artistic Works, World Intellectual Property Organization, *available at* https://www.wipo.int/treaties/en/ip/berne.
[28] H.L. Mencken, *In Defense of Women 158* (1918, rev. 1922).
[29] *Supra* Note 3, s. 57.
[30] Droit Moral, USLegal, *available at* https://definitions.uslegal.com/d/droit-moral-entertainment-law/.
[31] Universal Declaration of Human Rights,1948, art. 27.
[32]*Mannu Bhandari vs Kala Vikas Pictures Pvt. Ltd. And Anr*., AIR 1987 Delhi 13.

Free art license, are essentially agreements and they don't transfer ownership or fully waive the creator's moral rights. These rights, which require crediting the original creator even when the work is modified or shared, helps prevent misattribution, although issues can arise if the attribution is not clear or meaningful.

The right of integrity, protecting against modifications that harm the artist's reputation, can be more complex. Artists may feel that changes to their work conflict with their original vision, potentially leading to confusion or misrepresentation. Creative Commons licences like CC BY and CC BY-SA allow modifications, which may concern some artists, but the attribution requirement can deter harmful changes. The CC BY-NC-ND license, which prohibits commercial use and derivatives, offers the most protection for integrity. The right of disclosure, concerning how and when a work is first made public, is not directly affected by free licenses. Artists retain control over the initial release of their work.

The overlap of terms between various free content licences can create confusion for creators trying to comply with multiple licensing terms. Even so there are no adequate remedies for the infringement of the copyleft contract, this unleashes the people's act of infringing the contract and taking undue advantage of the copyleft concept. According to the interview, it is quite evident that the user of the open-source software does not give attribution to the primary creator of the work as there are no strict regulations which would suggest a strict remedy for the same.

Morally, the Author of a work has to have a full control on the work he himself created, but due to the adaptation of the copyleft concept it becomes impossible for the author to track his work and to oversee that who, when, how and for what his original work is being modified and distributed in the public domain. The main motto behind this is to reduce the competition but many are of the opinion that it is completely anti-competitive as it results in capturing bigger share in the market, further as the scope of rights provided under copyleft are wider hence the right to bring up a suit of infringement of the holder of a copyright gets violated.[33] To address this issue a structured technologically based mechanism should be created as it will address maximum challenges in relation to the concept of copyleft as a whole. GPL is usually not enforceable as there is no proper mechanism for check and balances by the courts, this also amounts to a price fixing scheme.

[33] *0S.O.S., Inc. v. Payday, Inc.*, 886 F.2d 1081, 1087 (9th Cir. 1989).

Free licenses don't necessarily equate to zero income. While they allow others to use, adapt, or even sell copies (depending on the license) without paying royalties, artists retain some control. For example, CC BY-NC licences permit non-commercial use while allowing artists to sell their work commercially. It is beneficial for community and collaboration, but artists lose potential income if others commercially exploit work previously intended for sale. Reversing this course and charging for previously free work, even with updates or new versions, can be difficult too.

Additionally, unwanted commercial associations or perceived value reduction due to widespread availability can impact future sales and reputation. Despite these challenges, free licences offer significant benefits. Increased exposure can lead to commissions, collaborations, and sales of other works. Artists can leverage their skills and recognition gained through freely licensed work to generate income through merchandise, workshops, and other avenues. There are undoubtedly some advantages in keeping the software open for its distribution. For example, an organization, business, or even a private person may utilize an open-source product to address an internal issue, possibly with help from the community. If such modifications are publicly disclosed, the Individuals who make modifications that are publicly disclosed get a chance to gain profit from future modifications made by others who enhance upon the newly added functionality. There are ways in which this issue can be addressed.

Voluntary contributions are inefficient in generating funds. In some countries, many content-based sectors are funded by the government through organisations like the Corporation for Public Broadcasting, the National Science Foundation, and the National Endowment for the Arts. However, funding these activities with public money carries the risk of political interference, which could threaten freedom of expression and creativity. There's also uncertainty about whether the government will consistently provide adequate support given other budget priorities. The specific details related to the process of funding of the are being removed from the legislative process.[34]

[34] A.J. Patton, *Why Do Mutual Fund Advisory Fees Vary? An Investigation into the Factors Affecting Mutual Fund Expense Ratios*, (May 2004) (unpublished Ph.D. dissertation, Massachusetts Institute of Technology).

The Multiplicity Dilemma

Multiplicity of licences available to the users only creates confusion. These tools providing open content often have their own licences and their terms overlap with existing CC licences. This creates confusion among the creators as it is back-breaking being able to adhere to every term of hundreds of licences. Choosing a free culture licence requires a clear distinction between practitioners who consciously adopt these systems and those who are pressured into them without fully understanding. The strength of free culture in simplifying cultural mechanisms as a shared techno-legal process may also be its weakness. Deeper analysis reveals varied interpretations and compromises. A proposed way to tackle this is clubbing the overlapping licences and building a better mechanism to ensure adherence to the same.

The choice of licensing model depends on the artist's goals and the specific context of their work. History demonstrates that new technologies often lead to unforeseen applications and evolving economic models. Free licenses, while impacting traditional revenue streams, can empower creators to engage with audiences, foster collaboration, and explore alternative paths to financial sustainability. The software industry has shown the most substantial adoption of the freedom to share concept through the Free/Open-Source movement. This provides benefits for innovation and diversity, but it also poses problems regarding compensation.

The Tracking Mechanism

In the interview, it was revealed that there is a lack of proper attribution to the creator when utilizing these licenses. Even when certain licenses fail due to improper attribution, and the work used becomes an infringement, there is no common tracking mechanism to determine who has used the work. The creation of such a mechanism could help regulate the unfair use of creators' work, ensuring that users cannot utilize the work without giving attribution or paying a certain consideration. According to the latest estimates, 402.74 million terabytes of data are newly generated, captured, copied, or consumed i.e., created each day.[35] The constant flow of new content online makes comprehensive monitoring nearly impossible. Additionally, the identities of the users should be provided to the original creator and the platform on which such works are licensed. We are of the opinion that there should be specific provisions related to these licenses in the existing IPR statutes, if it is not possible to regulate them through a special statute at this moment. Compensatory remedies should also be included in these provisions.

[35] Statista Research Department, Volume of Data/Information Created Worldwide, (2010 to 2025).

In the recent Google I/O keynote event Google CEO Mr. Sundar Pichai said that *"Metadata allows content creators to associate additional context with original files, giving you more information whenever you encounter an image. We'll ensure every one of our AI-generated images has that metadata."*[36] This indicates that creating a tracking mechanism for works under a Free Art License (or similar open licences) involves ensuring that the works' metadata carries the necessary information to track attribution and detect violations. For this a standardised set of metadata fields that must be included with each work must be defined.

Metadata can be embedded directly into digital files such as images, audio, and video using appropriate standards like EXIF, IPTC, or XMP for images; ID3 tags for MP3s; XMP for WAV files; and Vorbis comments for OGG audio files. For videos, XMP or other video-specific formats are used, while Dublin Core is suitable for PDFs and other documents. When dealing with physical art, a QR code or similar marker can link to a digital record containing the metadata. Key metadata fields should include the name of the work, artist's name, type of free art license, specific attribution requirements, creation and publication dates, a brief description of the work, and a unique ID such as DOI or UUID. Additionally, metadata should include the exact text for proper attribution, a URL linking back to the original work or repository, and a log of changes or modifications made over time. Any additional terms or requirements specified by the license should be clearly mentioned as well.

To detect unauthorised use of digital works, tools like Google Images or TinEye can be employed for reverse image search. Blockchain technology can be used to create immutable records of ownership and licensing, ensuring that metadata remains secure and untampered. Smart contracts can automate the enforcement of licence terms, tracking transfers, modifications, or commercial uses of the work. Digital certificates, stored on the blockchain, can be issued for verification.

Digital watermarking is increasing in the protection and management of intellectual property. This technique involves embedding information such as unique identifiers, copyright details, or ownership data into digital media like images, videos, or audio. What's remarkable about digital watermarking is that this embedded information is imperceptible to the human eye or

[36]Google Announces Use of IPTC Metadata for Generative AI Images, *IPTC* (May 10, 2023), *available at*: https://iptc.org/news/google-announces-use-of-iptc-metadata-for-generative-ai-images/ (last visited Aug. 23, 2024).

ear, yet it can be detected and extracted by specialised software later. This not only helps in verifying the authenticity of a file but also ensures that the creator's rights are safeguarded.

Tools like Digimarc have become popular for embedding and detecting digital watermarks across various types of media. Adobe Photoshop, a staple in image editing, also offers robust watermarking features for images, allowing creators to embed their marks securely. For audio files, VST Plugins are commonly used, offering similar protection for sound recordings. These tools enable creators to embed vital information directly into their digital files, ensuring that their intellectual property is traceable and verifiable. Visible watermarks, such as logos or text overlays, are straightforward and easily recognizable. While they provide a clear indication of ownership, they can be removed or altered, making them less secure.

Digital watermarks are prone to challenges regarding their vulnerability to removal or alteration by malicious users using readily available software, which compromises content integrity and tracking. To address this, many creators now use invisible watermarks that are harder to detect and remove, requiring specialized tools. Invisible watermarks are embedded within the media file itself, making them invisible to the naked eye. These watermarks offer greater security because they are harder to remove without significantly degrading the quality of the media. However, these solutions are not foolproof, as automated detection systems can generate errors, such as false positives or false negatives. Additionally, inconsistent copyright laws across countries make it difficult to enforce watermark protections globally.

Digital watermarking protects ownership by embedding information directly into media, making the creator's rights clear and ensuring authenticity. It helps monitor distribution across platforms and trace unauthorised copies, making it vital for fighting intellectual property theft. A centralised or decentralised database should store all works and metadata for public verification. Automated systems, like web crawlers, can scan the internet for the work, verify proper attribution, and send alerts for potential violations. Community reporting tools can further help monitor misuse. To support creators, clear licence notices, template legal notices, and a legal fund should be provided. Regular audits are essential to ensure effective tracking and metadata embedding.

Establishment Of a Semi-Governmental Organisation

Apart from creating awareness, there should be a proper semi-governmental body to regulate and resolve issues regarding Free Art License. Semi-governmental organisations tend to

operate with more flexibility than fully governmental bodies, which allows them to adapt quickly to changes in the digital landscape. This agility makes it easier for them to implement new technologies for monitoring and enforcement efficiently. By partnering with private sector entities like tech companies and online platforms, they can develop and deploy advanced tools to track and prevent infringement more effectively. With a degree of autonomy and funding from both public and private sources, these bodies can make decisions swiftly, conduct educational campaigns, provide legal support to artists, and develop robust monitoring systems.

Such an organisation could educate the public, foster respect for intellectual property, and enforce clear, comprehensive policies. Jack Valenti, President and CEO, Motion Picture Assoc. of America[37] was concerned as to *"Who will invest the huge amounts of private risk capital in the production of films if this creative property cannot be protected from theft? In such a scenario, the ultimate loser will be the consumer."* Such concerns led the United States Congress to enact the landmark *Digital Millennium Copyright Act (DMCA) of 1998*.[38] Establishing a similar legal framework in India could provide a foundation for taking action in cases of non-compliance.[39]

Equipped with advanced digital tools, they could monitor licensed art and take swift action against unauthorized use. By partnering with online platforms, this organization could help implement robust attribution mechanisms and infringement detection systems, ensuring that artists receive the credit they deserve and minimizing unauthorized use. On a broader scale, they could lobby for stronger intellectual property laws and better enforcement mechanisms at both national and international levels, creating a more powerful legal framework to safeguard artists' rights.

Conclusion

Free art licenses, like those provided by Creative Commons, are crucial for fostering creativity, collaboration, and innovation in the digital age. These licences enable creators to share their work while balancing the protection of their rights with the promotion of open access to ideas. As the creative landscape evolves, free art licences will play a key role in shaping a more open and dynamic ecosystem. To raise awareness of free art licences, a combination of online and

[37] Jack Valenti, Testimony before the Senate Judiciary Committee, *MPAA*(Press, Apr. 3, 2001).
[38] Digital Millennium Copyright Act (DMCA), 1998.
[39] MIT DSpace, *available at:* https://dspace.mit.edu/bitstream/handle/1721.1/16818/50699080-MIT.pdf?sequence=2 (last visited Aug 5, 2024).

offline strategies is essential. Social media, instructional content, and influencer collaborations can broaden reach, while webinars, workshops, and educational materials distributed in public places can promote understanding. Partnerships with art institutions and collaborations with government agencies, NGOs, and other licensing programs can support broader adoption and policy integration. Achieving this will still not ensure non-ignorant users.

Thus, we suggest that to effectively protect digital content, digital watermarking combined with automated monitoring systems and well-maintained databases offers a strong framework for managing and safeguarding works. This technology ensures creators can control their content and prevent unauthorized use. However, tracking through digital watermarking raises privacy concerns and requires significant resources. As watermarking technology improves, so do the methods to circumvent it, necessitating continuous development of more resilient methods. Education is also critical; by raising awareness about digital watermarking and promoting respect for intellectual property, we can encourage responsible behaviour. However, education must be supported by a strong legal framework to ensure enforcement against violations. By integrating robust technological, legal, and educational strategies, we can better protect creators' rights and maintain the integrity of digital media.

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'HI, CAN I HAVE ONE CUSTOMIZED BABY PLEASE? THANK YOU': CRITICAL ANALYSIS OF THE PATENTABILITY OF DESIGNER BABIES IN INDIAN CONTEXT

Kanishk Tiwari[40]

Abstract

The intersection of Intellectual Property Rights with emerging genetic engineering technologies presents unique challenges, particularly in the context of patenting designer babies. This research aims to critically examines the patentability of genetic modifications in embryos under Indian law. The concept of designer babies, where genetic modifications are made to embryos to enhance desirable traits, has sparked intense ethical and legal debates worldwide. The Indian Patents Act, 1970, which permits the patenting of inventions that are novel, involve an inventive step, and have industrial applicability, provides the legal framework for such evaluations. However, Section 3(b) of the Act explicitly prohibits patents for inventions contrary to public order or morality. This paper delves into the ethical considerations and legal constraints surrounding the patenting of designer babies, comparing Indian laws with those of other jurisdictions. By analysing the possible interpretations of the Indian Patents Act, the paper seeks to determine if patents for designer babies could be granted at all and whether they should be allowed. The study concludes with recommendations for amending the current patent laws to accommodate technological advancements while addressing ethical concerns.

***Keywords**:* Designer Babies; Germline Engineering; CRISPR; Patentability; Morality

Introduction

The Intellectual Property Rights basis its foundation on harmonizing the two conflicting ideas of firstly catering to Public Interest, and Secondly, to give due regard to the Interest of the Intellectual Property creator in order to maximize the incentivisation but these objectives are made subject to various ethical consideration enumerated in different statutes.[41] The concept of designer babies, where genetic modifications are made to embryos to enhance desirable traits, has sparked intense ethical and legal debates worldwide.

[40] 5th yr. B.A.LL. B (Hons.) | Maharashtra National Law University, Nagpur
[41] V.K Ahuja, *Law Relating to Intellectual Property Rights* 8 (LexisNexis, 3rd edn., 2017).

Advancements in genetic engineering technologies have brought the concept of designer babies closer to reality, raising significant questions about their patentability and the ethical implications involved. In India, the patentability of genetic modifications falls under the Patents Act, 1970, which allows for the patenting of inventions that are new, involve an inventive step, and are capable of industrial application. However, Section 3(b) of the Act prohibits the grant of patents for inventions contrary to public order or morality.

The author of the paper would attempt to draw parallels to this newly evolving area of jurisprudence with other jurisdictions and move forward to analyze the possible interpretation of Indian Patent Act 1970 to see if such patent can be granted and should (if at all) such patent should be permitted to be granted. The approach adopted by the author for analysis would be critical in nature, concluding the paper with suggestions of amending the current patent law to conform to accommodate the upcoming technological advancements.

Designing the Genes (of Babies)

The developing technologies in the medical field have brought to reality the cures for diseases which were earlier considered unimaginable. It is the Fourth Industrial Revolution (hereinafter 4IR) which is currently enabling a new digital economy, Internet 3.0 and the Programmable Economy.[42] 4IR as a concept was propounded by World Economic Forum founder and chairman *Klaus Schwab*.[43] It contemplates a revolution that 'creates a world in which physical, virtual and *biological systems* of manufacturing that cooperate with each other in a flexible way at the global level.' The interlinked technological advancements under this new 4IR *inter-alia* are Blockchain, big data, biotechnology, artificial intelligence (AI), robotics, Internet of Things (IoT), 3D/4D printing etc.

There are several technologies that are developed pertaining to editing the genetics of humans primarily to cure any genetic defects and secure a healthier life for the unborn human baby. However, ethical considerations have arisen with respect to usage of such technologies for ulterior motives giving rise to question of morality which shall be discussed at a later section in this paper.

Meaning of Genes

Genes are defined as "the medium through which living organisms transmit genetic information from one generation to next. It is our genetic code that makes us the unique individuals that we

[42] WIPO, "Blockchain technologies and IP ecosystems: A WIPO white paper" 11 (WIPO REFERENCE NO. RN2022-2E 1, 2022).
[43] Klaus Schwab, *The Fourth Industrial Revolution* 23 (Portfolio Penguin, 1st edn., 2016).

are." The double helical structure of DNA, initially admired for its intellectual simplicity, today represents to many a double-edged sword that can be used for evil as well as good.[44] Since 1980 after the grant of first patent for living organisms by USPTO in *Diamond v. Chakrabarty*[45] the subject of patents has moved from human-made bacterial microorganisms to human cells to human genes today.

The basic building blocks of life in every living being are genes. Every gene is a segment of deoxyribonucleic acid (DNA), which carries instructions necessary for the growth and functioning of living organisms. It is the Genes that dictate certain characteristics like eye colour (green or brown) and stature (tall or short). Then, those genes work as instructions for making functional molecules like proteins and ribonucleic acid (RNA), which carry out the chemical processes that give life to our bodies.

As discussed, modifying or making changes in the basic building blocks of a living organism has a revolutionary effect, and has been made possible with the advancement in technologies. We shall now briefly discuss first the germ line engineering, then subsequently the most prominent germ line-based gene editing technology that has made such scientific work possible.

For the purpose of this research paper, the identified most successful *germline gene editing*[46] technology, also considered as revolutionary, and relevant for discussion in the present subject matter is CRISPR-CAS9 Technology, the salient features and why exactly that such a medicinal wonder became a bone of contention in medical field shall be discussed.

Germline Engineering (Gene Therapy)

Unbeknownst to most, human genetic engineering has existed for a much longer. Gene therapy is a recent contribution to the field of genetic engineering. The main goal of gene therapy is to alter a patient's gene expression by introducing desired genetic material into body. Treating, curing, or eventually preventing a disease or disability is the goal of these alterations.

There are two main strategies in gene therapy:

1. Gene addition

[44] Pariksha Parmar and Munnazzar Ahmed, "Gene Patenting Rights: A Critical Analysis", in S. Sivaramakrishnan *et.al.* (eds.) *Advances In Biotechnology And Patenting* 205, 206 (Elsevier, 2014).

[45] 447 U.S. 303 (1980).

[46] Germline gene editing is the editing of genes in these reproductive cells or early stage embryos. The reason for the controversial nature of germline gene editing is that, the editing or alteration that has been made, will be passed down and inherited, which raises the concern of ethics, morale as well as safety.

2. Removal of a harmful gene by antisense nucleoid or ribozymes[47]

Essentially, it is well understood that whatever may be the strategy of genetic intervention, it is distinguished on the basis of the type of cell targeted. *Gene therapy can be targeted either to* somatic (body) *cells or* germ (egg or sperm) *cells*.

Somatic gene therapy is the process of introducing a new gene into a growing or already born human with the goal of treating or preventing an existing disease or problem. By altering the receiving patient's DNA through somatic gene engineering, his condition is improved, but the alteration is not passed down to the next generation (no inheritance). However, the latter gene targeting method i.e., germ based which is the second type of gene therapy involves alterations and modifications of DNA in a zygote, the first cell formed from joining of sperm and egg. Crucially, the goal of germ-line gene therapy is to alter the parents' cells in order to pass on changes to the offspring (Inheritance possible).
A distinction at this point is important to be noted, between the terms 'therapy' and 'enhancement' where the former refers to curing or preventing a medically unacceptable condition, whereas the latter is directed to enhance a function on property of the human body.[48]

The germ-based gene therapy/enhancement is what we are concerned with for the purpose of discussion. Hence, it is pertinent now to analyze the working (in brief) of the most prominently used germ-line gene therapy/enhancement technology in usage across the developed nations i.e., CRISPR-Cas9.

CRISPR Technology Functionality

CRISPR refers to "Clustered Regulatory Interspaced Short Palindromic Repeats, that are a critical component of an individual's defence system against bacteria."[49] In other words, CRISPR contain "sequences of genetic code," which include interim sequences known as spacer sequences, which code for past bacterial invaders in the body. These spacer sequences help "the cell detect and destroy [past bacterial] invaders" upon their return, with CRISPR acting as a guide to specific sequence of DNA. Cas9, "a CRISPR-associated protein... that is programmed by small [ribonucleic acids] to cleave DNA," commences the actual gene editing. It binds to the sequence of DNA of interest "and cuts it, shutting the targeted gene off."

Scientists are able to program these sequences so precisely that commentators have likened the

[47] Richard C. Mulligan, "The Basic Science of Gene Therapy" 260 *SCIENCE* 926, 930 (1993).
[48] Archisha Satyarthi, "Dissertation on Patentability of Biotechnology" *UNIVERSITY SCHOOL OF LAW & LEGAL STUDIES GGSIPU* 29 (2020).
[49] *See Id*. at 23.

technology “to a word processor, capable of effortlessly editing a gene down to the level of a single letter.” CRISPR can find the right sequence even when searching through billions of DNA pairs and can do so extremely accurately.

Further, the Cas9 editing process is believed to have three different checks to ensure the correct gene is cut out. First is the precursory scan, which allows Cas9 to locate the appropriate gene. The second check corrects possible errors from Cas9 binding to incorrect genes. The Cas9 protein binds on to the DNA base pairs only when they precisely match the RNA base pairs of the Cas9. If incorrect binding occurs, it only lasts for “milliseconds to seconds before the Cas9 moves on” to the correct match. Finally, since some incorrect matches can occur, particularly to off-target sequences that only differ by a few mutations, the actual cutting will only occur if there is a precise match with the DNA sequence, otherwise the Cas9 protein inhibits it. However, despite these checks, researchers have faced difficulty in using the technology precisely enough to prevent unintended edits through incorrect binding. Alleviating some of the fear of incorrect binding, scientists recently discovered an “off-switch” for CRISPR-Cas9: “anti-CRISPR proteins” that can be used to turn off gene edits. The ability to turn off edits could provide researchers with “a fail-safe to quickly block any potential harmful uses of the technology.” While researchers are continuing to unwind the intricacies of this technology, it nonetheless has the potential to revolutionize the scientific and medical fields. Yet with such revolutionary capabilities, the debate now centres on what diseases CRISPR-Cas9 could alleviate and when researchers will be ready to use the technology.

Beneficial Usages of CRISPR

CRISPR-Cas9 technology holds the potential to alter the world as perceived. From a medical perspective, the technology may have far-reaching effects on the human race as a whole because more than 6,000 diseases have been linked to genes.

One example of an area for treatment is cystic fibrosis, a disease caused by a gene mutation “that causes persistent lung infections and limits the ability to breathe over time.” Though there are about 1,800 different variations in the cystic fibrosis gene, a potential cure would be to employ CRISPR-Cas9 technology to replace the mutant gene with the proper one. A deal was made between the company Editas Medicine and the Cystic Fibrosis Foundation Therapeutics, which is connected to the Cystic Fibrosis Foundation, to provide Editas up to $5 million to develop a medical solution. Intestinal stem cell research has showed promise in preliminary investigations.

The exciting potential of CRISPR-Cas9 to cure haemophilia, a well-known blood condition that results in excessive bleeding, is yet another example. Haemophilia is brought on by genetic changes in an individual's DNA, just as cystic fibrosis. Using CRISPR-Cas9, University of Pennsylvania researchers created a haemophilia therapy and gave it to homophilic mice.

Despite the evidence of beneficial usages, there has been an ongoing debate about the efficacy of gene editing in usages pertaining to treating diseases and preventing them from occurring since the edited genes just like normal ones are capable of inheritance, thus passing down the lineage.[50] Further, questions as to viability commercialization of CRISPR-Cas9 technology still looms around in the Scientific Community.[51]

We shall now move forward to discuss the viability or patentability of germ-line based gene therapy as a process, and moreover, if the organism developed out of such gene editing is patentable as a product.

Legal Framework in India

The fields of law, science, and society are closely related. Science offers next to nothing about morality or ethics, and it offers no guidance on how we should live. It is unquestionably a scientist's duty to advance humankind via technology, but it is not his place to decide whether to use nuclear weapons. Moral, social, and ethical norms of human behaviour must be developed by society as a whole.

In the above context, this section will cover the nuances of Indian Law pertaining to granting of patent, and whether patent either product or process can be granted for Gene Editing technology.

Indian Patent Act 1970 post the recognition of Product patent in 2005 recognizes 3 essentials to be fulfilled for any product or process to become eligible for grant of patent.

1. Novelty
2. Non-Obviousness
3. Industrial Application

When the likes of technology such as CRISPR is looked from the perspective of above 3 essentials, it is an undisputed fact that prima facie it qualifies the test of being novel involving an inventive step not anticipated in by any sources before, and that a person ordinarily skilled

[50] Tara R. Melillo, "Gene Editing and the Rise of Designer Babies" 50 *VAND. J. TRANSNAT'l L.* 764 (2017).
[51] *See id*. at 765.

in the art could not have foreseen such technology as obvious, and finally the commercial viability subject to regulatory approval and stabilization of results achieves through such gene editing is possible.

The problem starts when Section 3 of the Patent Act comes into the whole picture, which subjects the above essentials to the restrictions provided therein.

Section 3(b), Section 3(i), and Section 3(j) are particularly relevant to be discussed as these are the restrictions that pose the ultimate challenge for grant of patent either product or process to Gene editing technologies such as CRISPR-Cas9.

Morality Perspective

Section 3(b) of the Act is reproduced as follows:

"*3. What are not inventions. —The following are not inventions within the meaning of this Act, — (b) an invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality, or which causes serious prejudice to human, animal or plant life or health or to the environment.*"[52]

With reference to the above cited exception to granting of patent, it is said that morality is very subjective differing from society-to-society based on practices and beliefs of common public.

It is imperative to state that what may be legal may not always be moral or conform to the beliefs of a society. Take for example the recently struck down law by the Supreme Court in the case of *Joseph Shine v. Union of India*[53] pertaining to Adultery committed by a married woman, citing the protection of sexual autonomy of an individual under Article 21 of the Constitution. It is the best example of how an Act may be perceived immoral by a society yet may still be legal. Another case scenario is Supreme Court striking down of the offense of Homosexual Sexual Intercourse under Section 377 of IPC in *Navtej Singh Johar v. Union of India*[54] so far as concerned that the consent was existing for such an Act, again citing human dignity and decisional autonomy over an individual's body as being protective under Article 21 of the Constitution.

The Section 3(b) can be said to be incorporated with a positive outlook to cater to the morality of the Indian society and preserve the social fabric. However, a wider interpretation at the

[52] The Patents Act, 1970, (Act 39 of 1970), s. 3(b).
[53] AIR 2018 SC 4898.
[54] AIR 2018 SC 4321.

whims and fancies of the Government despite the fact that what may be legal aligning with fundamental rights may not always be perceived as moral in society, poses a substantial problem for recognition and adequate incentivization to the inventors of new technologies.

The above as hint of doubt becomes true when we look at the current development of Indian Law with regard to Germline Engineering, to say in simple words, the Manual of Patent Office practice recognizes "*inventions relating to cloning of human beings, processes for modifying the germ line and genetic identity of human beings, uses of human embryos for industrial or commercial purposes, and processes for modifying the genetic identity of animals that are likely to cause them unnecessary sufferings as falling under the category of contravening public order and morality.*"[55] Therefore, in the guise of Public Order and Morality, as expected, the government has banned germline gene editing and reproductive cloning.[56] Further there is also a prohibition on clinical trials of xenogeneic cells, which means the cells that belong to members of different or varying species.[57]

The justification provided behind such ban is elaborated in the 2013 Guidelines for Examination of Biotechnology Application for Patent [58] that "the ban is imposed with the view that it may lead to the creation of designer babies, inducing unnatural advantages."[59] Further, the reasoning blatantly states that "Biotechnology deals with living subject matters and involves alteration of genomic materials of an organism. Such change may influence or may have a deep impact upon the environment or the human, animal or plant life or may involve serious questions about morality. Hence, adequate care should be taken while examining the inventions vis-a-vis their primary or intended use or commercial exploitation and it should be carefully dealt so that the subject-matter must not be contrary to public order, morality or causes serious prejudice to human, animal or plant life or health or to the environment. A few non limiting examples may further clarify the issues:

'(a) a process for cloning human beings or animals;

(b) a process for modifying the germ line of human beings;

(c) a process for modifying the genetic identity of animals which are likely to cause them suffering without any substantial medical or other benefit to man or animal, and animals

[55] The Manual of Patent Office Practice and Procedure as modified on March 22, 2011.

[56] Akshara Nair, "The Designer Baby Quandary- An Insight Into Gene Editing And Its Legality", *LiveLaw* (2023), available *at* <https://www.livelaw.in/columns/the-designer-baby-quandary-an-insight-into-gene-editing-and-its-legality-222176?infinitescroll=1> (last visited on July 12, 2024).

[57] *See Id*.

[58] Office of Controller General of Patents, Designs and Trademarks, "Guidelines for Examination of Biotechnology Application for Patent" 11 (2013).

[59] Akshara Nair, *supra* note 57.

resulting from such process.
(d) a process for preparing seeds or other genetic materials comprising elements which might cause adverse environmental impact.
(e) uses of human embryos for commercial exploitation.'[60]

In the light of the above guidelines it can be said at present, it is clear that by the virtue of expansive interpretation given to Section 3(b) of Patent Act 1970 there exists a blanket ban on grant of patent over germline technology based CRISPR-Cas9 gene editing method in India due to seemingly it being violative of Public Order and Morality as per the Government of India.

In-spite of the fact that germline-based gene editing technologies are prohibited to be patented irrespective if it's a product or process patent, it is relevant to discuss the possibility of prohibition on grant of patent for such technology under Section 3(i) of the Act.

Patenting Living Organism and Method of Treatment

Section 3(j) of the Act is reproduced as follows:
"*3. What are not inventions. —The following are not inventions within the meaning of this Act, — (j) plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;…*".[61]

The case of *Diamond v. Chakraborty* that happened to extended the scope of granting patent to living organism has also been recognized in Indian Legal system in number of cases starting from the landmark case of *Dimminaco AG v. Controller of Patents and Designs*[62] the interpretation was given to the term "manufacture" under the Act as bearing a general dictionary meaning attributed to the word in the particular trade or business, can be accepted if the end product is a commercial entity. The court further held that "there was no statutory bar in the patent statute to accept a manner of manufacture as patentable even if the end product contained a living organism."

Referring to the above bare language of the section, an express exception excluding micro-organism has been given. It is not the case that gene editing technology such as CRISPR may get covered under this provision, but nevertheless it can be argued under this particular Section that no expansive interpretation to the extent can be given so as to exclude any living thing to

[60] Guidelines, *supra* note 59 at 11.
[61] *Supra* note 53, s. 3(j).
[62] (2002) I.P.L.R. 255 (Cal).

be excluded from patenting specifically talking under this section, not read with any other provision u/s 3. The possibility of patenting a living thing apart from a microorganism shall be discussed in latter part of the paper.

Section 3(i) of the Act is reproduced as follows:
"*3. What are not inventions. —The following are not inventions within the meaning of this Act,* — any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products."[63]

The important terminology to be considered in the above language of the section with reference to the Gene Editing is 'Therapeutic' which includes prevention as well as treatment or cure of disease. Therefore, the process relating to therapy may be considered as a method of treatment and as such not patentable. Hence, this particular provision can be said to be restrictive and may act as an impediment when it comes to grant of process patent for CRISPR gene editing technology.

To conclude the discussion on legal framework pertaining to germline-based gene editing technologies like CRISPR-Cas9 irrespective of the immense advantages it holds in eliminating multiple diseases, cannot be patented under current laws for the reasons and analysis aforementioned.

It is necessary to discuss the legality of germline-based gene editing technologies in other prominent jurisdictions like USA and China.

Comparative Analysis with Other Jurisdictions

The three major jurisdictions i.e., USA and China and EU that are pioneers in health and medicinal technologies are chosen for analysis with respect to their legislations on recognition of patentability of Gene Therapy.

USA

An interesting case post the success of *Diamond v. Chakraborty* was that of Harvard Onco Mouse. It was first of its kind patent issue for a transgenic animal (i.e., an animal created by injecting genes from another species into a fertilized animal egg and then surgically implanting the egg into the mother).[64] The injected genes were oncogenes that triggered cancer growth,

[63] *Supra* note 53, s. 3(i).
[64] Pariksha Parmar, *supra* note 45 at 209.

making the oncomouse" a particularly valuable tool for testing the effects of cancer-fighting drugs and suspected carcinogens.

There have been numerous instances where patents on such living transgenic animals have been granted by the US Patent office including examples of Chickens, Dogs, Pigs, Sheep etc.[65]

The above example is with reference to a product patent on a living entity, but that does not extend to human beings even if conceived through artificial assistance and modifications as contemplated in CRISPR Technology usage.

With reference to process or product patent over living organisms, the landmark case is *Myriad Genetics v. Association for Molecular Pathology*.[66] The case at hand concerned granting of a patent to a modified genes for treatment of breast and ovarian cancer, the US Supreme Court in a landmark ruling went on to grant a writ of certiorari on the point that *human genes can be granted patent.* The point of consideration is that the human genes per se cannot be granted patent, but purified or isolated DNA can be.[67]

The USA regulator for approval FDA (Centre for Biologics Evaluation and Research (CBER) that regulates human gene therapies, which fall under the legal definition of a "biologic.") and the ancillary laws concerned[68] allow the extensive trial study for gene therapy products, however, till date no gene therapy product has been allowed to be sold in the USA.[69] Nevertheless, in a breakthrough step, a news has come that the US Patent and Trademark Office recently granted a patent for a technology that would let prospective parents specify the traits of their offspring, from health risks to eye colour. It is the company *23andMe* (a genetic testing company) that has secured a patent on technology that works on the model similar to CRISPR.[70]

China

The publication "An Outline of Quality Controls for Clinical Studies of Human Somatic and Gene Therapy" was issued in May 1993 by the Chinese Ministry of Public Health. In June 1999, after more revisions, it was published again under the title "Guiding Principles for

[65] *Id.*
[66] 569 U.S. 576 (2013).
[67] Pariksha Parmar, *supra* note 45 at 211.
[68] Archisha Satyarthi, *supra* note 49 at 63.
[69] *Id.*
[70] Namrata Maheshwari, "I'll Have One Customised Baby, Please, Thank You': The us Patent and Trademark Office recently granted a patent for a technology that would let prospective parents specify the traits of their offspring, from health risks to eye colour" 51 *EPW* 133 (2016).

Human Gene Therapy Clinical Trials." The Chinese State Food and Drug Administration (CFDA) released a paper titled "Guidance for Human Gene Therapy Research and Its Products" in March 2003 in response to the gene therapy field's explosive growth. This guideline paper described the structure for the research protocol, the requirements for building a recombinant DNA and gene delivery system.

The document also included specifications for the production process, quality assurance procedures, testing procedures for engineered strains and cell banks, as well as tests for product safety and efficacy. Hongzhang Yin released a study in 2006 that addressed China's policies and processes for evaluating and approving new drugs. A summary of the regulatory guidelines for gene therapy research, product development, and commercialization in China was presented in a paper titled "The application of gene therapy in China" by Dr. Peng of Shenzhen SiBiono GeneTech Co. Ltd. in May 2008.

The overall scenario may seem conducive when it comes to the pragmatic approach adopted by China in respect of gene editing technologies. However, that is not exactly the case, wherein we have seen how when a Chinese scientist He Jiankui had claimed to have developed a first gene-edited baby free from the disease of Alzheimer was jailed until being recently released.[71]

EU Model

The EU Clinical studies Regulation of 2014 prohibited any gene therapy clinical studies that alter the germline; however, it made no mention of whether non-clinical research is allowed or prohibited. There are rules prohibiting human germline modification in 15 of 22 EU countries.
The 2000 EU Charter of Fundamental Rights and the 1997 Council of Europe Convention on Human Rights and Biomedicine (Oviedo Convention) serve as the legal and ethical framework for gene therapy throughout the EU. "Eugenic practices, in particular those aiming at the selection of persons," are forbidden under Article 3 of the EU Charter of Fundamental Rights. Oviedo, which was ratified by 29 of the 47 countries in Europe, stipulates that any therapy involving genetic alteration of humans "may only be undertaken for preventive, diagnostic or therapeutic purposes and only if its aim is not to introduce any modification in the genome of any descendants."[72]

[71] Anjali Thakur, "Chinese Scientist Who Gene-Edited Babies Is Back In Lab After Jail Time", *NDTV* (2024) available at <https://www.ndtv.com/world-news/chinese-scientist-who-gene-edited-babies-is-back-in-lab-after-jail-time-5369252#:~:text=Chinese%20scientist%20He%20Jiankui%2C%20who,Alzheimer's%20and%20other%20genetic%20diseases> (last visited on April 12, 2024).

[72] Genetic Literacy Project, "European Union: Germline / Embryonic", *GLP* (2020) available at <https://crispr-gene-editing-regs-tracker.geneticliteracyproject.org/eu-germline-

The limitations on research set by Oviedo are not well understood. It may still be in compliance with Oviedo to use genome editing for medicinal or preventative purposes, provided that the mutation of the descendant's genome is incidental to the process rather than the main objective. It guarantees scientific research freedom subject to human rights protection, which is thought to safeguard researchers' ability to do germline editing as part of pure study. However, whereas Oviedo permits in vitro research on human embryos, Article 18.2 forbids the development of human embryos for scientific purposes. Thus, it is forbidden to conduct the current studies that have shown the genome editing of human embryos in the US, China, Japan, or other nations to eradicate a heritable illness.

Implications of Patenting Designer Babies (The Moral Question)

It is a saying that the law is the one that is supposed to keep up with the developing technologies to accommodate the necessary changes in society and not vice versa. Let's take for example the journey of conferring legal validity to Surrogacy, wherein in earlier times, surrogacy due to ethical and moral issues was completely banned. However, the technological advancement via Assisted reproductive technology offered various advantages to society and infertile couples who may have not been able to conceive child for number of reasons including work life balance in the modern times. Thus, the government recently conferred the legal validity on surrogacy as a practice subject to non-commercialization of such practice. Thus, the twin objective of conforming the law with the contemporary requirements and balancing it with the Moral perspective was achieved.

Another prominent example in the realm of Intellectual Property Rights can be with regard to Cryptocurrency and Blockchain Technology, where despite the numerous disadvantages associated with establishing control and have checks and balances to a decentralized currency system like cryptocurrency, it became the need of the hour that legal recognition was provided to it irrespective of other considerations. Hence, after banning cryptocurrency for a brief period, the Government of India finally concede in accepting the new normal and innovation in technology,[73] additionally, the role of blockchain technology with reference to the IP Management, Smart Contracts for licensing and assignment of IP Rights etc. were also

embryonic/#:~:text=The%20EU%20Charter%20of%20Fundamental,diagnostic%20or%20therapeutic%20purposes%20and> (last visited on May 2, 2024).

[73] Nidhi Bhardwaj, "RBI Gov calls for an outright ban on cryptocurrency as Union Budget 2023 approaches**",** *India Today* (2023), available at <https://www.indiatoday.in/cryptocurrency/story/rbi-gov-calls-for-an-outright-ban-on-cryptocurrency-as-union-budget-2023-approaches-2322146-2023-01-16> (last visited on April 23, 2024); Meghana Maiti, "How Are Cryptocurrencies Taxed? How To Report Crypto Income In ITR?", *Outlook* (2023), available at <https://business.outlookindia.com/personal-finance/tax/how-are-cryptocurrencies-taxed-how-to-report-crypto-income-in-itr> (last visited on May 17, 2024).

recognized by Governmental instrumentalities like RBI, NITI Aayog.[74]

The Fundamental Right Argument

Another prominent aspect in favour of granting patent and legitimization to such technologies roots from the protection of life and liberty of an Unborn child. The Supreme Court in the case of *Unnikrishnan v. State of Andhra Pradesh*,[75] the Supreme Court held that "the right to life includes the right to medical care, which extends to both the mother and the unborn child."
In the case of *Suchita Srivastava v. Chandigarh Administration*,[76] the Supreme Court held that "the right of an unborn child to life and personal liberty is protected under Article 21 of the Indian Constitution. It further observed that the State has a duty to protect the life and health of a pregnant woman and her unborn child. However, the right of an unborn child is not absolute and must be balanced with the right of the mother."

It is the responsibility of the state to promote such technologies as may be useful for protecting the life of an unborn child,[77] on the line of same principle even the amendments were carried out in Medical Termination of Pregnancy Act 1971 with respect to consent and protection to the life of child and mother. Therefore, it can be said that removing the blanket ban on lifesaving technology such as Germline Engineering capable of curing multiple diseases before the child is even born is very much viable in the contemporary times.

Patent Should be Allowed

It is argued in the foregoing context that the technological advancement that have a revolutionary effect of eliminating number of diseases and helping the humans in living a wholesome life such as the germline engineering gene editing techniques where the advantages outweigh the petty disadvantages are of nature that they cannot be restricted by the mere clutches of law without any progressive justification. Hence, it is the need of the hour that no imposition of blanket ban on patenting such products for commercial exploitation in the name of morality be allowed, further, a balance should be struck between incentivizing these beneficial innovations while also countering the immoral or extreme exploitation on a commercial level of such innovations by coming up with a proper policy framework and

[74] Press Release, "NITI Aayog, Oracle, Apollo Hospitals and Strides Pharma Sciences Come Together to End India's Growing Battle Against Fake Drug Distribution", *Oracle* (2018), available at <https://www.oracle.com/in/corporate/pressrelease/niti-aayog-oracle-pilot-real-drug-supply-chain-with-blockchain-iot-2018-09-28.html#:~:text=In%20order%20to%20fight%20the,to%20pilot%20a%20real%20drug> (last visited on May 20, 2024)
[75] 1993 AIR 2178.
[76] (2009) 14 SCR 989.
[77] Komal, "A Study on Right of An Unborn Child With Reference To Article 21 Of The Indian Constitution" 11 *IJCRT* 537 (2023).

regulatory mechanisms. The importance of morality for healthy functioning of society is not meant to be undermined by the way of demanding the allowance of patenting of germline based gene editing technology (especially process patent), but it is rather the intent that a harmonious view be adopted to preserve the moral/social fabric while also catering to the technological advancement by making such changes in the law as has been discussed.

Recommendations for Legal Framework

- Allowing patentability of germline engineering-based technologies.
- Enactment of a separate legislation: It is required for comprehensively regulating the Research and Development in the field of Genetic Engineering. Additionally, forming a regulatory body for overseeing and monitoring the misuse or extreme commercial exploitation of such technologies, beyond the therapeutic usages toward enhancements is also required.
- Incorporation of Specific Ethical Guidelines regarding Germline Engineering: In addition to the existing ones, it is required that comprehensive ethical guidelines addressing the moral implications of germline engineering, emphasizing the importance of informed consent, equity, and non-discrimination be developed.

Conclusion

The concept of designing babies through genetic modification, particularly germline engineering, raises profound ethical, legal, and societal questions. Advances in technologies such as CRISPR have made it increasingly feasible to edit the genes in order to enhance desirable traits in offspring. However, this ability also brings with it significant moral considerations regarding the nature of life and the limits of human intervention in the genetic makeup of future generations.

The legal framework in India faces challenges in addressing the patentability of genetic modifications, including designer babies specifically where any possible interpretation leas to a single interpretation of impossibility of grating patent over gene editing technologies. A comparative analysis with other jurisdictions reveals varying approaches to the patentability of genetic modifications. While some countries have embraced the potential benefits of genetic engineering and allow for patents in this area, others have imposed strict regulations or outright bans due to ethical concerns.

The implications of patenting designer babies are complex and multifaceted. On one hand, allowing patents could incentivize research and innovation in genetic engineering, potentially

leading to significant advancements in healthcare. On the other hand, there are concerns about the commodification of life, discrimination based on genetic traits, and the erosion of human dignity. Considering these, it is recommended that a careful balance be struck between incentivizing beneficial innovations in genetic engineering and ensuring that ethical principles and societal values are upheld. This could be achieved through the establishment of clear regulations and ethical guidelines, as well as ongoing monitoring and oversight to ensure compliance. Overall, the legal framework for germline engineering in India must be developed with a nuanced understanding of the ethical, legal, and societal implications involved. By doing so, India can harness the potential benefits of genetic engineering in ensuring healthy life for all while safeguarding against potential risks and ensuring that the fundamental principles of morality and human dignity are preserved.

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BALANCING PRIVACY AND PUBLICITY: A LEGAL ANALYSIS OF PERSONALITY RIGHTS

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Abstract

Personality Rights involve the evolving jurisprudence that addresses the protection of an individual's identity and personality traits. The Right to Publicity involves the right to protect one's identity, right to existence, and likeness from getting imitated and commercially exploited. This aspect of the law has existed in society for some time. However, recently, the Right to publicity has gained the spotlight through the development of Artificial Intelligence. Through precedents, Personality Rights have come to be considered as a facet of the Right to Privacy. The judiciary has been depending upon the existing statutes of Intellectual Property Rights such as Trademarks and Copyrights and the Constitution to render judgments and provide relief to the complainants. In this paper, we attempt to understand the current status of Personality Rights in India. However, the primary focus is to understand whether India needs a statute for personality rights. In this paper, we also analyze the current challenges and discuss potential solutions to address and resolve them. This paper states that even though the Indian Judiciary has attempted to include Personality Rights as a facet of intellectual property and the Right to Privacy, a significant gap is present which still requires adequate attention.

Keywords: Personality Rights, Intellectual Property, Right to Privacy, Commercial Exploitation, Statute.

Introduction

The concept of personality rights has started to develop through the rise of digital platforms and social media. In today's fast-paced world revolving around technology, personality rights have skyrocketed as a legal concept. In society, the legal rights associated with protecting one's personality define personality rights. It includes recognizing an individual as a physical and moral being, ensuring that their sense of existence is being protected. It becomes important for

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every individual to protect their lives from getting copied and marketed. Scholars claim that classical natural law embedded the roots of personality rights. Scholars claim that classical natural law embeds the origins of personality rights, making it important for every individual to protect their life from being copied and marketed.

Personality Rights encompass various factors, including the right to control and use one's name, voice, style, personality, and likeness. In order to safeguard such rights from being imitated and commercially exploited, it provides a shield. It helps protect an individual's dignity and expression in the society. It plays a role in preserving their sense of belonging and existence within society without having the fear of being imitated and thus exploited. Initially, these rights were not much in play because of the lack of media and digital power. However, with modernization and the development of technology, the personalities of others are being imitated and created differently, which can lead to defamation and further abuse. In the modern era, media can both distort and misinterpret information easily. Hence, the need to protect personality rights is currently on the rise.

Infringing upon one’s personality rights can lead to the deprivation of one's fundamental rights as well. The constant development of technology, media presence, and popularity of the same, has led to the development of personality rights across the world.

How Did the Question of Personality Rights Gain Attention?

Recently, Artificial Intelligence has introduced dynamic transformations into the world. It has made changes that can leave long-lasting impressions. However, the world has suffered various negative repercussions as well. One such repercussion is using AI to create 'deep fakes'. Deep fakes are defined as 'digital forgeries' created through 'deep learning' by Artificial Intelligence.[80] Deep fakes can generate completely new content by using the existing features of a certain person.[81] They are continuously being used with malicious intent to defame personalities.[82] This aspect gave rise to the need for protection of an individual's existence from being defamed.

[80] Hannah Smith, Katherine Mansted, “What’s a Deep Fake?” 6 *Weaponised deep fakes: National security and democracy*, 1 (2020).
[81] *Ibid.*
[82] *Ibid.*

In May 2024, Scarlett Johansson, a known personality in Hollywood, had accused OpenAI of imitating her voice in its latest GPT model.[83] OpenAI introduced *Sky*, a voice model as a part of GPT-4o where the voice being used was 'eerily similar' to the voice of Scarlett Johansson from the movie 'Her.'[84] This was a matter of grave concern for the actress herself and she moved on to emphasize the negative consequences the society was facing because of the origin of deep fakes. She further emphasized the need for immediate action to address this issue. She focused on protecting intellectual property rights as deep fakes posed a growing concern worldwide.

This case paved the way for the importance of personality rights in the digital age. It highlighted the need for statutes to protect the different facets of personality rights. Following this, it brought up the concern various personalities including celebrities and political figures were facing about how dangerous copying someone's voice, or images, can be in creating something different from the original. How else can the evolution of Artificial Intelligence violate the fundamental rights of every human being? It discredits the creativity of the artist and simultaneously poses threats to the personalities of being imitated as well. This case led to various personalities demanding their intellectual property rights in different corners of the world.

Status Of Personality Rights in India

One can consider Personality Rights as a relatively additional aspect. Currently, it does not possess any statutory position in India. However, it is being considered as a part of the common law. Personality Rights, or Publicity Rights, have strengthened in India through judiciary interpretations. Indian Courts have applied various parts of different existing statutes to protect the personalities in India. Art 21 of the Constitution of India, 1950 plays the most recognizable role in this domain.[85] The Right to Privacy under Art 21 helps protect such infringements. However, Art 21 could not cover the commercial aspect of publicity rights.[86] To overcome the gap present regarding the commercial aspect, the judiciary has applied the provisions related to Intellectual Property Rights existing currently in India. For example, courts have interpreted the different provisions of the Trademarks Act, of 1999 and the Copyright Act, of 1957 to grant protections regarding Publicity Rights. In some cases, passing off is being granted as a protection of personality rights as well.

[83] Scarlett Johansson v. Open AI: What are personality rights and how are they protected?, India, *available at: https://indianexpress.com/article/explained/explained-law/scarlett-johansson-vs-openai-voice-personality-rights-9347952/* (last visited on August 17, 2024).
[84] *Ibid.*
[85] *R. Rajagopal v. State of Tamil Nadu*, (1995) AIR SC 264.
[86] Agnes Augustian, "Protection of Personality Rights in India: ISSUES AND CHALLENGES", 1 *IPR Journal of Maharashtra National Law University, Nagpur*, 45 (2023).

Evolution of Personality Rights in India, Through Judicial Precedents:

The judiciary encountered the question of personality rights for the first time in the case of *D.M Entertainment v. Baby Gift House*.[87] In the given case; the plaintiff sued Baby Gift House as they were selling dolls that resembled closely to Daler Mehndi and were being marketed under his name. The dolls in question looked like the singer and could sing in tunes similar to the singer. It led to the claims related to the commercial exploitation of Daler Mehndi's persona. The plaintiff requested a permanent injunction against the defendant because they infringed his publicity rights. DM Entertainment received a favorable ruling from the Delhi High Court, which granted a permanent injunction to the plaintiff. The court stated that the dolls being sold were imitating the persona of the singer. They were infringing on his publicity rights. The court relied on the principle that no one can trade in another's name or likeness without permission, to deliver the judgment. Here, the court referred to the common law of intellectual property rights while delivering the judgment.

In this case, the Delhi High Court observed,

"The right of publicity can, in a jurisprudential sense, be located with the individual's right and autonomy to permit or not permit the commercial exploitation of his likeness or some attributes of his personality."

This judgment for the first time highlighted the issue of introducing an individual's name, likeness, and identity within the ambit of protection apart from physical property and body.

The case of *Arun Jaitley v. Network Solutions Private Limited & Ors*.[88] can be considered one of the most notable legal judgments in the domain of personality rights. In this case, the court has interpreted the protection of Publicity Rights like that of well-known trademarks. [89] One issue that was addressed by the Delhi High Court involved the issue of Commercial Exploitation of domain names regarding a public figure. The theory of publicity rights revolved around this issue. Here, Arun Jaitley was a prominent Indian politician who held a positive reputation within the country. He wanted to obtain a public domain with his name. However, upon application, someone had already registered a domain with the name www.arunjaitley.com. The plaintiff claimed that the domain was registered in bad faith and was being used to exploit him commercially. He claimed the same to infringe upon his personality rights. The Delhi High Court held that the domain name was indeed created in bad faith. The plaintiff is a world-known personality in India. Arun Jaitley was not merely a public figure.

[87] MANU/DE/2043/2010.
[88] 2011 (47) PTC 1 (Del).
[89] *Supra* note 10.

People also recognized him as a distinctive character who had goodwill. Hence, the court emphasized the protection of the plaintiff's name under the trademark law. The court emphasized that only the plaintiff is allowed to use the name ‘Arun Jaitley,’ and not anyone else, including those with intentions of commercially exploiting the public figure. Hence, the Delhi High Court imposed an injunction on the defendants on the selling of the domain.

The case of *Shivaji Rao Gaekwad v. Varsha Productions*[90] is a recognizable legal precedent regarding the personality rights of a well-known celebrity in India. After 11 years, this case remoulded the issue of personality rights in India. This case revolved around the publicity rights of the infamous actor 'Rajinikanth' who sued Varsha Productions to prevent them from using his name and style in the upcoming movie titled 'Main Hoon Rajinikanth'. In this case, the court acknowledged the importance of publicity rights, especially for a well-established celebrity in India. The Madras High Court held that a cause of action might only arise when the person in question is identifiable and reputable in the society. Additionally, the court pointed out that the use of the name and persona of such a personality can misrepresent the individual among the public and harm their reputation. Likewise, the Delhi High Court, in the case of *Titan Industries v. Ramkumar Jewellers*,[91] incorporated the jurisprudence that had become more robust in the present case. The court primarily focused on identifying the celebrity in question. The status and the presence of the celebrity become an integral part of deciding whether they can seek protection under personality rights. It was in the case of *Selvi J. Jayalalithaa v. Penguin Books India*[92] that the principle of identifiable personality was initially enunciated in jurisprudence.

Another notable precedent that is relevant in this domain is the infamous case of *K.S. Puttaswamy v. Union of India*.[93] The given case highlighted the importance of privacy. Finally, on 24 August 2017, a nine-judge bench by the Supreme Court of India unanimously held the Right to Privacy as a fundamental right under Part III of the Constitution. Hence, one can establish the importance of the Right to privacy for the citizens. This fundamental right is a predominant factor in personality rights as well. Foremostly, every citizen has the right to exist and survive with privacy in their lives. This landmark judgment has significant implications regarding the protection of an individual's identity and persona. The Supreme Court affirmed that privacy is an intrinsic part of an individual. This recognition provided a constitutional basis

[90] 2015 SCC OnLine Mad 158.
[91] 2012 (50) PTC 486 (Del).
[92] 2012 SCC OnLine Mad 3263.
[93] (2017) 10 SCC 1.

for the protection of one's personality. This case played a major role in laying the groundwork to help individuals protect their names, identities, and persona from being commercially exploited. It proposed that one can view Article 21 as the basis for acquiring personality rights. However, only Justice Sanjay Kishan Kaul had introduced publicity rights as a part of the right to privacy in his concurring opinion.

The recent landmark case that addressed a different dimension of personality rights was in the case of *Krishna Kishore Singh v. Sarla A Saraogi*.[94] The case revolves around the right to privacy, personality rights, and commercial exploitation of a deceased celebrity. The concerned actor is the late Sushant Singh Rajput. His father wanted to prevent the production that was exploiting the late actor's demise. Here, the court held that a personality can avail the rights of publicity during their lifetime. However, the same rights might not necessarily extend to after the death of the concerned personality. This case is considered important as it attempts to strike a balance between the right to privacy and creative expression in the media. It also brought up the question regarding the personality rights of a deceased person in India.

What are the Kinds of Personality Rights?

In India, the judgments indicate the classification of personality rights, also known as publicity rights, into two components. The two components are:

1. Protection From Commercial Exploitation:

Commercial exploitation is defined as the act of exploiting a certain kind of physical property or intellectual property belonging to someone else to gain financially. Various personalities or celebrities are being subjected to commercial exploitation. Their identities, voices, names, and persona are being imitated for financial purposes. Their status and goodwill in the public are being exploited either by the public or by artificial intelligence. Hence, it is crucial to consider the integral aspect of Personality Rights, which involves safeguarding individuals from commercial exploitation. One can also consider it as a Right to Publicity. This aspect is used to protect individuals from being commercially exploited without their consent or permission.[95] It allows the personalities to protect their work, their artistic characteristics, and their aura from being abused and misused. It protects their Right to Publicity and helps them carry on their kind of legacy within the society. This protection can be seen as a form of passing off. Personalities are required to establish significant goodwill in society through their charisma and

[94] CS (COMM) 187/2021.

[95] Samarth Krishan Luthra and Vasundhara Bakhru, "Publicity Rights and the Right to Privacy in India" *31 National Law School of India Review*, 145 (2019).

persona. A shield of protection is required to prevent such a persona from being imitated and misrepresented either for commercial purposes or other purposes.

2. Right To Privacy:

The fundamental right to privacy intertwines with Personality Rights. As discussed, the Supreme Court has established as a fundamental right through Art 21 the Right.[96] It plays a significant role in preventing the exploitation of the identities and personal information of individuals. It provides a veil to segregate private information from the information available in the public domain. Art 21 played a further role in laying the groundwork for the development of Personality Rights. It helped one understand how important it is not to invade and profit from someone else's privacy. The right to Privacy is another such integral part of personality rights that is required to be maintained and followed.

Recent Developments of Publicity Rights in India

The judiciary has been utilizing the Copyrights Act and Trademarks Act to render judgments to protect the aspect of personality rights. Although these legislations do not directly address the issue of personality rights, they have helped the judiciary to resolve such disputes. The judiciary relied on the facets of the existing legislation to provide adequate sanctuary under this domain. Through the development of judiciary and awareness in this given area, actors and other such identities have approached the court to protect themselves from such exploitation and to be able to maintain their uniqueness and personality. Famous people can currently trademark their voices, names, acting styles, and other factors under the Trademarks Act, of 1999. The use of first names and misrepresentations regarding the same is given protection under S. 14 of the Trademarks Act, 1999. Furthermore, S. 2(qq) of the Copyrights Act, 1957, which defines a performer addressing the issue of whether personality rights will fall under the ambit will also be applicable. S. 38 also plays a prominent role in effectively prohibiting commercial exploitation of the works of a performer.

In 2023, the renowned actor Anil Kapoor asserted his personality rights against his defendant prohibiting from commercial exploitation of his name, walking style, dialogue style, and persona.[97] He claimed that his interests, right to livelihood, family life, and right to live with dignity are being affected. In this case, the court has emphasized the constant use of Artificial Intelligence to create deep fakes and by the public to imitate his person, infringement of personality rights is a constant growing issue.

[96] *Supra* note 94.

[97] *Anil Kapoor v. Simply Life*, Manu/Deor/248558/2023.

The Delhi High Court passed an interim order on May 14, 2024, protecting the publicity rights of the actor, Jackie Shroff.[98] He claimed that his voice, his dialogues, and his images are being used by e-commerce platforms, social media, and artificial intelligence for commercial purposes without his consent. This case brought up the jurisprudence currently in existence and how safeguarding personality rights is a growing concern in today's age of technology and digital media.

The Bombay High Court recently granted relief to Karan Johar against the violation of his personality rights.[99]

Is There a Need for Statute in India?

The digital media age has been proliferating in the society today. Constant technological and digital changes are positively revolutionizing the world; however, they are subjecting society to various negative repercussions at the same time. It has ushered in various unparalleled challenges that have subjected the Indian Judiciary to focus on another vital aspect. The legal question that was brought up in this domain is posing a challenge for scholars, the legislative, and the judiciary to address the issue of whether a statute is required for publicity rights in India. As it has already been established, the judiciary attempted to use the existing legislation to provide relief to the complainants. Whereas the Constitution has played an efficient role in helping to provide a constitutional perspective, it has, however, lacked in providing a commercial perspective. The Indian courts have relied on the Trademarks Act of 1999, and the Copyrights Act of 1957 for a commercial perception. In certain cases, the court has also relied on the tort of passing off to render judgment to such legal questions. However, these facets of law are fragmental in playing a role in providing relief in the domain of personality rights. Hence, they are proving to be inadequate in resolving such issues.

Justice Sanjay Kishan Kaul is the first judge to include 'publicity rights' within the domain of the right to privacy in his concurring opinion.[100] It indeed introduced the scope of publicity rights within the ambit of privacy, but it failed to establish the same as a constitutional right. In such situations, a major concern arises regarding whether considering the Right to Personality as a fundamental right is possible or not. To date, no judicial precedent has dealt with this

[98] *Jackie Shroff v. The Peppy Store*, CS(COMM) 384 of 2024.
[99] *Karan Johar v. Indian Pride Advisory Pvt. Ltd*., 17863 of 2024.
[100] *Supra* note 94.

question of law. This question arises from the fact that personality rights arise out of the right to protect commercial exploitation from one person's likeness and existence.[101]

Another such concern which primarily is required to be asked is whether this right is available to everyone or only to such notifiable identities who have left an impression on the society. According to Justice Sanjay Kishan Kaul's opinion, he believes that this right is to be available to all the citizens of India. However, in various precedents, the High Courts have explicitly stated it is important to note whether the plaintiff has left a positive impact on society or not. In the case of *Indian Young Lawyers Assn. v. State of Kerala*[102], Justice Dhananjay Chandrachud, in his separate opinion has stated that,

"The Constitution postulates every individual as its basic unit. Part III of the Constitution guarantees rights aimed at recognizing every individual as its basic unit. The individual is the bearer of rights under Part III of the Constitution."

We can deduce, based on the wise words of Justice Sanjay Kishan Kaul and Justice Dhananjay Chandrachud, that we should extend the right to publicity to all citizens as a part of their fundamental rights. However, the issue has not received direct attention.

Thus, we can understand that a statute completely dedicated to establishing the rules and regulations of personality rights is essential for distinct reasons:

1. Till date, neither the judiciary nor the citizens can follow a particular statute to receive protection regarding the violation of publicity rights. The complainants needed to rely on other legislations which directly do not deal with the issue of personality rights. Similarly, the judiciary also had to rely on other facets of legislation rather than having a uniform statute to rely on to pass orders or grant reliefs. A uniform statute will provide a proper legal framework for everyone to follow and maintain.
2. With the help of a uniform and dedicated legal framework, the citizens will be able to navigate their rights in this domain of personality rights and take appropriate action when someone violates them. They will understand their rights and obligations and will respond accordingly when someone violates their rights.
3. Currently, the absence of any law has led to inconsistent judgments and legal uncertainties. Inquiries have raised various questions for the judiciary, including the applicability of

[101] *Supra* note 96.
[102] (2017) 10 SCC 689.

personality rights for a deceased person. A uniform law dealing with such aspects will provide an understanding as to how such issues are to be resolved.

4. A statute can render this right as a fundamental right and provide it to all citizens in India. It will play a significant role in resolving further problems and queries arising in this domain.

5. A statute can address the constantly strengthening jurisprudence in this domain, ranging as to what kind of person will avail such rights and to what extent should they provide resolutions. Currently, digital media and artificial intelligence have played a prominent role in infringing the personality rights. New laws will resolve such questions where the traditional laws have fallen short.

6. A dedicated statute in the realm of personality rights will provide for a robust legal mechanism for the protection of the publicity rights of celebrities and other such personalities in the country. Along with them, it will also help the common person in fighting any legal violations of this right. Their way of working is always being violated either and a uniform law will help to provide more powerful protection to them.

Conclusion

The realm of personality rights is a dynamic field that is growing important day by day. Nowadays, technology is being used to bring about various changes and developments in the world. The enhancement of technology and the development of Artificial Intelligence has brought the subject of personality lights to light today. This is one such field that intersects with various other domains, including Intellectual Property Rights, commercial exploitation, the right to privacy, and the right to livelihood. The field of personality rights has subjected everyone to various challenges and complexities. It has presented us with several questions as to how such issues are to be dealt with, and to what extent such protection should exist. Another primary concern that has emerged is whether we can consider personality rights as a fundamental right. These complexities and questions have brought up another major question whether India needs an independent statute in this domain of intellectual property.

An understanding of personality rights is important for policymakers, the judiciary, businesses, and individuals. A comprehensive understanding of this field will carve out a uniform path that will provide the aid individuals and the judiciary require. To date, the precedents have been inconsistent. Adequate laws have been established to protect innovations, protect the work of performers, and protect brand names. These legislations have been instrumental in guiding the way to address such issues. While the existing legal framework has made noteworthy progress

in guiding such cases, the absence of a uniform statute in this realm leaves a prominent gap. The lack of a statute has put various questions in front of the judiciary on several aspects of personality rights. After a few more years, a new ground apart from commercial exploitation and privacy might arise.

Challenges might keep arising and society might face much more severe consequences regarding the same. Personality rights are a timid legal issue that requires no statute. With deep fakes arising and the constant evolution of Artificial Intelligence, much more complexities, and harsh consequences are waiting across the horizon, waiting to prey on individuals. It has grown into a fundamental part of human livelihood and dignity. Recognizing these rights in such a crucial age will provide people with a sense of relief and the right direction they must follow to protect themselves. Upholding personality rights allows a society to create an environment that protects personal livelihood.

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NFTS: 'A HISTORIC TREND IN DIGITAL OWNERSHIP OR THE DEATH OF ARTISTIC CREATION?'- INTERSECTION OF INTELLECTUAL PROPERTY AND DIGITAL ASSETS

Aakriti Verma[103] *& Abhigyaa Singh*[104]

Abstract

NFT was a phrase seldom heard a decade ago until they traced their way into the digital-tech world. NFTs often surface to prove ownership of rare objects, such as virtual artifacts and artwork. From Jack Dorsey selling his first tweet as an NFT for more than $2.9 million to J.P. Morgan launching its first virtual branch in the decentralized metaverse, the buzz of the digital market has been rapidly expanding. While NFTs are gaining recognition, their operation and existence are still unclear. This fundamental leads us to the question- What is an NFT?' Pragmatically Non-fungible Tokens are the tokenized assets via blockchain. They are distinguished from other tokens through their metadata and identifying numbers. Owners of NFTs include organisations, authors, screenwriters, game developers and individuals who create physical work. There is a significant risk of infringement upon these owners' rights because their assets, when shared, are likely to be used by others to create an NFT. However, NFTs do not automatically confer intellectual property rights. "There is a stark difference between owning an NFT and owning the primary or other associated assets of intellectual property; owning an NFT is akin to merely having a display piece on a shelf."

The first part of this paper is concerned with the evolving concept of property- throwing light, to clear some shrouds regarding NFT and their impact on Intellectual Property Rights. The second part seeks to delve into the regulatory landscape, particularly India, stressing the need for a clear legal framework and protections. Additionally, it also addresses the social and cultural impact on the art world and the environment, and the potential of NFT to democratize access to digital assets. Finally, the paper concludes with an emphasis on the need to distinguish between the owning of an NFT and holding the associated IP rights.

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Keywords: Intellectual Property Rights, Non-Fungible Token, Blockchain, Smart Contracts, Infringement, Digital, Assets

Introduction

The legal concept of 'Property' has undergone a continuous change throughout history. Traditionally, the term was used to denote tangible possessions such as land or houses. The term property typically refers to any legitimate claim or interest that a person has in a thing that can be owned or possessed. Pt. Jawaharlal Nehru reflected on this evolution in his Constituent Assembly speech[105], which discussed the changing nature of the definition of property, contrasting the past where humans were seen as property of their masters. Every property was seen to be belonging to the king and was quantified in terms of cows and bullocks. These concepts have ceased to exist, and the meaning of property has taken a different form.

Contemporarily, there are various definitions of property defined under different acts. However, there is no definite definition of 'property' in the Transfer of Property Act, of 1882[106]. Section 2(c)of the Benami (Prohibitions) Transactions Act, 1988[107] defines property as "any property whether movable or immovable, tangible or intangible and any interest or right vested in such property." It is considered the most comprehensive definition in the ambit of property under Indian law. Property has been classified in various ways, one of which is the distinction between corporeal and incorporeal property. Corporeal property refers to property that has material existence. Land, houses, and jewellery are examples of the same. Incorporeal property includes entities that do not have a real or tangible existence.[108] This category encompasses intellectual property, such as patents and copyrights, as well as other legal creations like leases and securities.

In layman's language intellectual property relates to the creations of a human mind like inventions, literary and artistic work.[109] It is referred to as intellectual innovation, where the law aims to protect the interest of the creators by conferring upon them certain time-limited exclusive rights to control and manage their creations. Such rights only apply to the intangible

[105] Constituent Assembly debates, vol. IX at 1194.
[106] Transfer of Property Act, No. 4 of 1882, (Ind.)
[107] Benami (Prohibitions) Transactions Act, No. 45 of 1988, §2(c) (Ind.)
[108] A.K. Ganguli, "Right to property: Its evolution and constitutional development in India" 48 *Journal of the Indian Law Institute* 490 (2006).
[109]THE INSTITUTE OF COMPANIES SECRETARIES OF INDIA, INTELLECTUAL PROPERTY RIGHTS-LAW AND PRACTICE 2 (2015), https://www.icsi.edu/media/website/IntellectualPropertyRightLaws&Practice.pdf

or intellectual creation, not its physical embodiment. The intellectual property is collectively referred to as patents (innovations), trademarks (symbols), copyrights (literary and artistic work) and registered designs. However, the recent trends in intellectual property have seen several inclusions under its gambit.

With the expansion of the digital age, non-fungible tokens (hereinafter 'NFTs') have become its touchstone. Over time NFT business is envisaged to be prosperous and will continue to flourish, as per the predictions by the experts. In this study, an attempt has been made to analyse and understand the concept and definition of NFTs. An exploration has been strived to contour the converging enigma between NFT and IPR.

Technical And Functional Overview of NFTs

Despite Bill Gates' claim that NFTs cannot benefit the world and is based on a "greater fool theory," the NFT market continues to thrive.[110] With the evolution of technology, a new digital era has been penetrating its way into the creative world. Several businesses, governments and other organisations are utilising blockchain technology, offering security and traceability against accelerating cyber-crimes. The world's greatest economies suffered during the COVID-19 pandemic, but globally there was also an increase in the use of numerous commodities and activities, one of which was the massive amount of money invested in Crypto and NFTs.

The rising demand for Cryptocurrency and its technology of Blockchain has given a new dimension to what constitutes incorporeal property. Just as cryptocurrency is a complex subject, so is NFT. Yet, it is more difficult to understand the attraction towards it. NFT, short for Non-Fungible Token, means it is 'non-fungible,' indicating that, 'it is of such nature that it cannot be easily exchanged or replaced either in whole or in part with another possible similar TYPE' and a token is the 'item included in the digital asset or an entry on the blockchain.'[111] Hence, NFTs are digital tokens, which could range from artwork, music, videos and other creative work.[112] They can only have one owner at a time.[113] These are unique and irreplaceable, which makes it different from Cryptocurrency, which is replaceable and all the same, hence, making it fungible is a relatively new trend, working on the same technology as

[110]Runhua Wang & Jyn-An Lee, *Unwinding NFTs in the shadow of IP Law* 61 ABLJ 31-55 (2024). https://onlinelibrary.wiley.com/doi/full/10.1111/ablj.12237

[111]Daniel Horasman & Kholis Roisah, *NFT in the Perspective of Intellectual Property in Indonesia* 6 IJSSHR 3084-3088 (2023). https://ijsshr.in/v6i5/Doc/75.pdf

[112] NFTS EXPLAINED- OWNERSHIP, LICENSES, AND THE LAW https://www.mondaq.com/india/fin-tech/1172342/nfts-explained--ownership-licenses-and-the-law (last visited on Aug. 08, 2023).

[113] Mehab Qureshi, *What are NFTs? How are they different from Cryptocurrency?* INDIAN EXPRESS (Feb. 23. 2022) https://indianexpress.com/article/explained/what-are-non-fungible-tokens-nft-7783662/

that of crypto assets such as Bitcoin and Ether.[114]

This 'decentralized' technology, that is, one which eliminates intermediaries from the selling and buying process, has introduced the concept of digital assets and their ownership.[115] This ensures that no single entity has control over the entire blockchain, providing security and transparency. It has further extended the purview of incorporeal property to the digital realm. All of the transactions are recorded publicly on the internet, in what is known as a 'ledger.'[116] A digital ledger is called a blockchain. In case an NFT is purchased, this purchase of token is recorded in this unalterable ledger, after it is verified by a bunch of computers across nodes of the communication network.[117] After this verification, the ownership of the token changes and is recorded. The creation of value comes from the acknowledgement that the purchase is considered valid and one of a kind by an entire group.

Each NFT has a unique number- that allows it to be easily distinguished from others in the same series. This has the advantage of being unique, and because many NFTs have circulating issues and in the NFT market scarcity equals value. Additionally, NFT has high interoperability, meaning, it can be traded across multiple platforms and marketplaces. An NFT obtained from one marketplace can be traded on another, making them versatile and more desirable. They are also highly programmable, that is, they can incorporate complex functionalities through smart contracts, as will be discussed in the upcoming section. With a fundamental understanding of NFTs established, it is crucial to explore how these digital assets intersect with existing intellectual property laws and what challenges arise in this new landscape.

Intellectual Property Rights Vis-À-Vis NFTs

Intellectual property laws regulate '*corpus mysticum'* assets, which refer to intangible assets, in contrast to '*corpus mechanicum'* or tangible assets.*[118]* NFTs are categorized as intangible or incorporeal personal property since they lack physical existence but hold assigned value.[119]

[114] Shubham Swastek Dalai, *A study of NFTs (Non-Fungible Tokens)- Diagnosis through the lenses of classical Economics* (Unpublished, Uppsala Universitet).
[115] NFT TRADING PLATFORM: A DECENTRALIZED APPLICATION USING THE ETHEREUM BLOCKCHAIN https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4453987 (last visited on Aug. 08, 2023).
[116] An intro to Blockchain and NFTs, https://www.blockchainresearchinstitute.org/an-intro-to-blockchain-and-nfts/ (last visited on Aug. 08, 2023).
[117] Adarsh Vijayakumaran, "NFTs and Copyright quandary*" 12 JIPITEC* para 28 https://www.jipitec.eu › issues › vijayakumaran_pdf
[118] Andy Ramos, *The Metaverse, NFTs and IP Rights: to regulate or not to regulate?* WIPO Magazine (June 2022) https://www.wipo.int.
[119] Timothy Chan, *The nature of property in cryptoassets*, 43 CAM.UNI. P. 480-498 (2023). https://www.cambridge.org › core › content › view

NFTs are treated as property as they are a representation of ownership and authenticity of the asset. It exists purely in digital form on a blockchain.[120] When the creator mints an NFT which features a design, music or trademark, that they do not own or have a valid license to use, they fall within the ambit of possible trademark infringement.

Free Holdings Inc. v. McCoy[121] spotlights the concern regarding the ownership challenges around NFTs. The dispute revolves around the NFT 'Quantum' minted by McCoy on the Namecoin blockchain. Namecoin required periodic renewal, and McCoy did not renew Quantum, causing it to expire in 2015.[122] However, he later reminted Quantum of Ethereum in 2021. Free Holdings later re-registered the Namecoin Quantum in 2021. McCoy's action led to legal claims by Free Holdings, arguing ownership of both Namecoin and Ethereum versions. The court did not support any of the two arguments and dismissed the complaint on procedural grounds.[123] Therefore, although the conflict underscores that artists can create multiple NFTs connecting to identical digital networks on various blockchain platforms like Ethereum,[124] the legal standing of the quantum NFT based on Namecoin and the ownership of the double-minted NFTs remains ambiguous.

The ownership of NFTs is limited as compared to the general ambit of the word. The ownership is of the token and not of the creative work that it represents. Thus, Possessing an NFT does not automatically grant the holder the legal entitlement to capture images of the underlying artistic creation, reproduce them, and publicly distribute them in any manner.[125] The underlying asset is the property of the creator, as long as the creator does not waive off their ownership rights through a contract of sale or a smart contract. Smart contracts are self-executing contracts whose terms are directly written in code. They help to facilitate and enforce contract negotiations and performance. It has different clauses embedded in an NFT, that automatically execute certain actions such as payment of royalties with each subsequent sale. The Medium or mode of expression is immaterial here.

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[120] Vasundhara Shankar and Mudit Kaushik, *Using NFTs for Intellectual property transactions*, IJLT (2021) jlt.in/post/using-nfts-for-intellectual-property-transactions

[121] Free Holdings Inc. v. Kevin McCoy, No. 22-CV-881 (JLC) 2023 WL (S.D.N.Y 2023)

[122] *See* FAQ, Namecoin, https://www.namecoin.org/docs/faq/#why-do-names-have-to-be-renewed-regularly (last visited Aug. 24, 2024).

[123] *See Free Holdings*, 2023 WL 2561576, at *10–12 (ruling that Free Holdings had failed to establish standing to sue).

[124] Thomas Smith, *Solving the NFT Double Minting Problem with Computer Vision*, Geek Culture (July 5, 2021), https://medium.com/geekculture/solving-the-nft-double-minting-problem-with-computer-vision-c57bbbb4652d.

[125] Adarsh Vijayakumaran, *NFTs and Copyright quandary* 12 JIPITEC 402-414 (2023) https://www.jipitec.eu/archive/issues/jipitec-12-5-2021/5497/vijayakumaran_pdf.pdf .

As per the "Berne Convention for the Protection of Literary and Artistic Works," it is required by the contracting parties to provide the writer with exclusive rights over their works. The 1996 WIPO Copyright Treaty upgraded the Berne Convention according to the digital era. According to this agreement, the act of saving a protected work in a digital format on an electronic medium (such as NFT) constitutes reproduction, necessitating prior authorization from the copyright owner.[126] Copyright issues can also arise, as the authenticity of NFTs can be called into question when the initial entry in the blockchain is false or contains errors. With brands like Gucci, Jimmy Choo, Prada, and Burberry, releasing their own NFT collections on various platforms, they need to review existing trademark applications and registrations to determine if the classification of goods or services provides them with coverage for NFTs and digital fashion.[127] It is a good time for brands and companies to explore this new space to protect their Intellectual Property rights.

It is hard to verify an owner during an infringement when the owner is not well known in the public domain, or the art is abstruse. The same happened in the art by Basquiat, titled "Free Comb with Pagoda." The right to destroy the original artwork was also handed over to the winning bidder, once the digital version was sold by the alleged seller who minted the same NFT, disregarding the moral rights of the author.

The technology driving the NFT can be licensed by the blockchain owner, allowing users to purchase authentic collectables via brands. A renowned shoe company, Nike holds a patent in "cryptographic digital assets for footwear." This patent enables the buyers to verify the authenticity of their purchased items and own a digital collectable version of their sneakers in their Digital Wallets, known as Cryptokicks. To be entitled to patent protection the idea should be novel and eligible. Patents are initially novel and hence, non-Fungible. A blockchain can simplify and promote licensing agreements by incorporating automatic royalty collection methods within a portfolio. An inventor by minting their patent as an NFT, can create a commercial IP portfolio and automatically generate licensing revenue.[128] Patents in the digitalised NFT world have the scope to promote transparency and liquidity and also welcome innovators into the market who aim to effectively commercialise their inventions.

[126] Nishant Gulyani, *Nexus between NFTs and Intellectual Property Law* 6 INT'l J.L. MGMT. & HUMAN. 446 (2023).
[127] Beibei Zhou, *Applications of NFTs in luxury brands* 82 FIN. TECH. AND BUS. ANY. 28-36 https://www.researchgate.net/publication/380752540_Application_of_NFTs_in_luxury_brands
[128] Nina Shapiro, *A Digital Marketplace for Patents: Patents as NFTs,* AM. UNI. IP-BRIEF (Nov. 03) https://www.ip-brief.com/blogs/patents-as-nfts#:~:text=To%20rid%20the%20 current%20 patent,trustworthy%20and%20 extensive%20digital%20 marketplace.

The primary objective for a business owner minting an NFT for an underlying asset is to distinguish themselves from competitors in the market. Trademark protects the brands inclusive of the NFT brand. The procedure involves the reviewing of the existing trademark by the brand owner and application for the additional Trademark for the authenticated by NFT such as digital assets and virtual goods.[129] Infringement occurs when an unauthorised or competing party mints, sells, or resells that NFT using the asset owner's registered trademarks without the owner's consent. In the case of *Nike, Inc. v. StockX LLC*,[130] StockX was selling NFTs linked to products they had in stock, offering the buyer the right to exchange the NFT for a physical item. Nike discovered NFTs associated with their products and sure StockX, accusing them of using undue leverage to market goods. In another case of *Hermes Int'l v Rothschild*,[131] where Rothschild had minted NFTs titled "MetaBirkins" depicting Hermes "Birkin Bags."

Remember, that the worth of an NFT lies in the trust that it indicates authentic ownership of a unique item. The same has been planned by Mattel Inc. to do with its Hot Wheels NFT Garage trademark. NFT Trademark also keeps your NFT brand unique making it more valuable, such as Saks LLC planning to do with its SAKS trademark. Even personalities such as Kobe Bryant, and Jay-Z have filed an application for their NFT trademark.

Hence these approaches ponder upon, what one acquires when purchasing an NFT. Besides the bragging rights, they obtain a digital key- an encrypted code that records the existence and ownership of digital or physical assets on the blockchain. This holds as a perpetual proof of an artist's creation; something which acts as an impetus for the artists to enter this space. This digital key is linked to a smart contract that gives the purchaser sole ownership over the NFT, though not the copyright to the artwork, unless otherwise agreed upon. The extent to which Intellectual Property Rights are transferred to the purchaser is covered in the smart contract. Another point to be noted is that ownership of an NFT does not prevent one from copying the digital image linked to it.[132] The NFT owner is the registered owner of the original, but anyone can still replicate the image.

Purchasing an NFT does not automatically grant the purchaser intellectual property rights associated with the NFT. Although the ownership of the NFT may be correctly transferred to the new owner, the NFT collector does not gain the right to modify or replicate the NFT.

[129] Michael Kondudis, NFT and Trademarks: The Ultimate Guide, MEIKPLAW (2023) https://www.mekiplaw.com/nfts-and-trademarks-the-ultimate-guide/
[130] Nike, Inc. v. StockX LLC,1:22-cv-983-VEC (S.D.N.Y. Jul. 14, 2022)
[131] Hermès Int'l v. Rothschild, 654 F. Supp. 3d 268 (S.D.N.Y. 2023).
[132] Michael D. Murray, *NFT Ownership and Copyrights* 56 IND. L. REV. 375 (2022) https://mckinneylaw.iu.edu/practice/law-reviews/ilr/pdf/vol56p367.pdf

However, NFTs can be sold and transferred in a manner that allows the original inventor to receive royalties through the smart contract's functionality. The benefits of owning an NFT are often highlighted in product descriptions of NFT marketplaces. Nevertheless, these benefits typically do not include the transfer of intellectual property rights, as IP rights can only be transferred through legally binding contracts.

With a foundational understanding in its place, it is crucial to gain a wider standpoint on how this fundamental concept is applied to the Indian perspective. Hence, the NFT regulations in India are discussed in the upcoming sections.

Social And Cultural Implications

The realm of NFTs in the digital sphere extends far beyond just a cat gif priced at $600,000[133] or a tweet worth $3 million.[134] It delves into the underlying human psyche, and how technology is reshaping the way humans value it. The profound and pervasive role that technology plays in modern life is something that could not have been anticipated. Artists strive to connect with their audience often through storytelling. "NFT Storytelling" projects and companies sometimes embark on remarkable projects. One such company, JumpCut Creative, aims to disrupt the Hollywood Status Quo with its project "Women of Mystery".[135] Similar projects have been undertaken by companies like 'R3wind' and 'Crypto Coven'. Though their approaches and narratives differ, the common goal is to build a sense of loyalty and kinship through shared narratives.

With a focus towards India, NFTs remain a niche market, unlike in the US, where artists have occupied top spots by tokenizing digital works and selling them for substantial amounts. In India, popular actors and content creators have also embraced this trend. Amitabh Bachchan sold his NFT collection, "Madhushala", featuring his father's renowned poetry.[136] Additionally, companies like Tanishq and Mahindra & Mahindra have ventured into the Metaverse space, releasing their latest collection and products as NFTs.[137] This move is seen as a significant

[133] Grace Kay, *'Nyan Cat' flying Pop-Tart meme sells for nearly $600,000 as one of a kind crypto art*, BUSINESS INSIDER INDIA (Feb. 21, 2021) https://www.businessinsider.in/tech/news/nyan-cat-flying-pop-tart-meme-sells-for-nearly-600000-as-one-of-a-kind-crypto-art/articleshow/81179350.cms

[134] Jeff Kauflin, *Why Jack Dorsey's first tweet NFT plummeted 99% in value in a year,* FORBES (Apr. 12, 2022) https://www.forbes.com/sites/jeffkauflin/2022/04/14/why-jack-dorseys-first-tweet-nft-plummeted-99-in-value-in-a-year/?sh=3e83796465cb

[135] Falon Fatemi, *How Storytelling is Driving NFTs,* FORBES (Jan. 27, 2023) https://www.forbes.com/sites/falonfatemi/2023/01/27/how-storytelling-is-driving-nfts/

[136] AMITABH'S NFT- CURATED BY THE LEGEND HIMSELF, https://amitabh.beyondlife.club/ (last visited June 12, 2024)

[137] Ajita Shashidhar, *India Inc. tryst with Metaverse*, FORTUNE INDIA (May 09, 2022) ortuneindia.com/long-reads/india-incs-tryst-with-metaverse/108082

marketing opportunity.

Nonetheless, there is a popular consensus that this decentralization has democratized participation in this blockchain-enabled production and distribution through intrinsic features such as openness, transparency and accessibility. The hassle with galleries, music companies and distributors has zeroed, in contrast with the traditional control these entities had of digital assets like art and music. This control allowed them to set the terms for access and distribution, thereby closing opportunities for many creators. The founding of decentralized platforms such as OpenSea, and Rarible, where artists can create, mint, showcase and sell their artwork directly in the form of NFTs, has eliminated barriers posed by traditional intermediaries.

Considering the significant reduction in the platform fees, as compared to that of art galleries, the cost and complexity required to launch an NFT has tremendously decreased. Decentralized platforms allow artists to create NFTs at a low price. At the same time, buyers can engage through cryptocurrencies in more forms than traditional banking systems across different parts of the globe. Owing to Blockchain, there are no geographical boundaries between participants worldwide, allowing involvement in this ecosystem without using traditional financial infrastructure or middlemen. 'Decentralized Autonomous Organizations' (DAO) are becoming popular as new models for community-led initiatives.[138] They decentralize authority, giving the community the final says over issues such as direction of projects, funding and governance. Some platforms support collective art creation and NFT ownership which encourage more than one individual artist to contribute to a single work while sharing ownership stakes and profits. This creates a sense of belonging among creators and collectors alike. Fractional ownership allows various investors to own some percentage of an individual NFT reducing the entry cost for more people to invest in high-value NFTs. It makes valuable digital resources accessible to all, thus raising participation levels. Other income-generating possibilities provided to the users through NFTs are linked to 'play-to-earn' models and other rewards-based systems.[139] By doing so, it embraces decentralization through inclusive economic systems that directly pay off participants for their contribution and involvement in them.

This technology has extensive ramifications on the environment as well. Cryptocurrencies and NFTs are classic examples of how, as soon as humans have enough abundance to meet their

[138] Jens Lowitzsch, *Investing in Renewable Future- Renewable Energy Communities Consumer (Co-) Ownership and Energy Sharing in the Clean Energy Package* 9 REN. ENERGY. LAW. AND POL. REV. 18 (2019) https://www.jstor.org/stable/26743437

[139] PLAY TO EARN: NFTs, IP AND THE FUTURE OF GAMING, https://www.taylorwessing.com/en/insights-and-events/insights/2022/03/play-to-earn-nfts-ip-and-the-future-of-gaming (last visited on Aug. 18, 2024)

basic needs, they move on to create value in something that has no inherent value[140]. Their exclusivity and unique nature create psychological hype, making it more appealing[141]. The art industry revolves around this hype of allotting exorbitant value to objects of limited inherent value. But now, it is possible to do so in a non-physical way through sophisticated technology.

These digital assets with no substantial use, have a huge environmental impact in terms of the energy that is consumed to keep the computers running in huge warehouses[142]. The trading of NFTs has introduced another stream to generate revenue within the Metaverse. Consider the Metaverse as a virtual and alternate world, where even "real virtual estate" is bought for millions, because Snoop Dog's property is located next door.[143] It is seen by many as an escape from reality, where everything can be controlled through one's devices and their avatars. NFTs are prime examples of the deep real-world consequences that a new and hyped technological advancement can have, and how it continues to permeate various aspects of society. It becomes imperative to address the legal and regulatory framework governing them to ensure fair and protected digital interactions.

Policy And Regulatory Perspective

The NFT boom in 2021 presented a novel legal challenge. Regulations addressing various aspects that came into play with this new technology became apparent. A unified global policy framework is difficult to attain, considering the varying levels of technological advancement and development across countries. Some nations require a more stringent approach to tackle these issues. For instance, Ecuador has recognized the exponential potential of Cryptocurrency and accepted it as a legal tender, whereas many other countries have banned it entirely due to high risks of money laundering and fraud. The tax treatment of NFTs also varies; in some places, they are referred to as "collectables" and taxed accordingly. Other countries do not treat them as taxable assets, while others tax them for capital gains and inheritance. Below, we examine the policy framework and considerations of several countries, followed by an analysis of common trends.

In the United States, the first case, *Miramax, LLC v. Tarantino, et al.*[144], involved the creation

[140] Terry Ngyen, *The Value of NFTs, explained by an expert*, VOX NEWS (Jun. 10, 2024) https://www.vox.com/the-goods/22358262/value-of-nfts-behavioral-expert

[141] Robert Young, *The Psychology Of Nfts: Is Your Wallet The Next Social Flex?*, THE MEDIUM (Jun. 10,2024) https://medium.com/@robertdtyoung/the-psychology-of-nfts-is-your-wallet-the-next-social-flex-35919dc5130

[142] WHAT IS THE ENVIRONMENTAL IMPACT OF NFTS? https://www.vice.com/en/article/bvnp95/what-nft-environment-impact-climate-crypto-explainer (last visited on Aug. 08, 2023).

[143] *Understanding the Metaverse*, 22 Women of Color Magazine 41-54 https://www.jstor.org/stable/48697562

[144] Miramax, LLC v. Tarantino, No. 2:21-cv-08979-FMO-JC (C.d. Cal. Mar. 10, 2022)

of NFTs featuring unreleased scenes of an iconic 90s film: "Pulp Fiction," without prior authorization. The distributor of the film sued the director for breach of contract, trademark and copyright infringement. Ultimately, the matter was settled outside of court, leaving no landmark ruling. In contrast, a more definitive outcome was provided in the case of *Hermès International v. Rothschild.*[145] Luxury French brand, Hermès, sued artist Mason Rothschild over his NFT creation of "MetaBirkin", featuring Hermès Birkin, a rare and hard-to-get luxury in the fashion world. While Rothschild's argument that his work constituted free speech under the First Amendment was considered plausible, it was rejected by the Court on the ground that the design was "intended" to confuse potential consumers and "deceive" them into believing that the 'MetaBirkins' were in some way, related to the luxury brand." This judgement will serve as a crucial precedent in understanding the extent to which NFTs can infringe existing trademark rights for non-NFT users.

In Singapore, recent court decisions have affirmed the status of NFTs as valid property. However, existing Singaporean legislations such as the Payment Service Act (PSA) and the Securities and Futures Act (SFA) do not align neatly with the concept of NFTs. NFTs do not meet the criteria for digital payment tokens under the PSA nor do they exhibit traits that classify them as a capital markets product under the SFA. A notable judgement was rendered by the Singapore High Court involving the "Bored Ape Yacht Club" NFT. Moreover, while the concept of smart contracts is not yet explicitly regulated in Singapore, the legal jurisdiction is considered broad enough to encompass blockchain technologies, provided that the essential requirements for the formation of a legally binding contract are fulfilled.[146] This regulatory stance has fostered significant growth of the FinTech sector in Singapore.

In India, there is no definite legal framework for digital assets due to the nature of the property. In 2018, the RBI issued a circular discouraging companies and banks from dealing in any virtual currency.[147] However, the Supreme Court, in its judgement of *Internet and Mobile Association of India v. Reserve Bank of India,*[148] struck down the aforementioned circular, considering it to be violative of Art. 19(1)(g) of the Indian Constitution.[149] Drastic changes have been seen in the position of India on digital currency since this judgement, with the

[145] Hermès Int'l v. Rothschild, 654 F. Supp. 3d 268 (S.D.N.Y. 2023).
[146] Ben Chester Cheong, *Application of Blockchain-enabled Technology: Regulating Non-Fungible Tokens (NFTs) in Singapore*, The Singapore Law Gazette (Jan. 2022) https://lawgazette.com.sg › feature › application-of-bloc...
[147] Press release, Reserve Bank of India, RBI cautions users of Virtual Currencies (Feb. 01, 2017) https://www.rbi.org.in/commonman/English/Scripts/PressReleases.aspx?Id=2152#:~:text=The%20Reserve%20Bank%20of%20India%20advises%20that%20it%20has%20not,so%20at%20their%20own%20risk.
[148] Internet and Mobile Association of India v. Reserve Bank of India, W.P (Civil) No. 528/2018.
[149] The Indian Constitution. art. 19(1)(g).

finance minister declaring that cryptocurrency will not see a complete ban in the country. This decision will be determinative for the growth of the NFT market in India, considering that cryptocurrencies are commonly used as consideration in NFT transactions. According to the Indian Contract Act, 1872,[150] a lawful consideration is an essential element in the formation of a valid contract, without which, smart contracts would be rendered ineffective. Another issue with the existing legal framework is the validity of digital signatures. Smart contracts utilize digital signatures, created by converting decrypted input into encrypted output, known as a "hash", ensuring that the document has not been tampered with. This, however, is not consistent with the Information Technology Act, 2000,[151] as it only declares a digital signature permissible upon issuance by a government-designated authority. Consequently, in case of a dispute, such documents would not be accepted as evidence in a court of law due to the provision of Section 65B of the Indian Evidence Act, 1872,[152] which permits digitally signed contracts to be recognized as a form of evidence.

China has significantly diverged from other nations in its approach when it comes to the NFT space. Unlike other countries, where the value for NFTs is hinged on hype and scarcity, China has imposed strict supervision over the valuation and pricing of NFTs.[153] With its Communist regime's strict crackdown against cryptocurrency, NFTs are restricted to trading solely in the Chinese Renminbi. China's Copyright Law includes mechanisms for combating infringement, such as unauthorized reproduction or distribution of NFTs. However, ambiguity remains concerning the liability of miners and platforms facilitating NFT transactions. The courts have begun to recognize ownership rights over virtual assets, and cryptocurrencies are not discussed alongside NFTs. Specific legislation or judgements directly addressing NFTs are still in their early stages.

Countries like Japan do not recognize ownership of NFTs because ownership under Japanese Law is restricted to tangible goods,[154] as opposed to Switzerland, where cryptocurrency is legal and subject to income tax.[155] These regulatory trends involve the establishment or proposed development of a comprehensive framework tailored to address the unique attributes of digital

[150] The Indian Contract Act, No. 09 of 1872, §10 (Ind.)
[151] The Information Technology Act, No. 21 of 2000, §35. (Ind.)
[152] The Indian Evidence Act, No. 03 of 1872, §65B. (Ind.)
[153] Baiyang Xiao, *Copyright Law and Non-Fungible Tokens: Experience from China* 4 IJLIT 444-471 (2023) https://doi.org/10.1093/ijlit/eaad007
[154] Takeshi Nagase, *The boom in NFTs and potential legal issues in Japan,* The In-House Lawyer (2021) https://www.inhouselawyer.co.uk/legal-briefing/the-boom-in-nfts-and-potential-legal-issues-in-japan/
[155] SWISS TAXATION OF CRYPTOCURRENCIES- HOW ARE INVESTORS TAXED? https://blogs.deloitte.ch/tax/2024/01/swiss-taxation-of-cryptocurrencies-how-are-investors-taxed.html (last visited on Jun. 14, 2024).

assets. Many jurisdictions are actively clarifying the legal status of cryptocurrencies, NFTs and their subsequent impact on related sectors through court decisions or legislative amendments. Key objectives often involve enhancing consumer protection, maintaining market integrity and combating financial crimes. Further emphasis is made on transparency, disclosure requirements, and oversight of crypto-asset service providers. These common trends reflect efforts to foster innovation in the digital technology sector while safeguarding intellectual property rights and the interests of all stakeholders involved.

Conclusion

NFTs are poised to initiate a race in the metaverse, playing significant roles in developing influential brand images and monetizing the metaverse. Although they hold tremendous potential, they are still in the early stages of development. It is no harm to deduce that, at least legally, NFTs are not as disruptive as it is assumed so in the recently developed digital world. NFT offers limitless and revolutionary possibilities, shaping the technological era for the forthcoming years while still being on a nascent pedestal and gradually replacing traditional norms. Like a physical painting or sculpture, NFT can serve as an investment within the art world. In India, NFTs have not come under judicial scrutiny, leaving questions about their legality and potential infringement unanswered. Such issues will vary from case to case concerning intellectual property rights and technology laws. Certain global standards and specific frameworks are to be regulated for this technology along with established remedies.

Nonetheless, challenges persist regarding intellectual property rights and NFT ownership. It is paramount to distinguish between owning an NFT and holding the associated IP rights, as already discussed earlier. The rights granted by an NFT seller depend on the license terms, which vary for each NFT. Protecting works, especially the upcoming ones, is important in the digital scenario. To address the myriad issues presented by NFTs, it is suggestive to detail the conditions of sale, and the rights conferred. Additionally, a third-party entity could oversee the issuance and display of illicit and unverified NFTs on the marketplace. An administrative body should be established to inspect the legitimacy of minted works to protect innocent consumers. Even though registration is not mandatory for copyright, creating an accessible database of certified works supported by IP owners in registering their copyrights would ultimately enhance the protection.

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PERSONALITY RIGHT: CONCEPT AND PROTECTION IN ENGLISH LEGAL SYSTEM

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Abstract

The personality right is a comprehensive right that includes both economic and non-economic aspects of personality rights. In the present context, there is a heightened emphasis on an individual's right to prohibit the commercial use of their personal attributes, like their name, image, and likeness, for business purposes. This has generated significant interest and scrutiny, particularly concerning the economic aspects of protecting one's personal identity. The terminology indicates that the economic aspect of personality differs in each country. Some use personality rights: others use image rights or publicity rights. The UK uses the term 'image right', although the term 'image' has been used not in a narrow sense but in the broader sense of 'persona', (a wider term used to indicate different attributes of personality), which means it includes any attribute of personality. The concept of image rights in the UK has evolved throughout cases as there is no specific law for protecting image rights in the UK. The court provides protection by resorting to various other legal mechanisms like contracts, breach of trust, passing off, trademarks, and similar avenues. However, it has become evident from numerous rulings in UK courts that they have consistently declined to broaden their legal framework to address matters related to image rights. Hence, this paper delves into the examination of the United Kingdom's perspective on the protection of personality rights and explores the historical, cultural, and legal factors that have shaped the current landscape in the UK, where image rights are not recognized as a distinct and independent legal concept.

Keywords: Personality Rights, Commercial Misappropriation, Economic Value, Legal Protection, Image rights, Exploitation of Value

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Introduction

The UK's approach to protecting personality rights has been far from clear, making it difficult for individuals to protect their identity from commercial exploitation. Currently, the UK does not recognize image rights as an independent legal concept, instead relying on other laws such as contracts, breach of trust, passing off, trademarks, etc., to grant protection. This has been particularly evident in the sports sector, where players' image rights are licensed to companies through contracts, a combination of different rights, including trademark rights, data protection rights, and disclosure rights. Nevertheless, UK Courts have maintained a consistent stance of not extending their legal provisions to encompass image rights, reflecting a reluctance to offer explicit safeguards for individuals' identities. Overall, the UK's approach to protecting personality rights is lacking in clarity, leaving individuals vulnerable to commercial exploitation of their identity. The lack of a distinct and independent legal concept to protect image rights means that individuals are unable to easily prevent their identity from being used for commercial purposes.

Historical Development of Personality Rights in the English Legal System

Upon delving into the origins of image rights within the English common law framework, it has become evident that the system has hesitated to offer a recourse for cases involving the unauthorized use of an individual's persona. Consequently, many individuals have encountered difficulties in pursuing legal remedies for such misuse of their identity for an extended period.[158] Even compared to other jurisdictions towards protecting personality rights, the majority says that English followed a rigid approach to identity appropriation.[159] Additionally, variations in legal developments across different jurisdictions have highlighted significant disparities in the approach to legal protection within the English legal system. Historically, common law has not recognized an individual as having a proprietary interest in their personality, even when that person's persona possesses economic value.[160] Despite the well-established recognition of the commercial value associated with image rights, certain other jurisdictions, including the United States, Germany, and France, have enacted their own statutory laws to safeguard privacy rights against unauthorized use of an individual's image. In

[158] *In Clark v. Freeman* (1848) 11 Beav 112; *Williams v. Hodge* (1887) 4 TLR 175; *Dockrell v. Dougall* (1899) 15 TLR 333.

[159]Beverley-Smith, H. *The Commercial Appropriation of Personality,* 42 (Cambridge University Press, Cambridge-2002)

[160] B. St. Michael Hylton, and Peter Goldson. "The New Tort of Appropriation of Personality: Protecting Bob Marley's Face." The Cambridge Law Journal, vol. 55, no. 1, pp. 56–64. (1996)

contrast, English law, historically, did not provide a specific remedy for image rights infringement because the protection of image rights was not a prominent concern until the 1990s. The commencement of the 21st century marked a significant shift in image rights protection in the UK, with the pivotal Sports Club case in (2000),[161] serving as a catalyst that gave the green light for future image rights planning and structuring within the country.

In the 18th and 19th centuries, the basic protection for image rights in England was done through contract law principles[162] and breach of confidence.[163] They were not ready to recognize image rights as a separate legal right as the US did. The first case in the United Kingdom in which the so-called right to one's own image was recognized was *Prince Albert v. Strange* from 1849.[164] Although the court did not directly mention the image right, the court protected the plaintiff's images under breach of trust as it is a private photograph and is subject to common law copyright as it is considered an unpublished work.[165] Here, for the first time, the Court recognized that there is a right to one's own picture, but the issue is that the Court hasn't provided any conceptual clarity for such a right. This case also became the foundation of privacy rights in USA because, at that period, common law is followed by most countries. The main reason for the recognition of privacy rights is due to the inadequacy of existing remedies; for example, the breach of contract can only be claimed once there is a contractual relationship between parties. Also, even common-law copyright law only protects if the person owns the work. Due to these factors slowly, the English court tried to provide relief for the unauthorized appropriation of personality attributes under defamation law,[166] but to some extent, it also became inadequate on the ground that such right can only be avail if such use caused any injury to that person's reputation.[167] For example, in *Tolley v. Fry*[168] case, the plaintiff claims image misappropriation under false endorsement and defamation. In this case, the UK court expressly stated that the UK does not consider image rights as a legal right. However, after analyzing this case, it became well understood that defamation law is not a valid remedy for the protection of image rights because to claim under defamation, the use should amount to be something that lowers the estimation of the personality in the eyes of the reasonable member of the public. In

[161] *Sports Club plc v Inspector of Taxes* [2000] STC (SCD) 443.
[162] *Pollard v Photographic Company* (1888) 40 Ch D 345).
[163] *Prince Albert v Strange* (1848) 64 ER 293.
[164] *Prince Albert v. Strange* (1848) 64 ER 293.
[165] *Prince Albert v. Strange* (1848) 64 ER 293.
[166] *Pollard v. Photographic Co.* (1889)
[167] Beverley-Smith, H. *The Commercial Appropriation of Personality*, 42 (Cambridge University Press, Cambridge-2002).
[168] *Tolley v Fry & Sons Ltd [1931] AC 333.*

this case, it became clear that defamation law is not a supportive remedy for protecting personality rights because using the personality might not always defame the person. Thus, even if the defendant used the commercial value persona for the commercial purpose, the person can't claim under defamation law if it does not defame the player's image. In such cases, defamation became an invalid law for protecting personality right.

From the end of the 20th century, the Court stated to apply passing off remedy, though, before the 1980s, the tort of passing off was there. Still, it was unsuccessful in image rights primarily because the courts were not prepared to acknowledge image rights as a business.[169] When the existing laws became inadequate, the Court applied the passing-off principle. The major reason behind this is that from the end of 20th century, a massive change has happened in the personality rights context. The business of marketing products is used to reference real or fictional characters as an endorser or sponsor of their product or services. Because in the market context, the competition became high, and the need to attract consumers also increased; thus, they used different personality attributes to make the product more attractive to potential buyers, drawing attention to it or implying that the character approves or endorses it. As this enlarged, the chance of unauthorized appropriation of persona increased. Which, consequently, gave rise to the need for proper protection from the unauthorized exploitation of personalities or characters in marketing goods and services.[170] This led to the application of passing off,[171] the only available remedy in English law to prevent the unauthorized commercial exploitation of personality attributes such as name, likeness, voice, signature, or other references. In that way, passing off became the primary remedy for protecting personality rights in UK. While claiming under Passing off, three elements need to be proven: goodwill, misrepresentation, and damage. The goodwill applies to something economically important; thus, anything can be covered, but it is difficult to define. In image right context, it is synonymous with a person's reputation in this sense. As in the case of an ordinary man in the street, he will always struggle to prove that there is any goodwill attached to his name or image, whereas in the case celebrity, it is much easier. For this reason, passing off remedy is not adequate because here the right of celebrity is protected but according to personality right it is considered as an inherent right of every person. Thus, passing off is limiting it to celebrity only. Therefore, passing off is a

[169] Robert G. Howell, "Publicity Rights in the Common Law Provinces of Canada," 18 Loy. L.A. Ent. L. Rev. 487 (1998).
[170] B. St. Michael Hylton, and Peter Goldson. "The New Tort of Appropriation of Personality: Protecting Bob Marley's Face." The Cambridge Law Journal 55, no. 1 56–64 (1996):
[171] *Irvine v Talksport* 2003] EWCA Civ 423; [2003] 2 All ER 881; [2003] EMLR 538.

remedy that enables celebrities to stop advertisers from taking advantage of their goodwill without paying for it. The second element is misrepresentation. While linking misrepresentation with a personality right, it refers to an advertisement that makes a false statement, such as implying that a celebrity is promoting a product when he has never agreed to do so. If they see the commercial, the consumer will assume that the celebrity was paid to promote the product. This element focuses on consumer confusion, but every commercial misappropriation of personality rights may not amount to consumer confusion. In such cases, fulfilment of this element became difficult, which shows the inadequacy of passing off to protect personality rights. Later, plaintiffs in England failed to convince the courts that unlicensed commercial use of a person's identity can constitute passing off.[172] The main cause of this is that the plaintiff found it challenging to show these three requirements. First, the interest protected is the plaintiff's ownership of the reputation or goodwill associated with his name or trademark; If the ownership is on the goodwill, only the celebrity can be protected from unauthorized commercial appropriation, and the non-celebrity is barred from the preview. Because of this, the passing off remedies became inadequate for those who did not have sufficient goodwill. It in fact a major concerning issue that what will be the remedy for them? Moreover, the other element that the defendant's conduct must involve some form of misrepresentation, which causes confusion or deception among consumers. This second element, misrepresentation,[173] is needed to establish a passing-off claim, but as in the case of merchandising cases, however, the essential factor is misappropriation, not misrepresentation. Therefore, in some situations, much broader extension is given for passing off in case of appropriation of image right by interpretating misrepresentation as misappropriation[174] of personality right. However, the courts have resisted developing the tort of passing off into a wider tort of unfair competition to cover the misappropriation of valuable intangibles for some extent. The third, element is damage that such misrepresentation must damage the plaintiff's goodwill; what sort of damage is not clear. However, in the earlier period, the Court stretched these three elements to bring appropriation of personality within the scope of passing off. While claiming for the Passing off, one more element was there that the parties needed to

[172] *McCulloch v. Lewis A. May* (Produce Distributors) Ltd (1948) 65 RPC 58; *Lyngstad v. Anabas Products Ltd* [1977].
[173] Visser, D. J. G. "Misrepresentation and Misappropriation". In Common Principles of European Intellectual Property Law (pp.247-254). (2012).
[174] *Ibid. 16*

establish such a common field of activity;[175] the courts were looking for an obvious link or connection in the course of trade between the owner of the name, the licensor, and the goods to which the name was to be applied.[176] Later, in *Irvine v Talksport Ltd*, Mr. Justice Laddie stated: *"The extended action of passing off today does not require the plaintiff to prove a common field of activity."*[177] It shows the extension of principle in a broader sense going beyond parameters. As development happened, such extension of the principle led to more practical and conceptual issues as well as difficulties, by the way passing off became unsatisfactory as well as insufficient to cover problems that arise due to appropriation of personality right. Even still courts apply passing-off remedies in certain situations for the protection of personality right.[178]
As time passed, various cases of appropriation of identity were brought before the English courts, but the Court was never willing to accept the concept of 'personality rights or image rights; the law offers neither coherent nor consistent defense, as the courts are 'skeptical about creating monopoly rights in nebulous concepts such as names, likeness, or popularity.[179] It can be seen in the earlier case of *Du Boulay v Du Boulay*[180] where the Court held that recognition of a proprietary right over a name enabling one to exclude others from adopting a particular name was conclusively not an acceptable principle to provide a monopoly right over a particular person on the name of image right. Therefore, the Court stated that using another's name is a grievance for which English law affords no redress.[181] English law has always rejected the creation of rights in a name or other personality features such as likeness, appearance, or a more general right of publicity.[182] In every case, the Court cited no need for particular legislation relating to image rights under English law; therefore, the idea of 'image' or 'personality' rights was altogether rejected in so many instances in the United Kingdom.[183]

Compared to other countries, the English court is much more focused on the public's interests than a private individual. That is why it says that the English Courts have generally supported

[175] *Wombles Ltd v Wombles Skips Ltd* (1977) RPC 99., Lyngstad *v Anabas Products* (1977) FSR 61.
[176] Coors, Corinna "Is the UK heading towards protection of image rights? In: Selected Issues in Public Private Law." ATINER, Athens, Greece, pp. 187-199. (2015)
[177] *Irvine v Talksport* [2002] F.S.R. 60 at paras 13-14 and 39
[178] *Irvine v Talksport* (2002*), Fenty & Ors v Arcadia Group Brands Ltd (Topshop) & Anor* -2012
[179] The Doctrine of 'Personality Rights' in the UK- URL- https://www.ukessays.com/essays/law/the-doctrine-of-personality-rights-in-the-uk.php
[180] *Du Boulay v. Du Boulay*- 2 L.R.-P.C. 430 (1869).
[181] URL: https://theiprbeacon.wordpress.com/2014/03/26/what-are-personality-rights/
[182] First in 1931 in *Tolley v Fry*, then in 1948 in *McCulloch v May*, through various celebrity merchandising cases in the seventies, by the Whitford Committee in 1977.
[183] *Douglas v Hello* -2005, *Campbell v MGN*-2004, McCullouch v Lewis A. May Ltd- 65 R.P.C. 58 (1947) Fenty *v Arcadia Group Brands Ltd.* EWCA (Civ 3 2015) at [29.].

the principle of freedom of expression and have argued that true events should be generally published even if it has commercial value. In very rare cases, the courts have deviated from this principle, though intellectual property is said to be the main form of encroachment on the freedom of expression however, intellectual property is said to promote innovation that benefits the public at large. But for image rights, they argued, it benefits the private individual without benefiting the public. Even so, the trademark law helps to protect image rights to some extent; for example, if the personality registers their name or other attributes as a trademark, they have absolute right over the mark. Traditionally, trademarks aim to indicate the source or guarantee of the quality of goods and services; therefore, the English court provided the greatest weight to this function. In the modern era, the way of business changed, and traders started to use the names and images of well-known persons in their trade and business to stand in the competitive market hence the practice of using personalities as trading symbols has been much flourished today.

Therefore, the majority of well-known personalities use trademark law to protect their personality rights i.e., image rights but the English court was not much satisfied with for granting protection for image rights in trademark law, which is very much clear in Elvis Presley's case,[184] where the English courts' unwilling to grant a broad right for indicia of identity through trademark by claiming that such mark has lower inherent distinctiveness. Hence it will be less likely to distinguish the goods and services of one person from other which in fact ground for rejection of the trademark. One of the judges in the judgment mentioned that the celebrity who registers his name under the trademark law, the celebrity or his successors may have the complete right to license to market his trademark; but monopolies should not be so readily created easily as in the case of name.[185] One of the views is that trademark law[186] under Section 1 allows for trademark registration for personal names,[187] and most famous sports players register their names. All the issue is even though the statute protects names but, once a case emerges regarding name protection of a personality under trademark law, the Court does not give a proper interpretation for this clause.[188] Here, the Court adopted

[184] *Elvis Presley Enterprises Inc V Sid Shaw Elvisly Yours* - 936 F.2d 889 (6th Cir. 1991).
[185] *Elvis Presley Enterprises Inc V Sid Shaw Elvisly Yours* - 936 F.2d 889 (6th Cir. 1991).
[186] Trademarks Act of 1994- Section -1 A trade mark may, in particular, consist of words (including personal names), designs, letters, numerals, colours, sounds or the shape of goods or their packaging.]
[187] *Du Boulay v. Du Boulay* (1869) L.R. 2 PC 430, Guinchard, Audrey, Is the Name Property? Sketches of an Answer between England and France (September 30, 2008). Journal of Civil Law Studies, Vol. 1, 2008, *Dockrell v. Dougall (1899) 80 L T 556*.- Trade Marks Registry Work Manual (1998), Ch. 6, para. 9.
[188] *Elvis Presley Enterprises Inc V Sid Shaw Elvisly Yours* -1999.

the stance that the plaintiff's features may be easily recognizable, but if they do not meet the requirements for trademark registration, the mark can be *"distinguish goods or services of one undertaking from those of other undertakings"*[189]or be granted registration as a trademark, the proprietor's trademark must be unique from others.[190] Here the trademark law in the UK demands that trademarks must be used in the trade for which they are registered,[191] if they never use the mark in relation to the trade for which it is registered, the plaintiff cannot ensure that trademark registration will grant ant protection of personality attribute.[192] Because when a trademark has not been used continuously, the trademark registry has the complete right to remove the mark from the trademark registry. Then there is always a question raised to what extent can indicia of personality, particularly personal name, be registered as a trademark? The indicia of identity, especially name, always have an issue, which consists of two sides; one, the recognition of the absolute right of a person to a particular name enabling one to exclude others from adopting a particular name was conclusively denied which public side. On the other hand, if a particular name becomes valuable or famous due to one personality and if the value attached to the name is used without the particular person's consent, it will amount to commercial misappropriation of personality rights. However, the English court always supports public interest rather than private interest. While as in the case of a celebrity using their name, image, etc., for trade purposes, it will help to indicate that the particular person has authorized the use of his image, and it might assume that such authorization is an effective guarantee of the quality of the merchandise in the mind of purchasers. Likewise, trademark law can protect image rights, but the judiciary is not willing to provide protection.[193] Certain articles have highlighted that public figure, particularly athletes, have the option to utilize copyright law as a means of safeguarding their image. However, it's important to note that copyright law doesn't inherently protect a broad right of personality that encompasses elements like the image, name, or other distinguishing attributes of professional footballers.[194]

In essence, copyright law doesn't apply to features like an individual's face, and it's widely recognized that a name, no matter how creative or well-crafted, is not subject to copyright protection. While copyright law isn't designed specifically to safeguard image rights, there are

[189] Trademarks Act 1994 CHAPTER 26 Section 1(1).
[190] Sabah Qasim Khedir- The Legal Protection and Regulation of Sponsorship Rights in English Football-2018
[191] Trademarks Act 1994 CHAPTER 26 S. 46(5)
[192] Sabah Qasim Khedir- The Legal Protection and Regulation of Sponsorship Rights in English Football-2018
[193] *Elvis Presley Enterprises Inc V Sid Shaw Elvisly Yours* -1999
[194] In the case of *Merchandising Corpn of America Inc v Harpbond Inc* [1983] FSR 32, the Court of Appeal held that facial make-up is not painting within the definition of artistic works in the copyright Act 1956 section 3.

instances where the courts, due to the absence of dedicated legislation in this area, have extended protection to image rights under the CDPA (Copyright, Designs and Patents Act).[195] In the case of *Football Association Premier League Ltd v Panini UK Ltd.,*[196]the Court of Appeal examined whether the presence of logos in images of well-known football players[197] on stickers and albums may be considered an incidental inclusion under section 31 of the CDPA 1988.[198] In this case, the Court held that, according to copyright, it could be used to prevent unauthorized exploitation of the footballer's image only when that image includes logos of his club or the Football Association. In the CDPA statute, if a particular individual is the copyright owner of an original art photograph, drawing, or caricature, he/she may prevent third parties from substantially reproducing or exploiting the work. Signatures of personality can fall under graphic work is unique, as would other aspects of perceived identity, such as a team badge or strip also. But practically, copyright law was not much focused by the Court for image rights protection. This may be because the subject matter of both rights is different even though copyright[199] protects the economic and moral aspects; likewise, personality rights protect both, but the subject matter is different; one is the protection of creative work, and the other is the protection of personality attributes from commercial misappropriation. Sometimes there might have been a clash between copyright and personality rights, and sometimes the copyright is inadequate to protect image rights.[200]

When it comes to safeguarding image rights, trademark law offers more effective protection compared to copyright. However, it's worth noting that in the case of Elvis Presley, the court declined to register his name as a trademark but permitted the registration of his signature as a trademark. This demonstrates that elements other than names, such as an individual's signature, can be eligible for trademark registration in trademark law. Similarly, a person's likeness or portrait can also function as a distinctive symbol capable of distinguishing one company's products or services from those of another.[201] The registration process typically involves a specific image that serves as a distinctive symbol.[202] Therefore, some articles[203] mentioned that

[195] See *Exxon Corpn v Exxon Insurance Consultants International Ltd* [1982] Ch 119, [1981] 2 All ER 495.
[196] The *Football Association Premier League Limited and Others v Panini UK Limited* [2002] EWCA Civ 995.
[197]Acritas Sharplegal- Copyright Infringement and "Incidental Inclusion".
https://cms-lawnow.com/en/ealerts/2003/10/copyright-infringement-and-incidental-inclusion
[198] Sabah Qasim Khedir-The Legal Protection and Regulation of Sponsorship Rights in English Football-2018.
[199] *Bauman v. Fussell*-1978 R.P.D & T.M. 485 (C.A.) (Eng.).
[200] *Bauman v. Fussell*-1978- R.P.D & T.M. 485 (C.A.) (Eng.).
[201] *Rowland v. Mitchell* [1897].
[202] UK Registration 2036489 (close-up portrait of racing driver Damon Hill in racing helmet).

IP law is the best law available in the UK for the protection of image rights. This is why some sources have pointed out that intellectual property (IP) law is considered one of the most effective legal frameworks in the UK for safeguarding image rights. However, the Court has expanded these principles to encompass image rights protection under various other legal aspects. In a similar vein, the concept of privacy has not traditionally been readily recognized in the UK, which has significantly influenced the development of persona protection. Consequently, the UK's breach of confidence legal action has undergone a distinctive evolution. Instead of a right to privacy, the Court initially emphasized the importance of the right to privacy at the end of the 19th century.[204]

In certain instances, the evolution of image rights has rendered breach of confidence insufficient to offer a suitable remedy. However, the Court has taken an expansive approach to interpreting breach of confidence. Subsequently, within the realm of private information, the Court endeavors to safeguard image rights, as demonstrated in cases of this nature such as in *Campbell v MGN,*[205] in *McKennitt v Ash,*[206] and *Douglass v Hello.*[207] In all cases, the Court safeguards image rights under the preview of private information and protects them under breach of confidence. The case illustrates that the form of information protected through a breach of confidence action includes photographs. Some authors[208] justified the concept with trade secrets, as in this case, Judge Lindsay J characterized the photographic representation of the wedding reception as commercially confidential information or else of a hybrid kind, i.e., private information that had been commercialized. Therefore, there is a need to distinguish between the issues concerning the publication of information and those concerning its commercialization, not least because there is a tendency to conflate them. Here, though it is information but the attribute of personality, photographs were used which have a commercial

[203] Hayley Stallard, The Right of Publicity in the United Kingdom, 18 Loy. L.A. Ent. L. Rev. 565 (1998). Available at: http://digitalcommons.lmu.edu/elr/vol18/iss3/7, TAKER, IAIN,KEITH (2011) An examination of the commercial and non-commercial appropriation of persona within the United Kingdom, with a comparative analysis with common and civil law countries., Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/745/

[204] TAKER, IAIN,KEITH (2011) An examination of the commercial and non-commercial appropriation of persona within the United Kingdom, with a comparative analysis with common and civil law countries., Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/745

[205] *Campbell v Mirror Group Newspapers Ltd* [2004] UKHL 22.

[206] *McKennitt v Ash* (CA). Reference: [2006] EWCA Civ 1714; [2008] QB 73; [2007] 3 WLR 194; [2007] EMLR 113;

[207] *Douglas v Hello! Ltd* [2005] EWCA Civ 595.

[208] Aplin, Tanya F., *Commercialising Privacy and Privatising the Commercial: The Difficulties Arising from the Protection of Privacy via Breach of Confidence* (January 1, 2012). A Kur, N Lee, A Ohly and G Westkamp (eds), *Intellectual Property, Unfair Competition and Publicity – Convergence and Development* EIPIN Series Vol II (Edward Elgar, 2014), Available at SSRN: https://ssrn.com/abstract=2621015.

value; which defendant misappropriated it with the knowledge that it has commercial value. Instead of mentioning using photographs, the Court stressed the importance of the information on why the plaintiff brought an action to protect the appropriation of the potential commercial aspects of the photograph. For that, the Court rejects recognizing the image right[209] because the Court does not give much concern about the misappropriation of images but very much on personal or even intimate information about an individual.[210]

While considering image rights as private information, it also has, certain issue such as all information may not be in private nature; for example, if a photo taken of a personality in public may not be protected as private information; likewise, any photo of a live match cannot be protected as it is already in the public domain. If, later on, those photos were used by anyone to promote or endorse their product, it should be done without breaching the law of protection of private information.[211] Conversely, when it comes to offering a remedy through breach of confidence, specifically under the banner of private information, the judicial system is primarily dedicated to broadening the scope of the equitable breach of confidence cause. This expansion is aimed at encompassing scenarios involving the unauthorized public disclosure of private information. Historically, the equitable action for breach of confidence necessitated the existence of a confidential relationship between the plaintiff and the defendant.[212] However, following this case, the House of Lords embraced a broader interpretation of the breach of confidence doctrine, eliminating the necessity to prove the existence of a relationship between the plaintiff and the defendant that imposes a duty of confidence.[213] Numerous commentators have voiced criticism regarding the United Kingdom's approach to expanding breach of confidence to encompass situations that were neither conceptually nor practically intended to be included.[214] Later in 1998, the Human Rights Act, introduced under articles 8 and 10, was used by the Court to protect image rights. Some scholars say this act is the extension of a

[209] *Douglas v Hello! Ltd* [2005] EWCA Civ 595 Para -124.
[210]*Douglas v Hello! Ltd* [2005] EWCA Civ 595 Para-288.
[211]Image Rights Protection Of Footballers In English Law And How It Can Be Improved- available at:- HTTPS://LAWINFOOTBALL.WORDPRESS.COM/2014/06/28/IMAGE-RIGHTS-PROTECTION-OF-FOOTBALLERS-IN-ENGLISH-LAW-AND-HOW-IT-CAN-BE-IMPROVED/ (last visited on October 6, 2023)
[212] *Coco v AN Clark* (Engineers) Ltd [1969] RPC 41 (Ch).
[213] Chamberlain, Nikki, "Misappropriation of Personality: A Case for Common Law Identity Protection" (October 19, 2020). "Misappropriation of Personality; A Case for Common Law Identity Protection" (2021) 26 TLJ 195.
[214] Chris DL Hunt, "Rethinking Surreptitious Takings in the Law of Confidence" [2011] 1 Intellectual Property Q 66; Jillian Caldwell, "Protecting Privacy Post Lenah: Should the Courts Establish A New Tort or Develop Breach of Confidence?" (2003) 26 UNSW LJ 90; Des Butler, "A Tort of Invasion of Privacy In Australia?" (2005) 29 MULR 339; Ayre Schreiber, "Confidence crises, privacy phobia: why invasions of privacy should be independently recognised in English Law" [2006] IPQ160, as cited to in Chris Hunt "From Right to Wrong: Grounding a 'Right' to Privacy in the 'Wrongs' of a Tort" (2015) 52 Alta L Rev 635.

breach of confidence[215]. It is clear from an analysis of the number of UK judgements that the country has not taken any action to establish identity protection rights comparable to publicity or image rights.[216] Because there isn't specific legislation protecting identities, people rely more on incidental protection in other legal laws such as Copyright[217], trademark[218], breach of confidence[219] and the tort of passing off, however in compare to these rights courts used IP laws very often most of the remedy granted though passing off and breach of confidence as they consider these as the best ways to stop commercial exploitation in the UK.

Present context

During the 20th century, English courts sought to fortify the legal framework around image rights by recognizing the significance of "passing off"[220] to deter the illicit merchandising of fictional characters. While the UK courts have not yet granted comprehensive legal protection for image rights, this area of law continues to evolve[221]. In the 21st century significant developments, largely driven by technological advancements, resulted in a substantial increase in the value of personalities' names and images compared to previous decades. The necessity to safeguard these personality rights has become particularly pronounced, especially within the globalized sports sector, where sponsors are eager to make substantial investments to associate their companies, products, and brands with renowned personalities.[222]

In the United Kingdom, while there is no formal legal definition for image rights, sports

[215] Identity Protection In The UK How unauthorised commercial exploitation of a person`s identity should be protected under English law. A comparative study of publicity rights in the UK, the US and Norway. Identity Protection In The UK How unauthorised commercial exploitation of a person`s identity should be protected under English law. A comparative study of publicity rights in the UK, the US and Norway.

[216] Identity Protection In The UK-How unauthorised commercial exploitation of a person`s identity should be protected under English law. A comparative study of publicity rights in the UK, the US and Norway. The Dickson Poon School of Law.
URL- https://digilabs.global/wp-content/uploads/2021/07/IdentityProtectionintheUK.pdf see Hayley Stallard, The Right of Publicity in the United Kingdom, 18 Loy. L.A. Ent. L. Rev. 565 (1998). Available at: https://digitalcommons.lmu.edu/elr/vol18/iss3/7

[217] Copyright, Designs, and Patents Act ("CDPA") 1988 c. 48. *Du Boulay v Du Boulay* (1867-9) LR 2 PC 430.

[218] Trade Marks Act 1994 CHAPTER 26 -Tarzan Trade mark Case-1970("TARZAN" TRADE MARK, Reports of Patent, Design and Trade Mark Cases, Volume 87, Issue 15, 3 December 1970, Pages 450–461) *Arsenal Football Club v. Matthew Reed*- England and Wales Court of Appeal 2003 E.T.M.R. 73 (2003)

[219] The potential protection of identity through the breach of confidence has increased. An exclusive right of privacy is rejected in the UK. However, it has developed a right against unjustifiable disclosure of private information under the breach of confidence.

[220] *Edmund Irvine Tidswell Ltd. v Talksport Ltd* - [2001] 1 WLR 2355., *Fenty & Ors v Arcadia Group Brands Ltd (Topshop) & Anor* - Case No: A3/2013/2087 & A3/2013/2955

[221] *Mirage Studios v Counter-Feat Clothing Co Ltd*- (1991) FSR 145.

[222] Coors, Corinna, "Are Sports Image Rights Assets? A Legal, Economic and Tax Perspective" (February 22, 2015). The International Sports Law Journal, Volume 15, Issue 1, pp 64-68. , Available at SSRN: https://ssrn.com/abstract=2736291

agreements between players historically included clauses related to licensing their image rights. Over time, image rights clauses within sporting contracts have become one of the most intricate and contentious areas of dispute between sports clubs and their players, involving issues such as sponsorship conflicts of interest and licensing agreements. A landmark case, Proactive Sports Management Ltd v. Wayne Rooney,[223] marked the first instance in which the English High Court formally defined image rights,[224] This high-profile case revolved around the sports image rights of Wayne Rooney, the former Manchester United striker and England captain.[225] However in the *Proactive Sports Management Ltd v Rooney -2011* case, the UK court defined image right for the 1st time, which is very similar to the definition given in the US in *Haelan Laboratories v. Topps Chewing Gum (1953).* However, a key distinction between the two countries is that the United States recognized image rights as a distinct legal concept, while the UK did not. While the UK has not yet expressly acknowledged image rights, despite being aware of its existence in other jurisdictions, they have sought to extend existing laws to protect image rights, primarily in the context of the sports sector, where conflicts over image rights are prevalent.

Conclusion

In the United Kingdom, the protection of image rights remains insufficient within the current legal framework. The Court has made efforts to stretch and modify the principles of passing off to safeguard against the unauthorized exploitation of an individual's rights, but these attempts have frequently fallen short. While trademark law may offer a higher level of protection, it still falls short of being comprehensive. The absence of a dedicated legal provision to prevent the unauthorized use of individual identities has created a situation where individuals have no effective recourse when their identity is misused. A specific image rights statute should be introduced to improve image rights protection in the UK, mirroring the approach taken in Guernsey and other jurisdictions. This would recognize image rights as a distinct form of

[223] *Proactive Sports Management Ltd v. Wayne Rooney*- [2011] EWCA Civ 1444.

[224] In *Proactive Sports Management Limited v Rooney* [2011] EWCA Civ 1444 – "*Image Rights means the right for any commercial or promotional purpose to use the Player's name, nickname, slogan and signatures developed from time to time, image, likeness, voice, logos, get-ups, initials, team or squad number (as may be allocated to the Player from time to time), reputation, video or film portrayal, biographical information, graphical representation, electronic, animated or computer-generated representation and/or any other representation and/or right of association and/or any other right or quasi-right anywhere in the World of the Player in relation to his name, reputation, image, promotional services, and/or his performances together with the right to apply for registration of any such rights*

[225] Ian Blackshaw And Athena Constantine-"Football: Sports Image Rights and The Geovanni Case Football: Sports Image Rights and The Geovanni Case". Coors, Corinna, "Are Sports Image Rights Assets? A Legal, Economic and Tax Perspective" (February 22, 2015). The International Sports Law Journal, Volume 15, Issue 1, pp 64-68.

intellectual property and grant protection to those whose identities have been misappropriated. Alternatively, the existing IP framework could be augmented to provide better protection for image rights. This could be done by allowing the registration of names, images and signatures as trademarks, giving individuals greater control over how their identity is used. Ultimately, the UK needs to take steps to improve protection for image rights as it is clear that the current legal system is failing to protect individuals from the misappropriation of their identities. This must be addressed if the UK is to remain a leader in the field of intellectual property protection.

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INTERPRETING DIGITAL OWNERSHIP & INTELLECTUAL PROPERTY PROTECTION FOR AI-GENERATED CONTENT AND BLOCKCHAIN-ENABLED DIGITAL ASSETS IN CYBERSPACE

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Abstract

Cyberspace records ownership through connections between Artificial Intelligence blockchain systems and IP standards. AI will create significant content that demands new methods to determine who owns and created original material. The blockchain supports ownership of digital assets, particularly NFTs and rights management systems that provide improved methods to verify and protect these assets. This research finds difficulties when protecting AI-generated products while keeping blockchain assets under present legal standards. The study examines digital work protection systems through copyrights, patents, and trademarks and analyses decentralised smart contract verification and management. It finds regulatory issues and provides solution paths to update digital regulation standards. This study examines IP rights for AI and blockchain technology to suggest ways to update them.

Keywords: Intellectual Property Rights (IPR), AI-Generated Content Protection, Blockchain, Digital Ownership, Non-Fungible Tokens (NFTs), Smart Contracts and IP Enforcement

Introduction

The protection of intellectual property rights demands heightened importance in present times when the digital age meets rapid technological advances. Indian creative and inventive work requires powerful protective measures to safeguard their rights. The distributed and unalterable database characteristics in blockchain technology promise to reshape intellectual property management and protection processes. Through blockchain technology, several problems faced by Indian artists and innovators can be solved because it enables them to validate ownership claims and grant licenses while enforcing infringements. This paper examines the potential of blockchain technology to protect intellectual property rights in India through an assessment of its properties and advantages, disadvantages and prospects for Indian artists.

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Some intellectual property rights can successfully be protected because blockchain combines three essential elements: unalterable nature, decentralised structure, and token issuance features. Since blockchain technology maintains an unalterable state, it provides a consistent system for production and proprietorship traditions. The ownership establishment protects intellectual property rights because it protects the owner. A smart contract built on blockchain delivers two functions, including enhanced security work licensing and royalty collection services.[228]

Examining AI and Blockchain in the Digital Ecosystem

AI, blockchain technology, has brought sudden and extraordinary progress to the new digital environment for managing content creation and ownership protection. AI started with basic automation and now generates artistic content that includes texts, music, artworks and software that challenges ideas about what makes something original or authored by a person. Blockchain technology has established decentralised asset ownership verification systems, which simplify digital asset tokenisation and provide transparent transaction protection against unauthorised modifications.[229] Because AI combines with blockchain technologies, the digital ownership frameworks have become difficult to handle, which creates the need for intellectual property rights (IPR) to be reevaluated regarding matters of digital identities and authorship and enforcement. Technology solutions that show promise for efficient security practices present regulatory and ownership disputes and deal with decentralised systems beyond current legal infrastructure capabilities.[230]

Digital Ownership in Cyberspace

Digital ownership in cyberspace encompasses traditional tangible rights along with virtual assets and AI-generated content because blockchain records are also included. Digital ownership requires cryptographic verification along with smart contracts and distributed ledgers to authenticate digital assets and determine their origin. Advances in decentralisation[231] Technologies now create such immense challenges for existing property law definitions that they need modern solutions for protection and recognition. Several fundamental queries regarding copyright laws and exclusivity, together with moral rights, have emerged because of non-fungible tokens (NFTs) and AI-generated content that exist as distinctive digital assets. Digital ownership

[228] *Blockchain Technology for Enhanced IP Protection in India*, (Dec. 9, 2024), https://www.iiprd.com/the-role-of-blockchain-in-protecting-intellectual-property-rights-in-india/ (last visited Feb 14, 2025).

[229] Natalia Díaz-Rodríguez et al., *Connecting the Dots in Trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation*, 99 INFORMATION FUSION 101896 (2023).

[230] Nick Bostrom & Eliezer Yudkowsky, *The Ethics of Artificial Intelligence*.

[231] (PDF) Blockchain as a Type of Distributed Ledger Technology, https://www.researchgate.net/publication/348271633_Blockchain_as_a_Type_of_Distributed_Ledger_Technology (last visited Feb 14, 2025).

relates to disputes regarding unauthorised reproduction and protection of intellectual property rights in combination with demanding digital rights enforcement between different legal jurisdictions. Without the basic set of laws governing the matter, there remains a grey area for stakeholders, from content creators to blockchain developers to policymakers, on how digital asset transfer and monetisation should happen.[232]

Realization and Importance of Digital Ownership

The explicit implementation of digital ownership becomes feasible through technology, especially AI and blockchain. Under traditional possession methods, ownership of physical assets provided clear evidence of ownership control. Digital ownership now means virtual element possession such as AI-generated content, digital art, cryptographic currencies and decentralised intellectual property (IP). These changes need governments to reconsider existing laws regulating intellectual property rights (IPR). Digital ownership provides advanced accessibility alongside innovation but creates missing links regarding the determination of digital content creators and digital asset copyright protection and revenue generation. Blockchain-based entities such as non-fungible tokens (NFTs)[233] and wise contracts enable new methods that help secure possessions and legal rights for cyberspace users.[234] These innovations simultaneously create problems related to piracy and unauthorised copying of content and uncertainty about which territories hold legal jurisdiction. The principle of digital ownership is examined in this paper through an exploration of IPR mechanisms which help protect AI intellectual property and blockchain-based assets.

Evolution of Intellectual Property Rights (IPR) in the Digital Age

The intent behind IPR has always been to safeguard creative and innovative works that the Discoverers, Artists and Businesses are rewarded for their creations.[235] Yet the transfer to virtual substance has added difficulties to traditional IP laws. Copyright laws, originally designed for literary, artistic, and musical works, are now being challenged by AI-generated content, in which human authorship is often lacking. Likewise, patents, which were traditionally human-invented, have problems when AI creates something new without the guidance of a human. Trademarks

[232] Non-fungible tokens (NFTs) and copyright law - Bird & Bird, https://www.twobirds.com/en/insights/2021/australia/non-fungible-tokens-nfts-and-copyright-law (last visited Feb 14, 2025).

[233] (PDF) The treachery of images: non-fungible tokens and copyright, RESEARCHGATE (2024), https://www.researchgate.net/publication/356810962_The_treachery_of_images_non-fungible_tokens_and_copyright (last visited Feb 14, 2025).

[234] Andres Guadamuz, *Back to the Future: Regulation of Virtual Worlds*, 4 SCRIPT-ED 242 (2007).

[235] The Fourth Industrial Revolution: Shaping A New Era | Columbia | Journal of International Affairs, https://jia.sipa.columbia.edu/news/fourth-industrial-revolution-shaping-new-era (last visited Feb 14, 2025).

are also adapting to digital branding as businesses create virtual identifiers for metaverse spaces and decentralised platforms. IP Laws and Regulations: The basics of IP laws and regulations have built-in limitations and loopholes depending on the jurisdiction. The growing dependence on AI and blockchain emphasises the need for a holistic approach to the governance of digital IP, crossing legal reforms & technology-driven enforcement.[236]

Role of Intellectual Property in Emerging Technologies

Intellectual Property has played an essential part in encouraging innovators by granting them exclusive rights to their inventions, literary works, and artistic creations.[237] The growth of AI-generated content and blockchain-based digital assets generates challenges that existing intellectual property rights (IPR) frameworks cannot remedy. On one side of the spectrum, traditional copyright law requires human authorship as a prerequisite before protection can be attached, often considering AI-generated works excluded from ownership claims, thus creating legal loopholes about their commercial use and licensing.[238] On the other side are blockchain-based assets, notably NFTs, whose decentralised operation does not always match with traditional methods of copyright enforcement where enforcement of ownership and dealing with infringement claims becomes difficult. While alternative patent protection exists for AI innovations, there is still an ongoing debate regarding the applicability to inventions generated by autonomous AI systems. Trademark conflicts, too, have arisen in virtual worlds as brands find themselves engaged in digital environments of identity theft, counterfeiting, and domain squatting. Thus, an urgent need has arisen to redefine intellectual property rights in light of modern-day scenarios for an ever-developing digital economy, as such changes would provide much-needed clarity on ownership, enforcement, and liability in AI- and blockchain-based ecosystems. Balancing the need for innovation with legal protection would allow policymakers to ensure that intellectual property law retains its relevance in protecting digital assets while also permitting technological advancement.[239]

[236] Daryl Lim, *AI & IP: Innovation & Creativity in an Age of Accelerated Change*, (2019), https://papers.ssrn.com/abstract=3369200 (last visited Feb 14, 2025).

[237] Anusha Unnikrishnan, *ANALYZING THE IMPACT OF EMERGING TECHNOLOGIES ON INTELLECTUAL PROPERTY RIGHTS (IPR): A COMPREHENSIVE STUDY ON THE CHALLENGES AND OPPORTUNITIES IN THE DIGITAL AGE*, 10 LAW AND WORLD 66 (2024).

[238] Harshal Chhabra and Arihant Sethia, *The Impact of Artificial Intelligence on Intellectual Property Rights: A Case for Reform in Indian Patent Law by "Innovative Oversight" Approach*, IJLT (2024), https://www.ijlt.in/post/the-impact-of-artificial-intelligence-on-intellectual-property-rights-a-case-for-reform-in-indian-p (last visited Feb 14, 2025).

[239] Satyam Singh, *AI, NFTS AND IPR: LEGAL CHALLENGES IN INDIA* (2023).

AI and Blockchain in Redefining Digital Ownership

Artificial Intelligence and Blockchain are forces of transformation in the digital ownership paradigms. Without assistance, AI systems can generate text, write music, create paintings, and produce software code. This brings many questions about ownership, authorship, and legal recognition. Will AI-generated works receive copyright protection?[240] And, if so, who owns it: the AI developer, the end user, or the entity that trained the model? Blockchain, too, has contributed greatly to the protection of digital assets as it provides decentralised and immutable ownership records. Agreements executed through smart contracts on the blockchain are transparent and self-executing, minimising the role of intermediary enforcement for IP purposes. NFTs are a mechanism by which AI-generated art, media, and collectables can be truly and verifiably owned, although they throw up questions of authenticity, replication, and legal recognizability. On the one hand, AI and blockchain alter the regulations of ownership; on the other hand, the interface of technology and law shall evolve to form the bedrock that secures and promotes fairness and accessibility upon these new conundrums related to digital assets.[241]

Statement of Problem

Artificial intelligence and blockchain technology have changed how people generate digital content and own assets and the prospects for protecting intellectual property. Artworks, literary works, and even software created by AI are creating challenges with intellectual property rights frameworks designed to mostly protect human authorship or invention. At the same time, these introduce methods of establishing ownership and rights management novel to blockchain-enabled assets such as non-fungible tokens (NFTs), smart contracts, and decentralised digital assets, which are yet to be widely accepted in law.

The most prominent problem centres on which the legal framework covers ownership over an AI-generated product. Most copyright and patent laws demand a human author or inventor, which begs whether that means that the output of an AI cannot be given authorship or inventorship status. This has resulted in different judicial interpretations regarding individual country regulations and, in some cases, regulatory uncertainty caused by a lack of international legal consensus on the issue.

Moreover, blockchain technology presents opportunities and challenges concerning digital asset protection. On the disruptive end, while it provides individuals with decentralised and immutable

[240] What is the purpose of copyright law? | Copyright Law | Mateo Aboy, PhD, MBA, https://www.mateoaboy.com/f6/blog_files/128ce98299902760f1c540b8dcf9eec5-4.html (last visited Feb 14, 2025).

[241] Non-fungible tokens (NFTs) and copyright law - Bird & Bird, *supra* note 7.

records for matters such as IP registration, licensing, and rights management, it raises issues like jurisdictional overlaps, violations with the enforceability of smart contracts, and misuse possibilities by internet hackers who might use it for infringing purposes. The absence of common global regulations makes legal recognition of IP protections via blockchain even more complex, hence the uncertainties on enforceability across different jurisdictions.

Moreover, various ethical issues, which include monopolisation of AI-generated content creation, misuse of deepfake technology, and copyright violations through blockchains, will require a balanced regulatory framework that protects the rights of these creators, innovators, and owners of digital assets while providing technological advancement.

Objectives of the study

The purpose of this research is to analyse the changing frontiers of Intellectual Property Rights (IPR) in the digital ecosystem, especially concerning AI-generated content and blockchain-based digital assets. The primary objectives of this research are:

- To study the applicability of copyright, patents, and trademarks for the protection of AI-generated works.
- To study how blockchain and smart contracts provide security for digital ownership.
- To identify the gaps in existing IPR laws concerning digital assets and AI-driven innovations.
- To analyse jurisdictional issues and enforcement mechanisms in cyberspace.
- To submit legal and policy recommendations aimed at strengthening IP protection in emerging digital environments.

Scope of the Study

This study will also examine the international legal frameworks, case studies surrounding AI generated content disputes, NFT ownership issues, and rights management under blockchains. Ethics-based considerations for the governance of digital IP will be further studied in the context of the challenge of balancing innovation, legal compliance, and market competitiveness.

Research Questions

1. How can IPRs so that AI-generated content is recognised, but not necessarily at the expense of fairness and innovation?

2. What legal and jurisdictional obstacles exist in enforcing intellectual property for digital assets on the blockchain?
3. How might policymakers implement a regulatory regime that is harmonised at least at a high level to balance innovation, ownership rights, and ethical issues in IP systems relying on AI and blockchain?

Research Methodology

The approach of this research is qualitative and analytic, combining doctrinal and empirical methods. The study is based on secondary data analysis of laws, judgments, international treaties, and academic papers relating to AI, blockchain, and digital IPR. A comparative legal analysis will evaluate the approach adopted by jurisdictions in the U.S., E.U., India, and China toward AI-generated content and blockchain-facilitated digital ownership.

Some case studies will look at landmark disputes regarding AI-generated works and NFTs, thereby shedding light on practical legal challenges that are developing. The research will also analyse reports from IP offices, regulatory agencies, and tech firms to map the ongoing conversation on policy and reform. Interdisciplinary perspectives from law, technology, and business will be integrated to evaluate the real-world impacts of digital IP protection.

Combining these legal, technical, and economic insights, this study will provide an example of digital ownership in cyberspace while recommending policies for the modernisation of intellectual property laws to assimilate AI and blockchain-led changes, thus sustaining fairness for creators, innovators, and owners of digital assets.

Research Design

The paper entitled "Interpreting Digital Ownership & Intellectual Property Protection for AI-Generated Content and Blockchain-Enabled Digital Assets in Cyberspace" employs a multi-dimensional research design combining doctrinal, comparative, and analytical approaches to investigate the legal, technological, and policy implications of digital ownership in the era of AI and blockchain.

AI-generated content and Intellectual Property Rights

Over the previous two years, the world has witnessed several ground-breaking advances in the field of Artificial Intelligence (AI). Its expansion has been unprecedented, with AI businesses developing fresh applications at a pace never before witnessed in this "out-of-control race". It has

progressed from simply being a tool in the hands of the artist to being one itself.[242] Countries throughout the world have been wrestling with its consequences, finding their laws insufficient when implemented in this changing setting.[243]

As artificial intelligence continues to redefine creativity and production, issues arise regarding how old standards, such as originality, should adapt to this new paradigm in intellectual property.

Understanding AI-Generated Content: Definitions and Types

Artificial Intelligence has been revolutionary for content creation, enabling machines to independently create artistic, literary, or inventive works. AI-generated content refers to the outputs produced by machine learning models, generative adversarial networks (GANs), and natural language processing (NLP)[244] systems with minimal to no human intervention. AI-generated outputs encompass a broad range, including music (e.g. Muse Net, built by OpenAI), visual art (e.g. DALL·E, Midjourney), written text (e.g. ChatGPT, Bard), or even the generation of inventions by computers in scientific and technological fields. The primary concern with AI-generated content lies in differentiating works carried out with human assistance from those autonomously generated by AI. For the applicability of intellectual property laws upon AI outputs, human expression is regarded in terms of inputting, prompting, and curating AI outputs. This emergent and growing phenomenon requires an evaluation of the old traditional IP frameworks that have classically been designed to protect human creativity and ingenuity.[245]

Challenges in Recognizing Artificial Intelligence as an Author or Inventor

Attribution of authorship and inventorship is one of the most undeniable and complicated legal issues arising out of AI-generated works. Existing intellectual property laws in copyright and patent-related statutes accept only human creators as rights holders. But as AI systems create original works on their own, the question arises: should AI be credited as an author or inventor? Current laws, such as the U.S. Copyright Act and the new EU Copyright Directive [246] essentially imply human authorship. AI-generated works are not accepted for copyright registration, as in the

[242] wipo_ip_ai_3_ge_20_inf_5.pdf, https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_ai_3_ge_20/wipo_ip_ai_3_ge_20_inf_5.pdf (last visited Feb 14, 2025).

[243](PDF) Impact Of Artificial Intelligence on Copyright Law: Challenges and Prospects, RESEARCHGATE, https://www.researchgate.net/publication/377334695_Impact_Of_Artificial_Intelligence_on_Copyright_Law_Challenges_and_Prospects (last visited Feb 14, 2025).

[244] Erik F. Tjong Kim Sang & Fien De Meulder, *Introduction to the CoNLL-2003 Shared Task: Language-Independent Named Entity Recognition*, (2003), http://arxiv.org/abs/cs/0306050 (last visited Feb 14, 2025).

[245] Sandeep Singh Sengar et al., *Generative Artificial Intelligence: A Systematic Review and Applications*, MULTIMED TOOLS APPL (2024), https://doi.org/10.1007/s11042-024-20016-1 (last visited Feb 14, 2025).

[246] Impact Assessment on the modernisation of EU copyright rules | Shaping Europe's digital future, (2016), https://digital-strategy.ec.europa.eu/en/library/impact-assessment-modernisation-eu-copyright-rules (last visited Jul 28, 2024).

case of *"Thaler v. USPTO"*, in which the U.S. Patent and Trademark Office refused to treat an AI system (DABUS) as an inventor of a patent.[247] These challenges point toward the need for legislative alterations that could permit hybrid authorship models under which rights may be shared between human programmers or authors and AI systems or acknowledge AI as a separate legal entity with limited ownership rights. These dilemmas become all the more complicated due to ethical and economic implications, even as there may be changes in traditional market structures on revenue sharing for artists, writers, and inventors.

Copyright Protection for AI-Generated Works

It could be stated that "the author" is defined as any person who causes work to be created by a computer, as stipulated in "Section 2(d) of the Indian Copyright Act.[248]" Therefore, claims for authorship of works developed devoid of human intervention are somewhat diminished by the statement. Thus, neither the creator of the device, the machine itself, nor, to some extent, the copyright owners of the music in the machine's database are entitled to protection.[249] In that respect, only the individual who merely instructed the AI to compose the song would be entitled to such protection. While examining AI-generated documents,[250] it is also critical to see originality and inventiveness. A musical work in India is protected only if manifested in some form of external expression. "Copyright protection is available for works under Section 13[251] of the Act whose originality is demonstrated." However, AI is devoid of classic human attributes like creativity, intuition, and judgment[252]; it defines anything through mere algorithms and processing. Ethical quandaries and the possibility of infringement surface due to the distinct nature of AI innovation and the existing legal system. Assigning a separate personality to AI aggravates the predicaments arising from its lack of agency regarding contractual matters. Moral rights to be enjoyed by authors "under Section 57 of the Act will be difficult to enforce in the case of AI-generated works, as AI cannot recognise infringements that hurt its fame. Besides this, AI cannot distinguish between moral right and wrong; hence, making a case against it for creating undesirable information would be a tremendous challenge.[253]"

[247] Patentability of inventions created by AI—the DABUS claims from an Indian perspective | Journal of Intellectual Property Law & Practice | Oxford Academic, https://academic.oup.com/jiplp/article-abstract/15/11/879/5948823 (last visited Jan 21, 2024).
[248] Section 2 in The Copyright Act, 1957, https://indiankanoon.org/doc/797096/ (last visited Feb 14, 2025).
[249] Rupendra Kashyap vs Jiwan Publishing House on 1 July, 1996, https://indiankanoon.org/doc/134584/ (last visited Dec 21, 2023).
[250] P. Bernt Hugenholtz & João Pedro Quintais, *Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?*, 52 IIC 1190 (2021).
[251] Section 13 in The Copyright Act, 1957, https://indiankanoon.org/doc/4010217/ (last visited Jun 12, 2024).
[252] Law Essentials, *RG ANAND v. DELUXE FILMS AND ORS.*, LAW ESSENTIALS, https://lawessential.com/ip-case-laws/f/rg-anand-v-deluxe-films-and-ors (last visited Dec 8, 2023).
[253] Section 57 in The Copyright Act, 1957, https://indiankanoon.org/doc/1710491/ (last visited Jun 14, 2024).

One legislative option is to classify all AI-generated works as public domain and thus ineligible for any form of protection under copyright law, depending on the costs and benefits of affording any sort of protection.[254]

Patentability of AI-Created Innovations

The contribution of AI in scientific research and technological innovations has increased tremendously. AI systems can be used for producing new drug compounds, engineering new materials, and optimising industrial processes. Patents are a means that serves as an incentive to inventors for innovating. However, as stated by the current patent laws, they require a human inventor to claim ownership, which is evident in the DABUS[255] patent cases in which multiple patent offices, including the USPTO, denied AI as an inventor. It raises the fundamental issue about the scope of patent law in the age of automation by refusing patents for AI-generated inventions. If AI cannot be recognised as an inventor, should the patent rights belong to the human operators, developers, or corporations owning AI systems, or do we need a new category of "AI-assisted patents," differentiating between human-guided and locked-up autonomous AI inventions? Raising these questions is necessary to create a legal environment for innovation that has space for increasing AI integration into technological advancement.[256]

Trademark and Branding Issues vis-á-vis AI Content Creation

Trademarks are protective shields over the identity of a brand such that they can enable consumers to distinguish one good and service from another in the market. AI branding is automated branding, which includes AI-generated logos, slogans, and virtual celebrities, challenging the traditional notions of trademark doctrine. For instance, AI-based design tools can now produce logos without any direct intervention from humans, hence the question of who owns the trademark and its distinctiveness. AI-generated branding objects have a potentially increased risk for trademark infringement and dilution since human edits from the training of existing brand identities would inadvertently create similar outputs. It is also linked to the development of deepfake technology and AI-generated virtual personalities (e.g., Lil Miquela), which place a thin line between real and synthetic brand ambassadors. Current trademark legislation will require the adaptation of AI-generated brand assets to set out the parameters for the registration and enforcement of AI-based trademarks. This increases the legal risk for companies using AI for

[254] AI and copyright: exploring exceptions for text and data mining, https://cms-lawnow.com/en/ealerts/2024/10/ai-and-copyright-exploring-exceptions-for-text-and-data-mining (last visited Feb 14, 2025).
[255] Artificial Intelligence system as inventor in South African patent application: The case of DABUS - The IPKat, https://ipkitten.blogspot.com/2021/08/artificial-intelligence-system-as.html (last visited Nov 1, 2023).
[256] Ananya Ray, *AI IN IPR : LEVERAGING TECHNOLOGY FOR EFFICIENCY AND ADDRESSING CONCERNS* (2023).

branding and marketing rather, as it leaves companies with loopholes when using AI content commercially to cover their backs while reducing the damage caused by possible infringement issues.[257]

Blockchain and the Evolution of Digital Asset Ownership

NFTs Steal the Fashion Show and Decline Digital Ownership

The arrival of non-fungible tokens (NFTs) has altered the very definition of digital ownership by allowing for the creation, transfer, and authentication of unique digital assets via means of a blockchain network. Unlike traditional digital files, which can be duplicated and diffused infinitely, the very smart security of NFTs bestows on them provably owned and scarce rights. This, in turn, enabled artists, musicians, and the creative world to earn revenues under this scheme while controlling their intellectual property. However, copyright circuitry, which can involve the actual enforcement of rights, declares the NFT[258] marketplaces to generally be decentralised. Ownership of an NFT does not, however, necessarily confer to the owner of the NFT the underlying intellectual property rights. There are pending uncertainties regarding whether the same NFT[259] can be sold, how royalties can be enforced, and whether fraudulent listings have been made with copyrighted materials. It is thus apparent that, with the ever-expanding markets for NFTs in gaming, fashion, and real estate, the legal environment governing the purchase and sale of digital assets needs to be considered with urgency to guard against the unauthorised exploitation of creative works.

Smart Contracts and Enforcement of IP Rights

Smart contracts represent a particular kind of self-enforcing agreement designed to be coded to specific blockchain networks. Smart contracts, by automating the transactions and performance of contracts dependent on governed situations, naturally play a significant role in the execution of intellectual property rights. They allow rightsholders to receive automatic royalty payments without intermediaries, thereby stopping unauthorised reproduction of their works and maintaining their digital records. Examples from the music industry describe smart contracts as facilitating revenue-sharing arrangements among artists, producers, and distributors in a transparent manner based on pre-agreed ownership shares. In an analogy here, digital artistic

[257] Protecting Trademarks in the Era of Artificial Intelligence, (Jan. 27, 2025), https://depenning.com/blog/protection-of-trademarks-in-the-age-of-artificial-intelligence/ (last visited Feb 14, 2025).

[258] (PDF) A comprehensive study on Non-Fungible Tokens (NFTs): Use cases, ecosystem, benefits & challenges, https://www.researchgate.net/publication/361443799_A_comprehensive_study_on_Non-Fungible_Tokens_NFTs_Use_cases_ecosystem_benefits_challenges (last visited Feb 14, 2025).

[259] Shashank Pathak, *Information and Technology (Intermediaries Guidelines) Rules 2011: Thin Gain with Bouquet of Problems* (2013).

works and literary works can be similarly protected through licensing agreements coded to the blockchain that is automatically executed on resale or reproduction. Despite the advantages of efficiency, a clever contract has legal complications, such as difficulty modifying agreements after deployment and a lack of recognised mechanisms for dispute resolution. In fact, in many jurisdictions, their enforceability remains unvalidated in traditional legal systems that have yet to define a smart contract as a lawfully binding instrument. Hence, the need to respond to these challenges represents a merging of legal principles with the fast-altering technological environment to ensure a well-placed adaptation of smart contracts with shifting landscapes of law that protect intellectual property.

Legal Recognition of Blockchain-Based Ownership Records

A decentralised and immutable mechanism for recording and verifying ownership makes blockchain-based protection highly relevant to intellectual property. The blockchain's immutable record of transactions authenticates the origin, transfer, and licensing of digital assets and thus provides some level of assurance against counterfeiting and unauthorised use. This innovation would fundamentally change copyright and patent registration by creating transparent and verifiable records of ownership accessible all over the globe. Some jurisdictions have already started investigating integrating blockchain within their intellectual property registration systems, appreciating how it can improve both the speed of administrative processes and the security of rights management. Legal recognition of blockchain-based ownership records diverges from country to country, with some legal provisions asking how credible blockchain records can be as evidence during legal disputes. The decentralised character of the blockchain creates yet additional obstacles regarding jurisdictional competence, especially in matters of intellectual property infringement that straddles a multitude of territories. Building a definitive common legislative framework acknowledging blockchain-based ownership records as valid evidence of property rights is a major reason to restore faith and promote compliance in digital asset markets.[260]

Regulatory Issues Challenging Blockchain-Enabled IP Transactions

Despite its power to upend this realm of digital asset ownership, blockchain has compounded the enforcement function of intellectual property by raising numerous regulatory challenges. One chief concern here is the anonymity and decentralisation of blockchain transactions that have been able to pave the way for bad actors to exploit copyrighted material in an unaccountable

[260] A systematic review on blockchain-based access control systems in cloud environment | Journal of Cloud Computing | Full Text, https://journalofcloudcomputing.springeropen.com/articles/10.1186/s13677-024-00697-7 (last visited Feb 14, 2025).

fashion. Besides, due to pseudonymity, it is said that it would be more difficult to trace and act legally towards infringers, giving rise to concerns over piracy, counterfeiting, and violations of digital rights. Another set of concerns is that blockchain, due to its global nature, raises questions regarding jurisdictional enforcement; legal systems with no common regulatory framework find it difficult to pin down the boundaries of the buying, selling and transferring of digital assets. A large majority of IP disputes deal with cross-border cooperation in blockchain-embedded transactions, yet we have accepted international treaties and agreements that fail to address specific cases under decentralised technology. In addition, environmental issues have also arisen about blockchain networks that use proof of work consensus mechanisms since their energy-intensive nature has been proposed as a constraint on large-scale exploitation. Regulating bodies will have to come up with a solution now that addresses consumer protection, rights enforcement, and legal certainty in the realisation of its pros on IP transactions based on blockchain. Such adaptable policies would eventually bring international cooperation for alignment of their legal frameworks with the advance of technology so that innovations are encouraged with equity of IP protection in the digital age.

Digital Rights Management (DRM) via blockchain

DRM helps to prevent misuse in the digital space, essentially protecting intellectual property by preventing illegal access, copying, or distribution of copyrighted materials. DRM is mostly supported through a centralised authority such as copyright owners, licensing bodies, and even digital platforms on which restrictions are applicable for the use of content. The centralised model has drawbacks, majorly including single points of failure, vulnerability to hacking, lack of transparency, and high operational costs. Thus, using blockchain emerges as the best transforming, redefining the possible extension of DRM[261] by decentralising it, making it immutable, disclosing its underlying transparency, and automating the process through smart contracts.

Through blockchain-based DRM, content creators and rights holders can register their works on an unalterable ledger that guarantees verifiable ownership and automatic royalty distribution. NFTs mean that new dimensions of owning a digital asset have been opened since metadata can be input to ensure proof of authenticity/provenance. Creating smart contracts benefits DRM by automatically giving effects to licensing agreements and royalty payments while reducing the number of intermediaries to effectuate fair compensation for artists, musicians, and authors.

[261] Digital Rights Management (DRM), https://studylib.net/doc/5217347/digital-rights-management--drm- (last visited Dec 26, 2023).

Audius, Mycelia, and similar platforms monopolise blockchain to benefit artists with their music over distributed channels and earnings.[262]

However, with all such advantages, DRM based on blockchain also has issues. The main difficulties faced by decentralised DRM are scalability issues, high energy usage in proof-of-work (PoW) blockchains, and the complexity of associating them with the classical copyright framework. Furthermore, jurisdictional disputes and problems of enforcement arise because blockchain transactions are pseudonymous and global. However, as this technology grows, the possibility of changing the future of DRM[263] frameworks, making digital rights management more secure, transparent, and efficient, is bound to happen.

Challenges and Limitations of Blockchain-Based IPR Systems

Of course, the advantage of blockchain is the novel way it helps protect intellectual property rights (IPRs) without limitation regarding licensing and enforcement. However, it presents various challenges and limitations concerning strict engagement in its adoption.

First on the agenda is legal validity and regulatory ambiguity. Several jurisdictions haven't put up a well-defined legal framework for registering and enforcing IP rights using blockchain. Intellectual property law attaches to territoriality, which, in turn, makes effective enforcement difficult due to the decentralisation and borderless phenomena of blockchain. For example, if a dispute comes up regarding blockchain copyright registration, there is no clear information on whose countries' laws apply. Thus, adjudicating such cases may be complicated.[264]

Another major challenge is brought forth by immutability along with fault correction. The records kept in the blockchain are tamper-proof because of this feature. Still, at the same time, it also hampers error rectification. For immutable records, in the case of recorded wrong ownership or fraudulent claims, reverse correction can be a tedious task and sometimes even impossible without the intervention of a centralised organisation in contradiction to the principle of decentralisation in blockchains.

Scalability and cost efficiency also add to the list. Public blockchains require a lot of computational resources, especially with PoW consensus, leading to increased transaction costs and consuming massive amounts of energy. Newer consensus models like PoS, along with layer-2 solutions, are coming up to solve scalability issues but have yet to see mass adoption.

[262] Narendra Singh Shekhawat, *DIGITAL TRANSFER DOCTRINE THROUGH NFT: A*, 2.

[263] hometip-DRM Library Education Tip Sheet.pdf, https://www.ala.org/sites/default/files/advocacy/content/advleg/pp/hometip-DRM%20Library%20Education%20Tip%20Sheet.pdf (last visited Feb 14, 2025).

[264] Atharv Chandratre & Abhinav Pathak, *Blockchain Based Intellectual Property Management*, SSRN JOURNAL (2019), https://www.ssrn.com/abstract=3800734 (last visited Feb 14, 2025).

Privacy and unlicensed copying issues also arise within IP systems in a blockchain. Although blockchain records the transaction transparently, the users can choose to remain pseudonymous; this makes it nearly impossible to trace infringers in cases of copyright violation. Unregulated, decentralised platforms can easily allow unauthorised sharing of copyrighted content, which disintegrates the very idea behind copyright protection.

Finally, there is the technical and legal block to the integration of blockchain with current patterns of IP enforcement. Unlike currently existing copyright offices, patent registries, and courts, which operate on traditional centralised databases, cross-compatibility with decentralised blockchain systems complexifies the entire issue. Hybrid models need to be devised by policymakers and IP stakeholders to carry the advantages of transparency and security that blockchain offers onto the reliability of institutional structures of the conventional IP framework.[265]

Even though these challenges still exist, on the other hand, blockchain also opens doors to an innovation pattern in IPR management. As governments and legal institutions refine regulations and regulations while the evolution of technology continues, the use of blockchain in IP protection can be seen as the cornerstone of digital ownership and enforcement of intellectual property in the future.

Legal and Regulatory Frameworks Governing AI and Blockchain in Cyberspace

The development of artificial intelligence (AI) and blockchain technologies has revolutionised how we manage digital ownership and protect intellectual property rights (IPR). Present legal structures encounter difficulties when implementing these new technologies because they create empty regulatory areas and between-country conflicts with weak enforcement capabilities. This section comments on the compatibility of present intellectual property rights legislation and international treaties, together with legal jurisdiction issues and legislative modifications for AI and blockchain property protection within digital domains.[266]

Existing IPR Laws and Their Applicability to AI and Blockchain

The current structure of intellectual property regulations faces difficulties when trying to protect human-developed creative work since these laws were created to safeguard the intellectual output of humans. The present IPR system, founded on copyright and patents and trademarks, together with trade secrets, grants rights to creators while recognising their authorship. The lack of legal

[265] Decentralized IP: Can Blockchain Resolve the Copyright Crisis? - LeDroit India, (Dec. 29, 2024), https://ledroitindia.in/decentralized-ip-can-blockchain-resolve-the-copyright-crisis/ (last visited Feb 14, 2025).
[266] Avinahs Kumar, "Economics and IPR System in India" 4 International Journal of Law Management & Humanities 273 (2021).

personhood status for AI interferes with intellectual property laws since AI operations violate existing definitions regarding authorship and invention.

Most territories, which include the United States (Copyright Act, 1976) and the European Union (Directive on Copyright in the Digital Single Market, 2019), maintain human authorship as a fundamental requirement for copyright safeguard. AI-generated content lacks copyright protection because any unaltered AI product counts as machine-generated material beyond current copyright framework boundaries. Artificial intelligence-generated content ownership remains unclear because it falls between defined rights of ownership and licensing of human-created works.[267]

The issue of inventorship remains unresolved in patent law when it comes to AI-generated inventions. *"Cases like Thaler v. USPTO (2021) and Thaler v. The EPO (2022), together with AI (2021), rejected AI as an inventor and thus required human involvement during patent applications."*

Blockchain technology provides decentralised DRM systems and copyright registration options through its network, but the world lacks official legal recognition for blockchain IP protection solutions. Different jurisdictions maintain an uncertain position toward blockchain-based IP registrations since they lack recognition as binding ownership evidence.

However, existing IPR laws are inadequate for embracing the special requirements of AI and blockchain-produced assets. Legal adjustments must be implemented to establish a clear understanding and effective execution along with asset protection within contemporary digital systems.

International Treaties and Guidelines on Digital IP Protection

The worldwide protection of intellectual property counts on international organisations together with treaties that work to standardise borderless IP protection. The fast development of AI alongside blockchain technology has demonstrated that current worldwide IP systems struggle to fulfil their purpose because they were originally built to protect conventional creative art and industrial products.

International digital IP regulation folds into three main treaties alongside others:

- The Berne Convention from 1886 remains one of the oldest copyright treaties that provides literary and artistic work protection yet does not extend its provisions to AI-generated works.

[267] MATT BLASZCZYK, GEOFFREY MCGOVERN & KARLYN D. STANLEY, *Artificial Intelligence Impacts on Copyright Law*, (2024), https://www.rand.org/pubs/perspectives/PEA3243-1.html (last visited Feb 14, 2025).

- Through its membership with WTO, the TRIPS Agreement (1994) establishes essential protection standards for patents and trademarks, but it fails to handle AI authorship registrations with blockchain technologies.
- The WIPO Internet Treaties (1996) contain two components, including the WIPO Copyright Treaty (WCT)[268] and WIPO Performances and Phonograms Treaty (WPPT)[269], but their provisions do not extend to smart contracts, blockchain-based systems or non-fungible tokens.
- The EU Digital Services Act (2022) and the AI Act (2023) establish European regulations about AI-based content generation and online platforms, which might guide worldwide legal advancement.

International laws about AI, specifically those protecting blockchain IP, remain missing, which leads to difficulties in legal enforcement throughout different jurisdictions. The international institutions WIPO and WTO need to revise their regulatory frameworks to include policies about AI-generated works together with decentralised asset ownership protocols and smart contract-based licensing systems.

Comparative Analysis of Global IPR Regulations on AI and Blockchain

Artificial intelligence and blockchain technologies are advancing faster than traditional intellectual property rights legal frameworks because they produce legal uncertainties that differ from jurisdiction to jurisdiction. Each country has established its specific regulations for AI-manufactured material and blockchain-based assets because their legal systems and policy targets differ from one another. AI-generated works in the United States do not receive copyright protection unless human creators make meaningful contributions based on the stance of the U.S. Copyright Office. The European Union stands apart from the United States when it comes to copyright regulation since it plans to merge AI systems with its current laws and strengthen individual protections for AI-produced works. Blockchain regulations face significant differences between countries because Switzerland recognises cryptocurrency and smart contracts under friendly regulations even though China has implemented bans on crypto activities and controls state-controlled blockchain development. Singapore, alongside Japan, operates regulatory test grounds which allow blockchain applications to undergo inspection ahead of establishing formal legal restrictions. A harmonised global framework for intellectual property rights protection of AI

[268] WIPO Copyright Treaty (WCT), https://www.wipo.int/treaties/en/ip/wct/ (last visited Nov 28, 2023).
[269] WIPO Performances and Phonograms Treaty, https://www.wipo.int/treaties/en/ip/wppt/ (last visited Dec 26, 2023).

and blockchain must be established because existing approaches demonstrate the necessity of strikes between innovation and legal security.

Jurisdictional Challenges in Enforcing IPR in Cyberspace

The highest challenge to IPR enforcement across cyberspace stems from complicated jurisdictional issues. AI and blockchain assets operate from a borderless digital domain where enforcement of national laws during international disputes becomes highly challenging.

Blockchain networks function without centralised control thus, copyright theft alongside trademark and patent disputes remains untraceable across various jurisdictions because there exist no authorised legal tracking systems.

AI-generated content begins its life in one country before moving into international storage for global usage, which produces legal ownership and copyright length disputes.

Many intellectual property agreements involving blockchain use self-executing digital agreements known as smart contracts for their execution. Several countries have not accepted smart contracts as enforceable agreements, which produces disputes about intellectual property licenses along with royalty payments and digital asset transfers.[270]

Case Example: In the case of *"Dapper Labs vs. The SEC, it studied NFTs to determine their status as securities during the regulatory debate about digital property rights in 2023.*"

The growing challenges demand international strategic partnerships, which should aim to generate standard regulations for IP protection across virtual domains.

The Need for New Legal Frameworks and Policy Interventions

The original IPR regulations came from before computers and digital technology, so they do not work well when AI and blockchain applications appear. When it comes to AI-generated creations, there is no set legal structure which makes litigation happen over intellectual property rights.[271] The unique nature of blockchain NFTs makes them different from traditional property laws since NFT owners do not acquire copyright protection over their content. The current digital asset regulations do not fit the market, so new laws need to be formed to protect users and enable progress in this sector. Policy creators must create AI-unique copyright laws to establish minimum human control limits for protection and special rights for AI-developed content. The

[270] Narender Kumar, *CRYPTOCURRENCY, INTELLECTUAL PROPERTY RIGHTS AND COMPETITION LAW-CHALLENGES AND IMPLICATIONS*, 1.

[271] Adil S. Al-Busaidi et al., *Redefining Boundaries in Innovation and Knowledge Domains: Investigating the Impact of Generative Artificial Intelligence on Copyright and Intellectual Property Rights*, 9 JOURNAL OF INNOVATION & KNOWLEDGE 100630 (2024).

market should adopt uniform blockchain protocols to make IPR rights tracking accessible through safe platforms. Regulatory bodies must develop DAO standards to establish this new governance system legally.[272] The use of blockchain-supported digital contracts following regular legal standards can connect blockchain technology with standard legal frameworks. A mixed policy solution that accepts new technology while allowing speed changes will keep IP regulations effective in digital network-based markets.

Emerging Policies and Legislative Reforms for Digital Ownership

Legislative reforms by countries aim to fill the existing legal gaps within AI and blockchain-based IP protection systems.

AI-Generated Content Laws:

- The UK Intellectual Property Office (IPO) considers suggesting restricted copyright rights for AI-created work outputs.
- The National AI Development Plan of China states that AI-created content should receive copyright protection through existing legal frameworks.

Blockchain IP Reforms:

- The EU Blockchain Strategy endorses blockchain systems for copyright registration along with IP verification functionalities.
- The United States Copyright Office currently studies how to establish NFTs together with blockchain technology as proof to validate digital ownership rights.

Proposed Digital Ownership Legislation:

- The European Commission's AI Act (2023) stands as among the initial extensive sets of laws which govern AI-generated content along with automated decisions.
- The Draft Digital Personal Data Protection Bill (2023), which India introduced, incorporates sections about data ownership alongside AI-generated content regulatory measures.
- The progress of technological innovations shows a deepening understanding of digital ownership in modern legislation because international synchronisation continues to be a major hurdle.

[272] Singh - 2023 - AI, NFTS AND IPR LEGAL CHALLENGES IN INDIA.pdf, https://www.slsnagpur.edu.in/assets/pdf/journal/12.%20AI,%20NFTS%20AND%20IPR%20LEGAL%20CHALLENGES%20IN%20INDIA_Satyam%20Singh.pdf (last visited Feb 14, 2025).

Ethical and Policy Considerations in AI and Blockchain-Enabled IP

The current emergence of AI technology, together with blockchain systems, produces problems needing thorough ethical examination while requiring new policy development.

Ethical Ownership of AI-Generated Content:

- Policy decisions must determine whether AI-developed works should receive recognition from AI systems or developers or the end-users who trigger AI functions.
- The improper management of generative AI, together with deepfake manipulation, raises major privacy-related issues and produces false information.

Monopoly and Fair Use in AI-Generated IP:

- Technological firms possessing enormous dataset resources and AI model capabilities seem likely to control AI-generated content markets, thereby gaining control over digital creativeness.
- The existing fair use doctrine in copyright law requires evaluation because it needs to address both new AI capabilities and human creative rights.

Blockchain's Impact on IP Accessibility:

- The democratisation of IP registration on blockchain faces resistance from the high costs of transactions and environmental effects and regulatory limitations that hamper its adoption.

Balancing Innovation and Regulation:

- The evolution of IP policy demands a proper equilibrium between AI and blockchain advancements and fraud prevention measures, which stops all forms of misuse and monopolistic behaviour in the future.

Conclusion and the Future of IPR in Cyberspace

Findings & Recommendations

The intersection of artificial intelligence (AI), blockchain, and intellectual property rights (IPR) in cyberspace presents both unprecedented opportunities and complex legal challenges. AI-generated content raises fundamental questions about authorship, originality, and ownership, while blockchain-based digital assets challenge traditional property and copyright laws. Key findings indicate that existing IPR frameworks are inadequate to address these emerging issues, necessitating legal reforms that account for technological advancements. AI-generated works lack clear ownership rights in many jurisdictions, creating legal uncertainties for artists, developers,

and businesses. Similarly, while blockchain offers transparent and immutable ownership records, its decentralised nature complicates enforcement and regulatory oversight. The study also highlights enforcement difficulties in cyberspace, as digital assets transcend national borders, making jurisdictional enforcement highly complex.

To address these challenges, the following recommendations are proposed:

1. introducing sui generis protections for AI-generated works to provide clarity on ownership and licensing rights,
2. developing standardised legal frameworks for blockchain-based digital assets to ensure secure and legally recognised ownership,
3. fostering international cooperation to create cross-border enforcement mechanisms, and
4. leveraging emerging technologies such as AI-powered copyright detection tools and blockchain-based digital rights management (DRM) systems to improve IPR enforcement. Policymakers, legal scholars, and technology experts must collaborate to ensure that IPR laws remain adaptable to the fast-evolving digital landscape while upholding the rights of creators and innovators.

The Role of Legal Reforms in Digital Ownership Protection

Digital ownership development relies heavily on legal reforms which protect intellectual properties through enforceable laws during the digital era. Laws regarding copyright alongside trademark and patent must undergo review to establish appropriate codes for AI-generated production together with blockchain transactions. The establishment of detailed guidelines concerning human participation levels needed for copyright protection of AI-generated work will create essential legal stability. Featuring smart contracts in legal systems should take place to enable automatic agreements to finalise digital asset transactions between parties. Regulatory entities need to create operational frameworks which merge both technological advancements and consumer protection protections. Market transparency and prevention of legal disputes rest on the establishment of transparent regulations about NFT ownership together with licensing and resale rights. The authorisation of blockchain-based IPR registries at domestic and foreign levels will enhance intellectual property defence systems through unalterable evidence of ownership documentation. The adoption of unified legal practices related to these matters guarantees that AI and blockchain technology add positive value to creative economics while preventing security vulnerabilities that permit copyright infringement.

Future Trends in AI, Blockchain, and Intellectual Property

AI and blockchain technology will develop further to strongly affect our current performance rights system. The growth of AI technology requires new copyright regulations that allow AI creativity while safeguarding creators' rights in all industries, including word and music production and program and graphic source code. The future of rights security depends on AI technology that helps find digital IP violations through forecasting and performs automated copyright searches.

People worldwide will find it harder to distinguish physical from digital ownership because of DeFi development and tokenisation of assets and metaverse systems. Web3 technologies encourage ownership shared among users, so current IP governance regulations demand fresh ways to handle intellectual property made by multiple parties. As blockchain switches to lower-energy consensus mechanisms like proof-of-stake, the authorities will concentrate their inspections on examining blockchain transactions according to legal and ethical standards. Digital identity solutions that save verified credentials on the blockchain will protect intellectual property assets and help prevent fraud in managing digital asset ownership.

Final Thoughts on the Balance Between Innovation and Regulation

The full potential of online intellectual property protection depends on finding proper control between developing creativity and having strict oversight regulations. The development of AI and blockchain technology needs proper oversight since their rapid growth may increase copyright infringements and create market control while violating ethical property rights. Policy leaders must lead changes in digital IP regulations instead of just responding to new technology lacunas. People from different groups, such as lawyers, engineers, content makers and IP regulations makers, should work together to build ideas that guard copyright rights and benefit creative freedom. Using AI and blockchain technology with global IP rights-sharing strategies will make up a system that gives everyone a fair and balanced chance in our digital economy. The success of IPR in cyberspace will come from ensuring creators get fair protection and allowing modern technology to transform digital property standards.

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DELHI UNIVERSITY PHOTOCOPY CASE: ANALYSIS

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Abstract

In 2012, a significant dispute arose between publishers and students in India when foreign publishers pursued Delhi University for copying materials on campus without authorization. In 2016, the Delhi judges determined that the university's actions were not considered theft, as the creation of course packs did not violate any laws. The publishers responded by challenging the decision, but this time they were unsuccessful in court. This decision demonstrates the profound connection between copyright and education, not only at one school but across all schools in India.

Nevertheless, the publishers withdrew the lawsuit in March 2017 and issued a public statement announcing their decision not to prosecute the case and their intention to forgo submitting an appeal to the Supreme Court. The publishers announced their intention to establish a more collaborative relationship with academic institutions, instructors, and students in order to facilitate equitable access to knowledge and address their needs. The Indian Reprographic Rights Organization (IRRO) submitted a Special Leave Petition (SLP) to the Supreme Court in April 2017, contesting the division bench's decision. On May 9, 2017, the Supreme Court issued an order that declined to review the impugned judgment and dismissed the SLP.

The judgments in this case have a significant impact on not only the University of Delhi but also all educational institutions in India, as they connect the right to education with the copyright law. The case investigated the unique treatment of schooling when it comes to copying materials such as books. Indian law does not specifically address the issue of discreetly copying items for educational purposes. However, this could potentially fall under section 52(1)(a)(i)'s clause, which permits private study, or section 52(1)(i), which allows teachers and students to copy materials for classwork. Consequently, it is imperative to strike a balance between safeguarding individuals' work and providing educational resources.

Keywords: Fair Use, Fair Dealing, Right to Education, Authors' Right.

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Fact of the Case

The first interpretation of section 52(1)(i) was brought up in the case of *The Chancellor, Masters and Scholars of the University of Oxford v. Rameshwari Photocopy Services*.[274] The lawsuit for a permanent injunction was filed by five reputable publishers, including Oxford University Press, Cambridge University Press, who are based in the United Kingdom; Cambridge University Press India Pvt. Ltd. As well as Taylor & Francis, United Kingdom, and Taylor and Francis Books India Private Limited. Ltd. The plaintiffs filed a petition for an injunction against the defendants, Rameshwari Photocopy Service (defendant no. 1) and the University of Delhi (defendant no. 2), requesting that they be prohibited from photocopying and distributing their publications on a large scale, circulating them, or selling unauthorized compilations of substantial extracts (ranging in length from six to sixty-five pages) from their publications that they have assembled into course packs of course materials for sale. Defendants No. 3 and No. 4 were pled guilty as the Association of Students for Equitable Access to Knowledge (ASEAK) and the Society for Promoting Educational Access and Knowledge (SPEAK), respectively.

Arguments Presented

It was asserted by the plaintiffs that defendant no. 2 had institutionalized infringement by giving a license that allowed for the reproduction and selling of course materials. Specifically, this was the reason that the plaintiffs presented. The plaintiffs' goal is not to prevent students from photocopying; rather, they seek to put an end to the practice of systematic photocopying. This is the purpose of the plaintiffs. Since neither a teacher nor a student duplicated the work while they were participating in the teaching process, it is not conceivable to mount a defense under section 52(1)(i) since doing so would violate the provisions of the statute. Through the sale of the course packs, the defendants were able to create the circumstance in which they would be in the same position as the plaintiffs. In addition, the plaintiff asserted that defendant number two should have obtained a license from the Indian Reprographic Rights Organization (IRRO), and that the payments that the students would have been had to pay would not have been much more than those that defendant number one had previously spent.

In front of the court, defendant number one contended that the acts that it has been carried out were within the scope of fair use in accordance with sections 52(1)(a) and 52(1)(h) of the act. This is because the course packs are used for both research and teaching purposes in the

[274] The Chancellor, Masters and Scholars of the University of Oxford v. Rameshwari Photocopy Services, 2016 SCC OnLine Del 5128.

academic world. On the other hand, defendant no. 1 is not participating in any form of commercial exploitation of the works that are protected by copyright, even though they are providing photocopies at a modest charge of forty rupees per page to pay their expenditures. One further thing to take into consideration is the fact that the library only possesses a limited number of books that are original. Because of this, members of the faculty have gathered a broad variety of copies of books, papers, and journals, which they photocopy to prevent any harm to the original works. This is done to ensure that the texts are preserved in their original form.[275]

The second defendant argued that education has been an honorable exception to copyright regulations for a very long period, and that this is recognized by sections 52(1)(a) and 52(1)(i) of the acts. For the purposes of doing research and instructing, the vast majority of educational institutions all over the globe permit students to copy a certain number of pages from any book that is protected by intellectual property rights. A test of fair dealing is included in section 52(1)(a), in contrast to section 52(1)(i), which does not include such a test since it is not included. It is thus immaterial whether just a portion of the book is photocopied or if the whole book is duplicated. This is because of the fact that this is already the case. In the library, both the teacher and the student have the opportunity to read the books that are outlined in the course curriculum. They also have the option of borrowing the books and making copies of the pages that are pertinent to the course. Given the high cost of acquiring books and the fact that books are sometimes unavailable or out of print, photocopying is a crucial service for educational purposes. This is because books are frequently out of print or unavailable. It was also stated that, even if the problem is linked to copyright law, it must be considered in light of the right to knowledge, and since the Constitution cites the right to education both as a Fundamental Right and as a Directive Principle of State Policy. This was added to the argument that the matter must be addressed using the right to information. It has been brought to the attention of the University of Delhi that the teachers are unable to bring a photocopier with them, and that there is not sufficient room, money, or personnel on campus to enable photocopying to take place at the library.[276]

The third defendant argued that the provisions of section 52(1)(i) cannot be restricted to classroom education and that the beginning of the academic semester marks the beginning of teaching inside the classroom. If the educational establishment is authorized to develop the course packets, it may also do so via the assistance of an agency.

Judgement

[275] *Ibid*. para. 4.
[276] *Ibid.* para. 5.

The court has said that there is only one question that has to be resolved, and that is whether or not the fact that course packs are created constitutes an infringement of copyright. The court stated that the scope cannot be limited or increased by applying section 52(1)(a) to the circumstance after the legislature has expressly granted exceptions for the field of education under sections 52(1)(h), 52(1)(i), and 52(1)(j). This is a legal matter that does not require a trial to be held.[277]

Regarding subsection 52(1)(h), the court concluded that it did not apply to the circumstances of this case. This was because the course packs in issue were composed solely of the creative works of the plaintiff. The publication must be constituted mostly of items that are not protected by copyright for section 52(1)(h) to be relevant. Additionally, the publication must exist in the first place.[278] The court also decided whether or not course packages are considered to be publications. The court referred to the third part of the act's definition of "publication," which specifies that publishing is defined as "making a work available to the public by issue of copies or by communicating the work to the public." The court came to the conclusion that the term "publication" in section 3 relates to the act of preparing and issuing a book or journal for sale to the public and does not pertain to the making of photocopies of previously published work after interpreting section 3 in conjunction with sections 4, 5, and 14(a)(ii).[279] The court went on to explain that publishing, as opposed to "reproduction," as defined in section 52(1)(i), is the phrase used in section 52(1)(h). Publication is the act of making anything accessible to the public for the very first time, as well as via reprints or further editions. Replication, on the other hand, is the process of reproducing something for the restricted use of a teacher or students.

With regards to the connection between § 52(1)(i) and the circumstances of this particular instance, the court made the following observation that[280] within the scope and ambit of section 52(1)(i), it is not possible to place any restrictions. Education has been institutionalized for a very long time, both at the school and post-school levels, and there is little credit given to individual instructors for the delivery of teaching. This is even though the country historically adhered to the Guru-Shishya parampara, which is traditionally known as the teacher-disciple tradition. Since neither the teacher nor the student existed in society at the time that it was incorporated in the legislation, there is no foundation for reading it to suggest that it provides for a particular instructor and student. Neither of these individuals exist in society today. Therefore, the fact that

[277] *Ibid*., para. 22.
[278] *Ibid.*, para. 45.
[279] *Ibid*., para. 47, 48.
[280] *Ibid*., para. 55.

teachers now communicate information only as members of an institution does not exonerate the institution of its need to comply with section 52(1)(i), nor does the fact that the institution photocopies any copyrighted content on behalf of its instructors satisfy this requirement.

The court provided an explanation of the difference between the term's "lecture" and "instruction." Despite the fact that the act's section 2(n) defines "lecture" as a document that includes "address, speech, and sermon," the court pointed out that the Act does not define "instruction." If the legislature's intention was to restrict the reproduction of copyrighted works during a lecture in accordance with section 52(1)(i), then the word "lecture," as defined by the act, would have been the phrase that would have been used. As a result, the word instruction" needs to be defined in a manner that is distinct from that of "lecture." The court stated that an "instruction" would be defined as "something a teacher tells the student to do in the course of teaching or detailed information which a teacher gives to a student or pupil to acquire knowledge of what the student or pupil has approached the teacher to learn," in reference to a teacher. This definition was made in reference to the fact that a teacher is the provider of the instruction.[281]

In addition, the court discussed the problems of when instruction is delivered and when it is ended. Specifically, it made the following observation that during instruction would include reproduction of any work while the process of imparting instruction by the teacher and receiving instruction by the pupil continues, that is, throughout the entirety of the academic session during which the student is under the tutelage of the teacher. In addition, the act of giving and receiving instruction is not limited to the human connection that takes place between a teacher and a pupil on a daily basis. Consequently, a teacher would be in conformity with section 52(1)(i) of the Act if they duplicated any copyrighted content to instruct pupils in line with the curriculum over the duration of the academic year.[282]

It was also observed by the court that enormous books may now be photocopied at a low cost as a result of technical improvements. While they are seated in the library, students are no longer expected to copy pages from books and other materials. Because every student in today's world has a mobile phone that is equipped with a camera, they are able to snap photographs of the required pages and then print them out. The court came to the conclusion that an action carried out via a certain mode would not be regarded as illegal if the activity had the same effect regardless of the mode's difference.[283]

[281] *Ibid.*, para. 60.
[282] *Ibid*., para. 72.
[283] *Ibid*., paras. 76, 79.

As a result of the court's decision, the complaint was dismissed since the defendants' actions did not constitute an infringement. It makes no difference whether defendant no. 2 purchases the photocopy machine directly, whether they let the students photocopy themselves, or if they delegate the task of photocopying to another individual.[284]

Following the filing of an appeal that challenged the judgment of the single judge, the division bench gave its decision in the case of *The Chancellor, Masters and Scholars of University of Oxford v. Rameshwari Photocopy Services.*[285] Intervention petitions were made to the division bench by the Indian Reprographic Rights Organization (IRRO), the Association of Publishers in India (API), and the Federation of Indian Publishers (FIP). The court allowed all of these motions.

The court inquired as to whether the privilege granted by section 52(1)(i)(i) is unconstrained and unimpeded by the need that it be a fair use, as well as the extent to which the term of "by a teacher or pupil in the course of instruction" is expansive.[286] It was established, after conducting an analysis of the four course packs, that the average cost of the books from which certain pages were photocopied was Rs. 2542 (that is, two thousand five hundred forty-two only), and the average percentage of books that were copied was 8.81%. This was one of the findings of the analysis.

The court made the comment that the outcome would be similar regardless of whether the word "course" is read as a verb or a noun. This was done in line with the logic that was offered by the respondents. This is because the result will include the whole of the academic process that takes place over the course of a semester.[287]

The court made the observation that justice must be provided in every activity, even those that do not specifically allow for fair use. This is particularly true in circumstances when the labor of another person is involved. All actions must be fair. Therefore, the general fair use concept, rather than the four criteria that determine fair use judgment, would be translated into this clause. This is due to the fact that the legislature has not specified fair use as a limiting factor under section 52(1)(i).[288] It will rely on the use that is intended to determine whether or not it is deemed fair use.[289] Both qualitative and quantitative material usage would be unaffected by the fact that

[284] *Ibid*., para 86.
[285] 2016 SCC OnLine Del 6229.
[286] *Ibid*. para. 17.
[287] *Ibid*., para. 39.
[288] *Ibid*., para. 31.
[289] *Ibid*., para. 32.

the "extent justified by the purpose of education" standard will be used to determine fairness in use for educational purposes. Additionally, a significant amount of content that is protected by intellectual property rights could be utilized to guarantee that students comprehend the content that is being utilized in the classroom.[290] The court went on to note that the provision does not define where information may be conveyed; it will probably encompass in-person education conducted in a formal setting, as well as communication between students and professors, as well as communication between students and themselves. Regarding the impact on the market, the court said that there would be no adverse effect since students would choose to go to the library rather than buy all of the reference books on a certain topic. This would avoid the need for the market to be negatively affected. Rather than shrinking, the market for works that are protected by intellectual property rights will grow as a result of increasing knowledge.[291]

The interpretation of the distinction between "publication" and "reproduction" that was given by the single judge was not accepted by the division bench. It was brought to their attention that publications always have a profit-making component, even if they are not meant for public consumption or are not freely available to all members of the community. If a teacher were to copy a work with the intention of using it in the classroom, there would never be any aspects of profit involved in the process. Putting out an argument that the teacher would be prevented from generating further copies is not something that can be done under any circumstances.[292]

A complaint was filed by an intermediary, and the court responded by stating that it is not required for instructors and pupils to obtain photocopying equipment in order to reproduce works that are protected by intellectual property rights while they are in the classroom. Even in the event if it were feasible to find a location where a photocopying machine with a guy behind it could be found, the activity's essential notion would not be changed in any way. The first respondent in this circumstance is not generating any other form of profit.[293] Due to the fact that the university's participation comes to an end when it determines what the content of the course will be, it was also stated that the school does not allow photocopying. After that point, the instructors of the class would be the ones to be responsible for assigning the readings, which would include the works that were protected by copyright.[294]

Additionally, the court did not agree with the position that was provided by the single judge about

[290] *Ibid*., para. 33.
[291] *Ibid.*, para. 36.
[292]*Ibid*., para. 57.
[293] *Ibid*., para. 60.
[294] *Ibid*., para. 61

the application of section 52(1)(a) to the facts of the case. This was because the explanation did not take into account the provision's requirement of fair dealing, which was the reason why this occurred. It was essential to use section 52(1)(i) rather than section 52(1)(a) in order to evaluate replication since the course materials were utilized throughout the teaching process.[295]

After the court overruled the ruling of the single judge and decided that there was a factual question that could be tried, the claim was revived for a factual trial before the single judge. On the other hand, the plaintiffs and appellants decided to withdraw the complaint and make a public notice on March 9, 2017, declaring their intention to dismiss the case and not pursue an appeal with the Supreme Court.[296] They made the announcement in the public statement that they wanted to work more closely with educational institutions, teachers, and students in order to fulfill the standards that they had set down and to ensure that everyone had equal access to knowledge.

In a Special Leave Petition that was presented to the Supreme Court in April 2017, the Indian Revenue and Revenue Organization (IRRO) contested the decision of the Division Bench of the Delhi High Court. The Supreme Court issued a decision on May 9, 2017, rejecting the SLP and refusing to interfere with the disputed judgment. However, the court did not intervene with the judgment.

Analysis and Conclusion

In this instance, the decisions that were made connect the copyright statute to the right to education that is provided by the Indian Constitution. This has implications not just for the University of Delhi but also for all educational institutions in India. Nevertheless, there are problems with the rulings, and some people have criticized them for failing to take into consideration the interests of higher education in India and the publishing industry. The rulings have been praised as historic and momentous decisions that support the right to education by granting access to educational copyrighted works.[297] However, there are issues with the rulings. Furthermore, it was asserted that because it eliminates all of the academic publishers' incentives, it represents the incapacity of Indian courts to combine legal outcomes with robust economic models. This was despite the fact that the court did not address the fact that the actions of the defendants had an economic impact on the publishing sector. In this particular instance, the court

[295] *Ibid.* para. 75.
[296] Available at: http://fdslive.oup.com/asiaed/News%20Items%20and%20Images/Joint%20Public%20Statement.pdf. (Visited on June 15, 2024).
[297] Aneesha Mathur, "Simply put: What a photocopy shop's HC victory over publishers means for Copyright" The Indian Express, Nov. 4, 2016.

made the observation that students are not the intended market for the publisher since they would not have gone to the trouble of acquiring the full set of books. By following this line of logic, the argument presented by the publisher is completely ignored. The institution, rather than the student, presented itself as the possible customer in this scenario. The court acknowledged that the publishers' intention was not to force the students to buy their books, and it agreed with this assessment. For the purpose of allowing the students to xerox the required information, the publishers demanded that the institution get a license.[298] They were of the opinion that getting an IRRO license would be sufficient to fix the whole problem. In the process of recasting the agreement between the publisher and the institution as one against the students, the court chose to disregard the financial effect that the arrangement would have on the publishers.

Considering that extensive photocopying would be authorized, it is quite doubtful that educational institutions such as Delhi University and others would spend money on the purchase of these books. For the sake of achieving their educational goals, students are granted permission to photocopy relevant portions of academic texts as soon as the institution obtains a copy of the textbook. This is a hazy and unsatisfactory standard. This is beneficial not only to the students but also to the education institution. There will be a reduction in the amount that the institution is required to pay. In the other direction, the publishers miss out on a considerable sum of money. As a result of the court's decision to permit extensive photocopying of academic literature, the institution is no longer required to acquire enough volumes or secure a license from each of the copyright organizations.[299]

It was further suggested that even if the publishers might keep putting out Indian works, they wouldn't be motivated to put in more money and resources.[300] In opposition to this viewpoint, it was stated that photocopying has been unchecked in Indian educational institutions for more than thirty years and that this business would not be in existence today if photocopying had a negative impact on publisher profits. The publishers are attempting to increase their profits via this method.

In this specific scenario, the "nature of the work" component of the standard fair use test is an essential factor to consider; nonetheless, the court did not accept this component. Because so many people purchase books and movie tickets for the purpose of amusement, the owners of

[298]Shamnad Basheer, "Copyright as exception" The Indian Express, October 19, 2016.
[299] Ananth Padmanabhan, "Reading it wrong" The Indian Express, October 14, 2016.
[300] Prashant Reddy, "Counterview: The outcome of the DU Photocopy Case isn‟t necessarily good news for Higher Academia in India" available at: https://spicyip.com/2016/09/counterview-the-outcome-of-the-du-photocopy-shop-isnt-necessarily-good-news-forhigher-academia-in-india.html. (Visited on June 15, 2024).

these copyrighted works are unlikely to notice when well-known books and films are used in classrooms for the goal of teaching and education. This is because most people acquire these things for entertainment reasons. Considering this, there would be no infringement of their copyright, and their primary market would continue to be unaffected. On the other hand, academic textbooks are aimed at specific readership because they include specialist subject matter and language that is technical in nature. Therefore, the only people who may benefit from them are those who are actively involved in doing research in specialist topics. If readers who read the magazine, which is mostly composed of students and professors, were permitted to photocopy the sections that they need, the market for academic publishers would suffer as a consequence of this. The reasoning that the court has used in this specific case makes it quite evident that it has just a surface-level understanding of the economics that is significant.

Even after the institution had secured a license, the students would have been allowed to take use of this benefit. In addition to receiving reimbursement for their investment, the publishers would have been rewarded. For ensuring that the students have access to the course materials, the educational establishment would have been obligated to make payment in this scenario.

The University emerges victorious since it was successful in securing a scholarship for the students. Additionally, in addition to the loss that has been incurred by publishers, this verdict has also had a severe effect on the rights of copyright owners.

It was the single judge who raised the question of whether the manufacturing of course packs constituted an infringement of copyright to the notice of the court in a way that was proper. Having said that, the court has made it clear that this is a legal problem rather than a factual one. The court was of the opinion that if the activities taken by the university were within the parameters of section 52(1)(i), then there was no form of infringement. However, if the university's acts did not fall within those parameters, then the plaintiff would be granted an injunction. As a result of this knowledge, the judgment is called into question since the court had previously concluded that the acts of the institution would not take place. The fact that this is the case suggests that the court saw section 52(1)(i) as a general clause that does not differentiate between copying all a book or a certain portion of it, provided that the reproduction of the copyrighted works occurs during instruction. Taking into consideration the interpretation of the sentence, this interpretation was presented. Additionally, to add insult to injury, determining whether a reproduction is taking place during instruction is a fundamentally factual matter that necessitates the evaluation of the curriculum. Following the ruling that was rendered by the lone judge, there were a few problems that remained unsolved. An inquiry was not carried out to

determine whether a substantial quantity of the plaintiffs' works was being duplicated, nor was there any investigation undertaken to determine whether or not the course packs were being sold for the purpose of monetary benefit.

Because of the decision made by the division bench, photocopying was limited to just those items that were necessary for the purpose of the course of instruction. This was done to prevent students from exceeding the permissible limit that was established under section 52(1)(i). Without providing any details on the manner in which the issue is to be decided, the court remanded the case to the single judge. The court did, however, specifically restrict the utilization to accomplish the aim, and as a result, it fits somewhere within the boundaries of distributive justice.[301]

Additionally, it is not yet clear whether the act of photocopying a whole book would be considered a practice that is permitted. As a result of the fact that, on average, 10% of the work from various books was photocopied, a number of authors have asserted that the rulings do not permit photocopying of the entire book.[302] However, there are some who have argued that the court did allow photocopying of the entire work because, in this particular instance, a full chapter was taken from an edited book, which is a copyrighted work in and of itself, and a book would follow the same reasoning.[303]

Other criticisms that were leveled against both rulings included the fact that the plaintiffs never appeared before the court and that the court did not discuss the conflict between section 32A and section 52(1)(i) regarding the reason why the law allows royalty-free use for educational purposes despite the fact that it also contains a provision that requires licensing.[304] It is vital to strike a healthy balance between the two sections, and if the division bench decides to construe section 52(1)(i) in such a way that it allows for the unlimited copying of copyrighted materials during teaching, then section 32A will become outdated.[305] It was proposed that Article 52(1)(i) be interpreted in a limited manner in order to limit its applicability to the use of copyrighted

[301] Lawrence Liang, "Paternal and Defiant Access: Copyright and the Politics of Access to Knowledge in the Delhi University Photocopy Case", 1 Indian Law Review 36, 46 (2017).
[302] Pankhuri Agarwal, "Dispelling the Myth that the DU Photocopy Judgment permits Photocopying of Entire Books", available at: https://spicyip.com/2016/11/dispelling-themyth-that-the-du-photocopy-judgment-permits-photocopying-of-entire-books.html. (Visited on June 10, 2024)
[303] Prashant Reddy, "Does the DU Photocopy Judgment Place Any Limits on Photocopying?", available at: https://spicyip.com/2016/10/does-the-du-photocopy-judgment-place-any-limitson photocopying.html. (Visited on June 10, 2024).
[304] Section 32A of the act allows license to be issued by the Copyright Board on an application made to it for systematic instructional activities, where the copies of the work are not made available in India and such copies have not been put on sale in India at a reasonable price.
[305] Id. at 17

materials during classroom instruction; photocopying outside of the classroom should not be allowed. 397) It was also said that as the publishing industry and libraries continue to evolve, the distribution of educational materials will also continue to alter. This will bring about new issues for educational institutions, as it will bring about new opportunities.[306]

One author, in a critique of the ruling, said that the court ought to have encouraged the growth of libraries by imposing a restriction on the number of books that may be accessed via digitally protected e-kiosks in institutional libraries that are used for non-commercial purposes. This would have been a step in the right direction. If the prices of the digital books are priced in a reasonable manner, then the duplication of the digital books at a proportion that is lower than a certain threshold would be considered to be fair use. If the publishing industry had been in possession of this knowledge, it would have been advantageous for them to construct a robust business plan.[307]

It was also said that the verdict encouraged students to photocopy course materials rather than reading them, which was another criticism that was leveled against it. Due to the fact that it would accept photocopying as a replacement for libraries, this would result in the perpetuation of academic poverty in India.[308] It was claimed in answer to this perspective that the teaching approach, and not the course packs, is to fault, and that just reversing the verdict that was preferred by the publisher would not remedy this misperception. This position was taken in reaction to the opinion that was presented.[309]

Conclusion

The judgement regarding Section 52 of the Copyright Act, 1957, which allows the reproduction of works through copying photocopying for education & academic, has been deemed legal. The principle of Fair dealing offers a detailed guideline. Anything not included within this fall is directly under copyright infringement.

This case raises important questions about how to establish limits of Fair dealing. If limitless usage is allowed under this doctrine, can it still be considered genuine or does it become questionable?

[306] Prashant Reddy Thikkavarapu, "The DU Photocopy Judgment- A Chronicle of the Missed Arguments", 2(3) Indian Law Review 1, 2 (2018).
[307] Shamnad Basheer, "Copyright as exception" The Indian Express, October 19, 2016; Satish Deshpande, "Copy-wrongs and the invisible subsidy" The Indian Express, October 7, 2016
[308] Krishna Kumar, "Shortcut to scholarship" The Indian Express, October 11, 2016.
[309] Shamnad Basheer, "Copyright as exception" The Indian Express, October 19, 2016.

In examining this, the court stepped away from the standard four-factor test of Fair use. Instead, it created its own criteria for evaluating Fair Dealing. These criteria include purpose, nature, percentage of work used, and impact on the market. This new interpretation has reduced the extent of copyright protection. Now, it can easily be misused in the name of education. Academics such as teachers or professors can utilize copyrighted material without strict limitations if it serves their purpose. This shift in rights seems quite unreasonable for several reasons.

Determining when the educational use of copyrighted material ends is not clear-cut at all. This interpretation complicates understanding of what constitutes bona fide versus mala fide fair use. The unclear distinction between these rights and exceptions undermines the original purpose of copyright protection. Even though some protection exists, it often feels paused in favor of fair users' rights. Judges imply that absolute copyright protection does not exist; this protection must be viewed as a statutory right instead.

The implications of this interpretation could confuse individual teachers & students greatly. If taken literally, one might argue that any work could be photocopied or reproduced for educational reasons – raising concerns about whether authors in education would have any protection at all. The judge argued that photocopying and taking cell phone images are both potential infringements if course packs cross the line into copyright violation.

The broader view of fair use was illustrated with examples from Section 52, although these updates have yet to take effect. It becomes evident that students photocopying copyrighted works seems equivalent to universities providing students with course materials.

While this interpretation sounds intriguing, it mainly centers on balancing rights holders' interests with student welfare. A clearer definition and understanding of Fair use is required. Judges & lawmakers need to consider how limitless fair use interpretations may eventually impact creative incentives behind producing works. Establishing minimal thresholds for copyright protection similar to the four-factor test should be a priority to uphold copyright's intent.

This judgement also raises issues about whether Fair use has shifted from an exception to a right itself. The judge emphasized that public welfare concerns outweigh those given to copyright holders. This raises questions about India's unclear copyright framework considering this conflict, highlighting confusion over fair use as either an exception or a user's right.

The court's interpretation will significantly influence how educational materials and books are

published in India. The judge placed considerable emphasis on affordability while claiming that such an approach will benefit national progress; however, it severely undermines defendants' economic interests.

There was little consideration of how this impacts the plaintiffs' profits; any losses faced by them were dismissed based on students' low purchasing power – which is not sustainable reasoning. A critical analysis required solid economic evidence regarding damage caused by photocopying practices was overlooked entirely by the court.

The academic institutions appear free to reproduce unlimited work and distribute multiple copies without needing to make additional purchases. This situation seems to protect everyone except publishers & authors, leading to practices where one book can be purchased legally but numerous copies made within institutions claim educational grounds as justification. Such actions undermine incentives for authors & publishers alike while subtly favoring profit-driven motives.

This landmark judgement promotes free access to information within academic contexts while broadening interpretations around fair use considerably. It highlights how user rights may outweigh statutory protections provided by copyright when justified correctly.

Ultimately, balanced approaches are essential between exceptions & rules related to copyright law moving forward; developing standards that respect both rights holders & users in an increasingly globalized context is more important than ever. Therefore, there is need for improvement in how fair use/ fair dealing is applied in India.

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INTERMEDIARY LIABILITY FOR TRADEMARK INFRINGEMENT

Baishali Jain[310]

Abstract

This article examines the concept of intermediary liability in the context of trademark infringement, exploring the legal responsibilities of online platforms and intermediaries in relation to intellectual property rights. As the digital marketplace continues to expand, the role of intermediaries such as internet service providers (ISPs), social media platforms, and e-commerce websites in facilitating trademark infringement has come under increasing scrutiny. The paper analyzes legal frameworks to assess the scope and limitations of intermediary liability. It also considers the balancing act between protecting trademark owners' rights and fostering the free flow of information online. Through a detailed exploration of case law and emerging trends, this article aims to provide insight into the evolving landscape of intermediary liability and its impact on both trademark holders and digital intermediaries in the modern e-commerce environment.

***Keywords*:** Intermediary, Trademark, Counterfeit, e-commerce, trademark infringement

Introduction

E-commerce is one of the paradigms shifts that India faced in the era of fastest growing economies. As per the facts, India is the destination to major e-commerce hubs with goods and services providers from multinational players. E-commerce platforms have gathered an enormous market over the last decade and a half. In India, initially, these platforms were about customers being able to find different products offered by various brands at the click of a button and having the convenience of home delivery, and of course, the incredible discounts e-commerce offered. Once a substantial market-base was created, these platforms themselves became brands. In that, what they sold was not just the product, but with it, the brand name they had created for themselves over the years. Trademarks, then, hold major value for e-Commerce platforms, because the product is now branded as both the seller's and the platform. The simultaneous growth of both e-commerce and trademarks lead to the upswing in IPR

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violations through online transactions questioning the "nature of the e-commerce".

Courts in India didn't get the opportunity to discuss the changing landscape of intermediary liability. But the recent years, changed the Indian jurisprudence by giving handful of settled judgments like *Louboutin vs. Nakul Bajaj*[311] and *L'Oreal vs. Brandworld*[312] on the above issue. The above-mentioned cases discussed the following three issues to clear the picture of the liability of intermediaries in trademark infringement. The issues are as follows:

1. What constitutes the e-commerce platform be termed as "Intermediary"?

2. What is the relationship between IP rights violations and immunity u/s 79 of the IT Act?

When can an E- commerce platforms claim to be an "Intermediary" under the IT Act?

E-commerce in India is governed by the provisions of Information Technology Act, 2000. Post enactment, the act was amended in 2008, which introduced the term "intermediary" under Sec. 2(w) and Safe Harbour provision under Sec. 79 of the Act.

As per the IT Act, an "intermediary" is defined as any person who on behalf of another person receives, stores or transmits an electronic record or provides any service with respect to that record and includes, among others, search engines, online payment sites, online auction sites, and online marketplaces.[313]

The definition concludes two points:

a. It is meant to apply only as far as the services of the actor are related to an "electronic record".

b. It is an umbrella definition covering all services in respect of an electronic record.

The definition was clear in its terms, but was shadowed by the issue as to whether e-commerce platforms fall under the term "Intermediary"? The issue first rose in the Louboutin case before the Delhi court. Louboutin (plaintiff), luxury brand specialized in shoes filed a suit seeking protection against unauthorized selling of their products by Darveys.com (defendant), member-only luxury online shopping portal. Whereby, the defendants claimed immunity u/s 79 of the IT Act as an "Intermediary". This was the first time the court dealt with such an issue. Due to lack of jurisprudential evidence or settled theories in favour of such an issue, the Indian court relied

[311] Louboutin vs. Nakul Bajaj, (2018) DL 344.
[312] L'Oreal vs. Brandworld, (2018) DL 980.
[313] The Information Technology Act, 2000, Sec. 2 (w).

on foreign judgments -: European Union (EU) and USA.

Position in EU

In *L'Oreal SA & Ors v. eBay International AG & Ors*[314] case, the court dealt with the violation of Trademark rights on online platform discussing the nature of such platforms as an "Intermediary",

"The question whether the operator of an online marketplace is entitled to the exemption[315] *is based on the role played by the operator i.e. active or inactive. If the operator provides assistance "which entails, in particular, optimizing the presentation of the offers for sale in question or promoting them", even if the operator has not played active role and he provides the above service, the operator can claim protection as an intermediary. However, the said intermediary, if upon becoming aware of the facts which lead to an inference that the offers made on the website were unlawful, failed to act expeditiously, then the exemption ceases"*

To conclude the EU stand, the courts determine the following factors:

a. the role of the platform i.e... active or not
b. Level of control and knowledge over the data stored with the portal

Moreover, if the portal initially had no knowledge of unlawful data but later on, upon obtaining the knowledge about the same no remedial step is taken by the said portal, the portal stands liable.

Position in US

In *Tiffany vs. eBay*[316] case, the Circuit Judge dealt with the trademark infringement by eBay through counterfeit sale of the plaintiff's products. The court held that

"The standard for contributory liability, as derived from the common law of tort, required that 'a service provider must have more than a general knowledge or reason to know that its service is being used to sell counterfeit goods. Some contemporary knowledge of which particular listings are infringing or will infringe in the future is necessary. Therefore, the court held that eBay would not be liable for contributory infringement of Tiffany's trademarks unless it had actual knowledge of the specific acts of infringement".

Position in India

In *Christian Louboutin vs. Nakul Bajaj* case, the court first sat to discuss the nature of e-

[314] C-324/09 12 JULY, 2011.
[315] Article 14 of the Directive 2000/31 i.e. the E-commerce Directive.
[316] 600 F.3d 93.

commerce platforms as “Intermediary”. The court took the guidelines from the foregoing jurisdictions. The honorable judge J. Singh laid down exhaustive list of 26 activities, which if performed by the platform would bring that platform under the term “Intermediary.” The activities are as follows:

i. Providing details of seller on the platform
ii. Providing transport facilities to the seller for the movement of the products
iii. Claiming quality assurance
iv. Uploading the product on the platform
v. Claiming authenticity guarantees
vi. “Creation of the listing” of the said products
vii. Reviewing the product themselves of via customers
viii. Paid membership facility
ix. Advertising the product on the portal
x. Using the database of the customer to promote the product
xi. Exclusive discounts to members
xii. Assistance in order placing via call centre assistance
xiii. Designing payment gateway
xiv. Collecting the payment
xv. Packaging the product under their portal packing
xvi. Facilitating the product to the final purchaser
xvii. Giving delivery personnel facility
xviii. Accepting cash on behalf of the seller
xix. Final payment to the seller after deducting the commission.
xx. Exchange of product facilities in case of complaint
xxi. Deep linking with the seller’s website
xxii. Entering into agreements with other sellers
xxiii. Providing after-sales services if product demands so
xxiv. Trademark through Meta tags
xxv. Booking ad-space or ad-words on search engines
xxvi. Promoting its own affiliated companies on the basis of more favorable terms than other sellers;

Summarily, it can be concluded that the court noted that the role of an online marketplace can be ascertained by looking at the following factors broadly:

a. The role performed by the portal with respect to the goods i.e. the above-mentioned

exhaustive list of activities

b. The policies of the portal with respect to ensuring that counterfeit, illegal goods not traded through the same- enforcing terms of use and consequences upon such violations.

Thereby concluding, the court held that in the present case, Darveys.com was not an intermediary but was an "active participant". The court applied the same exhaustive list test in *L'Oreal vs. Brandworld* case and *Skull candy vs. Shri Shyam Telecom*[317] case, thereby setting the precedent.

What is the relationship between IP right violations and the immunity claimed under Sec 79 of IT Act?

Much ink has been spilled over the issue of whether and when online intermediaries like Amazon, eBay etc become liable for IP rights infringement. It is not the first time that the court has established the relationship between virtual space infringement and safe harbor provisions (Sec. 79 IT Act). The court has once already decided the role of intermediary with respect to Copyright infringement. In that suit, the court ruled in favour of the intermediaries giving priority to their Freedom of speech and expression under the Constitution of India.

It is for the first time that the court settled the role of intermediary with respect to Trademark infringement. Whenever a notice is served to the infringing party, the first defense taken by them is that they are the "intermediaries" and hence claim immunity under Sec. 79 of IT Act.
Sec. 79 of the act states, an intermediary won't be liable for any third party information being made available by it. It is an exemption qualified by a number of factors such as:

- Due diligence is observed by the intermediary
- No interference/modification with the information/data
- Limited function of the intermediary i.e only provides access to communication.

Moreover, the exemption would fail if it is proved that the intermediary has indulged in any of the following act:

- Conspired, abetted or aided or induced in the commission of the unlawful act
- Doesn't take remedial action upon receiving the knowledge regarding the unlawful act.

In short, it can be stated that Sec 79 is not a blanket exemption rather a conditional one, with the aim to check the blatant use of this provision. Now referring to the Louboutin case, the

[317] Skull candy vs. Shri Shyam Telecom, (2018) DL 979.

court held that the role of the portal was not just of an intermediary but rather an active participant.

To test the liability of the defendant, Sec 101 and 102 of the Trademark Act dealing with falsifying and falsely applying trademarks is relied upon. The court provides the following illustration to give a clear view:

"*Any online marketplace or e-commerce website, which allows storing of counterfeit goods, would be falsifying the mark. Any service provider who uses the mark in an invoice thereby giving the impression that the counterfeit product is a genuine product, is also falsifying the mark. Displaying advertisements of the mark on the website so as to promote counterfeit products would constitute falsification. Enclosing a counterfeit product with its own packaging and selling the same or offering for sale would also amount to falsification. All these acts would aid the infringement or falsification and would therefore bring the e-commerce platform or online marketplace outside the exemption provided under Section 79 of the IT Act."*

Thus, the court didn't hold defendant liable for infringement but ordered injunction against the defendant along with other administrative directions.

Case Laws

1. Christian Louboutin SAS vs. Nakul Bajaj

Christian Louboutin is a designer luxury brand dealing in footwearDarveys.com is involved in the promotion and sale of luxury products. The site is accessible to only signed members. Through site, the seller identity is not known. Even the website claims for the genuineness of the product. The price of the product is manipulated by the website itself. All the products sold under the trademark of Louboutin without the authorization from the plaintiff. On the above based facts, the court concluded that the defendant cannot be termed as "Intermediary".

2. L'Oreal vs. Brandworld

L'Oreal engaged in the business of manufacturing, distribution and sale of wide range of hair care, skin care, eye care, cosmetics and beauty products. www.shopclues.com is an online market place.

Plaintiff filed a suit against the defendant for the injunction to forbid the defendant from selling their products on their portal without license from them. The defendant claimed defense under the safe harbor provision proving themselves to be an intermediary on the following grounds:

a. The sellers' details are disclosed on the site

b. The website has taken down policy
c. The website is facilitating payment and providing logistical support

However, there are other factors also which need to be discussed such as the guarantee provided by the website, selling look alike products on the same window which constitutes aiding and abetment of violation of intellectual property. Hence the court held the Shop clues to be outside the term "intermediary" and hence cannot avail the benefit of safe harbor provision.

The above rule was applied in *Skull candy vs. Shyam Telecom* case again in 2018 by Delhi High Court.

3. Amazon seller services vs. Amway India Enterprises & Ors[318]

Amway, USA originated company deals in manufacturing and distribution of healthcare, wellness, cosmetic and home products through Direct Selling Business Model (DSBM). It also has its online portal www.amway.in. Amazon, an American company is an e-commerce platform wherein sale of goods takes place.

Amway has filed an application for interim injunction against Amazon, to stop them from selling unauthorized Amway products as it amounts to trademark infringement.

The single bench judge of Delhi High Court passed the order in favour of the plaintiff i.e. Amway Company restricting the e-commerce platforms from selling the products of Amway, Modicare and Oriflame without their consent.

Aggrieved by the order, Amazon filed an appeal before the division bench of Delhi High Court, wherein the division bench reversed the order of the single judge bench on the ground that the mere value-added services being provided by the e-commerce platforms which includes packaging, storage and delivery does not change the nature of the e-commerce platform from intermediary to massive facilitator. Thereby they continue to fall under the term "intermediary and hence within the purview of safe harbor provision.

Conclusion

Analysis

Given this changing nature, the concern of intermediary liability has a greater significance for customers. This has been recognized both by the government and the courts. However, the differences between a physical market and an online market bring into the picture some fundamental questions about enforcement. In a physical market, a trademark is associated with the physical product itself and the seller, whereas online, the amount of information available

[318] Amazon Seller Services vs. Amway India Enterprises, (2020) DL 133.

and the number of sellers increases exponentially, with there being many new added steps in the transaction in terms of selecting and identifying the trade partners, which then becomes an integral part of the process. This will then require the determination of joint liability for the infringement of the platform and the seller.

Initially this case came up as a new chapter in the legal phase with new guidelines regarding the role of intermediaries with reference to trademark infringement. It was considered that the decided case will set up precedents for the upcoming ones. But the result was not the one which everyone wished for. There are various loopholes or grey areas which have not been cleared by the decision. In fact, it is so said that the condition has become much worse than it was before this case.

As per my understanding of the legal knowledge, I could gather few grey areas which have been darkened by the present judgment. Some of them are as follows:

i. One of the prime issues throughout the case was to define the scope of intermediary. It was expected that the case would set the lines precisely. But in reality, the judgment did not succeed in making the distinction between the intermediary defined u/s 2 (w) and those intermediaries defined u/s 79 of the IT Act. The court held that ones who fail to come under safe harbor provision also cease to be an intermediary u/s 2 (w). Such conclusion is blurred as based on no logical reasoning.
ii. The court interpreted that Sec 79 is applicable only for online platforms and excluded the other activities like delivery, packaging etc. the court could have separated the online and offline elements of e-commerce and analyzed each of them distinctively.

iii. The next point of issue is the “level of knowledge”. Sec. 79 talks about “actual knowledge”. This is the doubtful area as to what level of knowledge is required to bring the intermediary outside the purview of safe harbor. Does the knowledge should be more than general or just the basic knowledge. Even the court didn’t lay down the specific level of knowledge as to state the defendant liable for infringement.

Recommendations

The statue should precisely define the thin line, demarcating the role of e-commerce platforms as to when they act as intermediary and when they act as active participant.

The IT Act should avoid the confusion arising from the definition of intermediaries under section 2 (w) and those under section 79. The difference between the two creates a gap thereby raising the issue as to any platform which fails to fall under section 79 ceases to be an

intermediary under section 2 (w) too.

The legislature should provide proper guidelines ensuring consumer interest as well as the intermediary interest thereby establishing a balance between the two.

The enforcement cell of these E-commerce platforms should be vigilant and efficient upon receiving any such information regarding the unlawful activities and should also review the quality and genuineness of the product before uploading it on the portal.

The E-commerce platform is a complex structure which makes it even more difficult to lift the curtain when infringement takes place as to who is to be held liable. Therefore, there should be clear guidelines as to what activities will make the intermediary liable for the infringement

While the concern for online infringement and protecting rights holders is legitimate, the route that the Court took muddles the issue of platform liability for online infringement, and the legal uncertainty is likely to have a negative effect on the online sale and purchase of goods.

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MANIPULATION OF IPR AS A STRATEGIC TOOL IN ADDRESSING LIVE STREAMING MUSIC AND VIDEO INFRINGEMENT IN THE DIGITAL ERA

Ranjana Paul[319]

Abstract

According to John Locke's theory of Intellectual Property, "When a person puts his labour in an unowned object, his labour gets amalgamated with the new object that is then created, which cannot be separated without causing damage to the novel creation thus made. The creator then acquires natural rights over the object to which he applied his intellectual labour. Once the person acquires the property right, his original creation is protected from being used, transferred or manipulated by another person." Nowadays, it's not applicable as we're progressing towards the digital era therefore, confining IPR solely to ethical and moral rights will not have any significant changes. They're progressing towards individualism and business owing to their commercial interest. As we're well aware, Trademarks and Trade secrets play a pivotal role in various brandings and logos of companies however, Copyright is the longest-serving protection for the creators and plays an important role in protecting artistic works. Coming to music protection in digital platforms owing to unauthorised user upload platforms, intellectual property is an intricate interplay of artistic creativity and legal protection for online live-streaming music. The research employs the legal research method, undertaking a qualitative analysis of the legal instruments on copyright and IPR enforcement.

The paper first reviews the economic and social impact of live-streaming piracy on the topic. It then examines the imperative boundaries of current IPR systems in the digital environment. Another role of the research is to explore the relationship between technology and law with specific reference to automatic takedown systems, watermarking, and real-time monitoring systems. Last of all, it advises achieving the best course of action, which is a combination of regulatory adjustments, international cooperation, and technology enhancement for effective

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copyright protection. By entering into the realm of IP, the paper underscores the need for a responsive and innovative legislated approach to tackling live-streaming piracy while making digital content accessible to many creatives.

Keywords: Live Streaming Infringement, Intellectual Property Rights, Digital Piracy, Copyright Enforcement, Technological Innovation

Introduction

Background and Importance of IPR in the Digital Era

Intellectual Property Rights (IPR) protect creative content rights in innovation while creating fair, competitive market environments for creative industries. Digital technology expansion has brought a complete transformation to the process of content production and its distribution and reception. Digitisation led to platforms such as streaming services joined with social media and cloud file storage, which boosted accessibility while creating new difficulties to protect copyrights. The core aspect of IPR, called Copyright law, offers creators complete authority to manage their artistic outputs, from musical works to filmed content and staged performances. Concurrently, with the switchover from traditional content delivery systems to digital streaming services, unauthorised content access has increased dramatically, and IPR enforcement has become difficult to perform. IPR protection in current times presents multiple dimensions since it requires resolving legal matters and technological capabilities alongside strategic policy decisions. The strategic management of IPR through legal, technological and economic strategies necessary to address new copyright infringement forms, especially within live streaming systems. [320]

The Evolution of Live Streaming Technology

Real-time video and audio content broadcasting through live streaming technology has transformed creators to distribute their content to worldwide viewers. Milestones in live streaming technology derive from basic internet radio services and primitive video streaming systems that appeared during the late 1990s and early 2000s. Through enhanced internet bandwidth capabilities, better compression algorithms and cloud services, live streaming emerged as the main method for distributing content. Visual creators use YouTube Live, Twitch, Facebook Live and Instagram Live to stream real-time entertainment content for which they earn money by running advertisements and getting sponsorships or collecting subscription fees. The

[320] Digital Content Creation and IP Laws Unveiled, https://www.globalpatentfiling.com/blog/Navigating-the-Creative-Landscape-Digital-Content-Creation-And-Intellectual-Property-Laws (last visited Feb 16, 2025).

same technological advancements that make unauthorised streaming of copyrighted music and video content possible through digital piracy have increased exponentially. Illicit streaming sites engage in unlicensed rebroadcast activities that result in major financial losses for content creators alongside production houses and streaming service providers when they stream concerts athletic events and entertainment shows. The quick and seamless recording of copyrighted content poses major challenges for law enforcement and technology because it requires enhanced IPR regulation and implementation methods.[321]

Rise of Music and Video Infringement in Digital Platforms

Incorporating numerous live-streaming platforms into the market has created a steep surge in charges of copyright infringement targeting musical and video material. Live performance rebroadcasts without authorisation copyright music uploads and pay-per-view event streaming occur frequently in digital environments. Various infringers have discovered opportunities through decentralised content hosting with VPN usage to exploit legal ambiguities in modern copyright statutes. The rise of UGC platforms has introduced more complications in the copyright field since users post copyrighted material on their platforms without the author's permission. The content detection systems developed by major streaming services, including YouTube Content ID and Facebook Rights Manager, struggle to identify intricate copyright violation methods. The lack of uniform global regulations and weak enforcement mechanisms contribute to the increasing difficulty in controlling digital piracy. This growing challenge has prompted a re-evaluation of how IPR can be strategically manipulated to combat unauthorised streaming effectively.[322]

Objectives

This study aims to analyse the role of IPR as a strategic tool in addressing live-streaming music and video infringement in the digital era. The research seeks to explore legal, technological, and policy-driven approaches to strengthening copyright enforcement. The primary objectives include:

- Examining the existing legal framework governing copyright protection in live streaming.
- Identifying key challenges in enforcing IPR against unauthorised digital broadcasts.
- Evaluating the role of technology, such as artificial intelligence (AI) and blockchain, in

[321] Livestreaming | Description, History, Technology, & Concerns | Britannica, https://www.britannica.com/technology/livestreaming (last visited Feb 16, 2025).

[322] Admin Administrator, *How Live Streaming Can Expose You to Charges of Copyright Infringement*, ASIA IP, https://www.asiaiplaw.com/article/how-live-streaming-can-expose-you-to-charges-of-copyright-infringement (last visited Feb 16, 2025).

preventing copyright infringement.

- Assessing the economic and ethical implications of stricter copyright enforcement on content creators, platforms, and consumers.

- Proposing policy recommendations to enhance copyright protection while maintaining a balanced approach between innovation and access to content.

Research Questions

1) How effective are current copyright laws in combating live-streaming infringement?
2) What technological solutions can be leveraged to enhance copyright protection in real time?
3) What are the economic consequences of live-streaming piracy on the media and entertainment industry?
4) How can content creators, platforms, and regulators collaborate to develop a balanced IPR framework?

Methodology and Scope of Study

This research employs a multidisciplinary approach, incorporating legal analysis, technological evaluation, and economic assessment to understand the manipulation of IPR in live streaming. The study will be primarily based on qualitative research, utilising legal case studies, statutory reviews, and policy analyses from various jurisdictions. It will examine landmark copyright infringement cases related to live streaming to assess judicial interpretations and enforcement trends. Additionally, the study will analyse technological mechanisms such as digital rights management (DRM), AI-based content recognition, and blockchain-based licensing systems to evaluate their effectiveness in mitigating piracy.

The research will focus on international copyright regulations, with a particular emphasis on frameworks such as the Digital Millennium Copyright Act (DMCA) in the U.S., the Copyright Directive of the European Union, and India's Copyright Act of 1957. The scope of the study will include major live streaming platforms, both legitimate and illicit, to understand the technical and legal challenges in enforcing copyright. Furthermore, stakeholder perspectives, including content creators, copyright holders, platform operators, and policymakers, will be considered to provide a holistic view of the issue.

By comprehensively analysing the interplay between IPR, technology, and digital piracy, this study aims to contribute to the ongoing discourse on strengthening copyright protection in the

digital age. The findings will provide valuable insights for legislators, industry players, and digital rights advocates in formulating a more effective and sustainable approach to combating live streaming infringement.

Understanding IPR in Digital Content Protection

Intellectual Property Rights and Their Role in Media & Entertainment

The media and entertainment industry benefits from Intellectual Property Rights (IPR) because these laws protect creators while enabling them to profit from their original content while also boosting new ideas. The main types of IPR protection include copyright alongside trademarks, patents, and trade secrets. Copyright emerges as the primary Intellectual Property Rights protection because digital technology enables simple content duplication and distribution, which artists and creators need. Through copyright protection, authors and creators maintain control of their work and have the authority to determine all its reproduction rights public performance uses distribution methods and adaptations.

The widespread adoption of digital streaming platforms has changed how people experience media content because it gives worldwide immediate access to music, filmed entertainment and real-time performances. Simple access has resulted in massive unauthorised use and piracy that reduces the revenue available to copyright holders. Copyrighted material distributed through YouTube and other streaming platforms requires valid licenses because Spotify and Netflix use Content ID and DRM technology to monitor unauthorised content. The existing measures for fighting illegal digital use remain insufficient because IP infringement continues to spread and requires improved laws to stop unauthorised content sharing. Strategic implementation of IPR protects artists and content creators from underpayment while it develops a balanced system upholding innovation and access to content.[323]

Copyright and Related Rights in Live Streaming

Going live has emerged as a leading digital content delivery method that provides immediate broadcasts of music performances along with sports competitions, concerts, gaming streams and various other shows. The technological advancement produces complicated copyright issues for owners to resolve along with obtaining appropriate licenses while enforcing their rights. The copyright law protects original works in tangible form, yet live broadcasts lack coverage because

[323] David Klein, *Legal Concerns for Social Media Influencers: Intellectual Property - KMT*, KLEIN MOYNIHAN TURCO (2021), https://kleinmoynihan.com/legal-concerns-for-social-media-influencers-intellectual-property/ (last visited Feb 16, 2025).

they are unrecorded at first. The Berne Convention & the Rome Convention grant international copyright protection to live performances especially when recordings and transmissions occur instantaneously.[324]

Three legal rights, such as Performers' rights[325], broadcasting rights and synchronisation rights, apply to live-streaming activities. The musician performing at their concert maintains their performing rights, and the event organisers and streaming platforms retain the right to distribute the broadcast. The unlawful transmission of live content, known as live-streaming piracy, is identified as illegal broadcast activity of copyrighted material without permission to use it. Illicit content transmission without rights holder payment is common in pay-per-view events and sports broadcasting services, so streaming services profit at the expense of rights holders.

YouTube, Facebook Live and Twitch use automated content recognition technology to identify and eliminate unlawful streams. Users who infringe copyrights use techniques that involve reflecting whole streams or editing audio but also practice cropping to avoid detection systems. Live-streaming copyrighted content demands a strong mix of legal safeguards, technological detection frameworks and stronger platform regulations, leading to proper protection for intellectual property in real-time streaming platforms.[326]

Digital Millennium Copyright Act (DMCA) and Similar Legal Frameworks

Live streaming has established itself as an online distribution method through which people can watch music concerts and sports games and tune into gaming sessions and other events in real time. Technological advancement produces complicated copyright issues for owners to resolve, obtaining appropriate licenses while enforcing their rights. The copyright law protects original works in tangible form, yet live broadcasts lack coverage because they are unrecorded initially.[327] The Berne Convention[328] & Rome Convention grants international copyright protection to live performances, especially when recordings and transmissions occur instantaneously.

[324] Oldham Li & Nie-Benjamin Choi, *Intellectual Property for Social Media Influencers*, LEXOLOGY (2022), https://www.lexology.com/library/detail.aspx?g=f4416c8c-e704-431d-bb44-f7b18be4855c (last visited Feb 16, 2025).
[325] Ayush Verma, *Performer's Rights under Copyright Law*, IPLEADERS (Apr. 23, 2021), https://blog.ipleaders.in/performers-rights-under-copyright-law/ (last visited Feb 16, 2025).
[326] IPR_News, *Broadcasting, Performing Rights and Copyrights: Navigating the Legal Landscape*, UNIMARKS LEGAL (2022), https://unimarkslegal.com/ip-news/broadcasting-performing-rights-copyrights/ (last visited Feb 16, 2025).
[327] The streaming industry and the platform economy: An analysis - Jean K Chalaby, 2024, https://journals.sagepub.com/doi/10.1177/01634437231210439#body-ref-bibr43-01634437231210439 (last visited Feb 16, 2025).
[328] Berne Convention - an overview | ScienceDirect Topics, https://www.sciencedirect.com/topics/computer-science/berne-convention (last visited Aug 23, 2024).

Three legal rights, such as Performers' rights, broadcasting rights and synchronisation rights, apply to live-streaming activities. The musician performing at their concert maintains their performing rights, and simultaneously, the event organisers and streaming platforms retain the right to distribute the broadcast. The unlawful transmission of live content, known as live-streaming piracy, is identified as illegal broadcast activity of copyrighted material without permission to use it. Illegal content distribution without rights holder payment is common in pay-per-view events and sports broadcasting services, so streaming services profit at the expense of rights holders.

YouTube, Facebook Live and Twitch use automated content recognition technology to identify and eliminate unlawful streams. Users who infringe copyrights use techniques that involve reflecting whole streams or editing audio but also practice cropping to avoid detection systems. A solution to these problems will require strong legal safeguards, technological enforcement methods, and stricter platform regulations to guarantee the protection of copyrighted material within live-streaming platforms.[329]

Fair Use, Public Domain, and Open Access Considerations

Under copyright law, fair use remains essential because it permits restricted usage of copyrighted materials without rights holder permission. The following fair use scenarios exist within the live-streaming commentary and criticism section: educational demonstrations and derivative creations that qualify as parodies. A Twitch or YouTube content creator can utilise brief copyrighted footage or music during reviews as long as it satisfies the fair use test by showing certain conditions:

- The use belongs to transformative processes if it introduces fresh interpretations or messages.
- The type of material subject to copyright protection affects the analysis by determining whether the work holds factual or creative elements.
- Evaluating how the utilisation affects the monetary worth of the authentic material creates the fourth fair use evaluation criterion.[330]

Fair use is a legally unsure principle that results in regular conflicts between content originators and the copyright holders who protect their work. Automatic copyright monitoring systems on

[329] Copyright Issues in the Digital Era: Challenges and Solutions, https://lawctopus.com/clatalogue/clat-pg/copyright-issues-in-digital-era/ (last visited Jul 21, 2024).
[330] Sneha Mahawar, *Fair Use under Copyright Law*, IPLEADERS (Jan. 25, 2023), https://blog.ipleaders.in/fair-use-under-copyright-law/ (last visited Feb 16, 2025).

various platforms automatically report and delete content even though fair use exemptions could protect the material, leading to user discontent.[331]

Copyright law contains the public domain category that includes original content that has become unprotected because creators explicitly assigned it to the public domain or because it entered the public domain through time expiration or non-renewal. Content creators benefit widely from public domain works because these materials exist in free availability for direct use and meticulous modification. Researching the public domain status of intellectual property can prove difficult because counties have different timeframes for copyright expiration.

Open access initiatives, such as Creative Commons (CC) licensing, provide alternative copyright models that allow creators to share their works under customisable permissions. This approach promotes a more flexible and collaborative digital environment while ensuring holders retain control over how their content is used. In the live-streaming industry, open-access music and video libraries offer legally compliant alternatives to copyrighted material, reducing the risk of infringement.[332]

Balancing copyright protection with fair use, public domain access, and open-access licensing is essential for fostering a digital ecosystem that supports content creators and users. While stringent copyright enforcement is necessary to combat infringement, flexible copyright models encourage creativity, innovation, and the ethical sharing of knowledge in the digital era.

Live Streaming Infringement – Challenges and Legal Loopholes

Types of Infringement in Live Streaming (Piracy, Unauthorized Broadcasting, etc.)

Live-streaming technology growth has brought up new legal and regulatory issues about intellectual property rights (IPR) despite improving digital content viewing methods. Three major types of infringement occur in live streaming, namely unauthorised broadcasting and content theft, which threaten the security of rights holders, creators and platform operators.

Unauthorised live transmission of copyrighted content through unlicensed broadcasters constitutes live-streaming piracy. Sports broadcasting suffers extensively from piracy through streaming services that broadcast premium athletics events without paying rights holder fees, including FIFA World Cup events and Olympics competitions and pay-per-view fights. The

[331] Fair Use in Copyright (BitLaw), https://www.bitlaw.com/copyright/fair_use.html (last visited Feb 16, 2025).
[332] Jack McKenna, *Open Access Copyright and Creative Commons Licenses*, MDPI BLOG (Dec. 5, 2023), https://mdpiblog.wordpress.sciforum.net/2023/12/05/open-access-copyright/ (last visited Feb 16, 2025).

illegal streaming industry operates through unauthorised platforms and social media networks, which lure millions of viewers, resulting in major financial setbacks for professional broadcasters. [333]

The act of broadcasting without authorisation represents another infringement that involves the unauthorised streaming of content from movies to music concerts and gaming events. The unauthorised streaming of complete content, such as films and exclusive Netflix and Disney+ programming from YouTube, Twitch and Instagram Live, occurs frequently. Traditional piracy differs from unauthorised broadcasting because the latter happens in real-time legal enforcement challenges since takedown protocols might not respond fast enough before viewership begins.

Live-streamed content becomes the target of illegal distribution through three actions: including original content copying and recording to repackaging distributed content. Unauthorised streaming services use copyright-protected material from legitimate services to reconstruct modified versions (aspect ratio changes, logo overlays, audio distortions) before distributing them through mirror sites to bypass copyright systems. The illegal practices hurt the financial worth of original material, thus making it hard for creators to generate revenue from their work.[334]

As live streaming continues to grow, so do the complexities of detecting and preventing these infringements. The legal frameworks in place often struggle to keep pace with evolving digital threats, making it imperative to address these challenges with innovative enforcement strategies and stronger regulatory mechanisms.

Streaming Platforms and Liability Concerns (YouTube, Twitch, Instagram Live, etc.)

Digital platforms execute two roles in copyright systems since they allow users to distribute live content and function as dispute intermediaries between rights holders and content creators. Copyright infringement responsibilities of streaming platforms remain disputed because both legal uncertainties and changing digital content-sharing practices exist.[335]

Streaming platforms YouTube, Twitch and live-streaming platforms Facebook Live, Instagram

[333] Intellectual Property Rights in The Era of Digital Streaming - Academike, (2025), https://www.lawctopus.com/academike/intellectual-property-rights-in-the-era-of-digital-streaming/ (last visited Feb 16, 2025).

[334] Legal Issues & Challenges Around Livestreaming, https://www.mondaq.com/india/copyright/1501366/legal-issues-challenges-around-livestreaming (last visited Feb 16, 2025).

[335] (PDF) The Role of Intermediary Liability in Balancing Copyright Law in the Digital World, https://www.researchgate.net/publication/368661081_The_Role_of_Intermediary_Liability_in_Balancing_Copyright_Law_in_the_Digital_World (last visited Feb 16, 2025).

Live, and TikTok give users real-time broadcasting capabilities to defend their broadcast channels against unauthorised content from rights holders. Online platforms in the U.S. are protected through DMCA[336], while those in the EU use Directive 2019/790 Article 17 to diminish their liability risk by implementing strong copyright defences. The protection measures automated content recognition systems, takedown mechanisms, and content filtering technologies to identify and remove infringing streams.

YouTube uses the Content ID system, which automatically examines live-streamed content through a database of copyrighted materials. Copyright holders can monetise matched content by choosing to block it directly or share monetary revenue with the platform. The Twitch platform enforces a permanent account deactivation policy as the third offence of copyright infringement against a user. The automated detection systems by platforms maintain streaming loopholes since pirates find ways to manipulate videos using different methods, such as altering playback speed and visual filter applications. The speed at which infringing content gets re-uploaded creates continuous obstacles for real-time enforcement involving copyright protection.

Platform liability exemption, a safe harbour, protects server operators from legal consequences when they promptly remove notified infringing content after assuming reasonable practices. This loophole exists, according to critics, because platforms do not actively prevent infringement, although they claim protection from direct liability. Streaming services maintain that strong oversight measures would cause platforms to excessively filter legitimate works while inhibiting fair-use applications and creative activities.

Balancing platform responsibility with user rights remains a complex issue in copyright law. The challenge lies in ensuring that platforms enforce copyright protection effectively without disproportionately restricting content creators' freedoms. Strengthening collaborative efforts between rights holders and platforms, refining automated enforcement technologies, and enhancing legal accountability measures are crucial in addressing liability concerns in live-streaming environments.

Jurisdictional Challenges in Cross-Border Infringement

The challenge of solving live-streaming infringement becomes complex because digital piracy breaks through various legal jurisdictions. The international availability of live-streamed content

[336] Digital Millennium Copyright Act, WIKIPEDIA (2023), https://en.wikipedia.org/w/index.php?title=Digital_Millennium_Copyright_Act&oldid=1158379028 (last visited Jun 29, 2023).

proves difficult for enforcement agencies since traditional broadcasting laws do not apply to this distribution method.

Copyright laws display different regulations depending on the specific territory. The legal validity of a stream under fair use or private use exemptions within one country does not extend to other countries where it can thus constitute an infringement. The prohibition against copyright infringement becomes increasingly difficult to enforce due to streaming sites that base their operations in countries where law enforcement does not effectively protect copyrights. Streaming piracy hubs remain successful in countries without substantial anti-piracy agreements because these nations prevent content owners from Europe or the United States from taking legal action against them.

VPNs create a jurisdictional problem when users employ them to discover blocked content by revealing alternative physical locations. Piracy websites use VPN methods to circumvent copyright blocker systems which creates difficulties for authorities who enforce intellectual property laws. Rights holders normally request website blocking injunctions, yet this approach proves ineffective because blocked sites get immediately replaced by alternative domains or mirror sites.

Global copyright laws enforced through the *"WIPO Copyright Treaty (WCT)*[337] *and TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights)*[338] *seek to establish a standard system for managing digital copyright enforcement."* The failure to have standard implementation practices alongside inconsistent enforcement priorities among different jurisdictions remains a key barrier to live-streaming online infringements. Effective solutions to these jurisdictional challenges include stronger international cooperation improved digital IP enforcement systems and harmonized copyright legal frameworks.

Strategic Use of IPR in Combating Live Streaming Infringement

The growing concerns over live streaming infringement necessitate a strategic and multi-faceted approach leveraging Intellectual Property Rights (IPR) as a defensive tool. The traditional enforcement mechanisms, though effective to some extent, are increasingly being challenged by the rapid evolution of digital piracy tactics. This chapter explores proactive copyright enforcement mechanisms, digital rights management (DRM), AI and blockchain technologies,

[337] WIPO Copyright Treaty (WCT), https://www.wipo.int/treaties/en/ip/wct/ (last visited Nov 28, 2023).
[338] trips_art13_jur.pdf, https://www.wto.org/english/res_e/publications_e/ai17_e/trips_art13_jur.pdf (last visited Dec 26, 2023).

and licensing strategies as critical elements in addressing live streaming piracy.

Strengthening Copyright Enforcement Mechanisms

Copyright enforcement mechanisms form the first line of defense against unauthorized live streaming and digital piracy. Given the ease with which infringing content is shared online, robust legal and technological frameworks are essential to ensure effective deterrence and real-time takedown of infringing materials.

One of the most significant advancements in copyright enforcement is the notice-and-takedown system, which is primarily governed by the Digital Millennium Copyright Act (DMCA) in the U.S. and similar legal frameworks globally. Under this system, rights holders can file infringement notices to digital platforms, which must then remove the unauthorized content. However, live streaming presents a unique challenge because pirated content is consumed in real-time, making traditional takedown mechanisms inefficient. In response, platforms like YouTube, Twitch, and Facebook Live have developed automated content recognition technologies, allowing for the detection and removal of infringing streams before they reach large audiences.[339]

Another critical enforcement strategy is the graduated response system, also known as the "three-strikes rule", where platforms issue escalating warnings and penalties to repeat infringers. Some jurisdictions, such as France's HADOPI law, have implemented similar systems at the ISP level, wherein users who engage in repeated copyright violations face penalties, including internet service restrictions. While effective, critics argue that such measures risk over-blocking legitimate content and penalizing users without due process.[340]

Additionally, geo-blocking and ISP-level filtering are gaining prominence as enforcement tools. Rights holders often work with internet service providers (ISPs) to block access to known piracy websites, preventing users from accessing unauthorized live streams. However, VPNs and mirror sites often render such measures ineffective, necessitating continuous updates and real-time monitoring of infringing sites.

Despite the advancements in enforcement mechanisms, digital pirates continue to exploit legal

[339] recordoflaw, *Digital Piracy and Copyright Enforcement: Approaches to Tackling Online Infringement*, RECORD OF LAW (Sep. 12, 2024), https://recordoflaw.in/digital-piracy-and-copyright-enforcement-approaches-to-tackling-online-infringement/ (last visited Feb 16, 2025).

[340] Social media and Intellectual Property (IP): Part I- Protection and Ownership | BananaIP, https://www.bananaip.com/social-media-and-intellectual-property-ip-part-i-protection-and-ownership/ (last visited Feb 16, 2025).

loopholes, jurisdictional challenges, and evolving technology to circumvent restrictions. Therefore, strengthening copyright enforcement requires global cooperation, real-time detection technologies, and tighter platform accountability measures to effectively curb live streaming infringement.

The Role of Digital Rights Management (DRM)

Digital Rights Management (DRM)[341] plays a pivotal role in preventing unauthorized access, copying, and distribution of copyrighted content. DRM systems use encryption, access control, and digital fingerprinting to secure digital media, making it harder for infringers to redistribute protected content without permission.

A widely used DRM standard is Google Wide Vine, Microsoft PlayReady, and Apple Fair Play, employed by streaming services like Netflix, Amazon Prime Video, and Disney+. These technologies encrypt live-streamed content, ensuring authorised users with valid credentials can access and view the material. DRM also enables session-based watermarking, allowing content providers to track leaks and identify the sources of unauthorized broadcasts.[342]

For live streaming platforms, multi-DRM solutions are becoming increasingly essential. Multi-DRM technologies integrate multiple protection layers, ensuring content remains secure across different devices and operating systems. In addition to encryption, DRM technologies often incorporate token-based authentication, time-limited playback, and screen recording restrictions, preventing unauthorized screen captures or stream rerouting.

However, despite the benefits of DRM, some users and digital rights advocates criticize it for limiting consumer rights and fair use access. Issues such as device compatibility, regional restrictions, and limitations on personal storage create challenges for legitimate consumers. Additionally, DRM itself is not foolproof cracked DRM versions and piracy groups often find ways to bypass encryption, necessitating continuous updates and enhancements to DRM technologies.

Nevertheless, the strategic use of DRM in live streaming environments remains one of the most effective means of preventing real-time piracy and unauthorised distribution, complementing

[341] Digital Rights Management (DRM), https://studylib.net/doc/5217347/digital-rights-management--drm- (last visited Dec 26, 2023).
[342] Importance of Intellectual Property for Social Media Influencers and Content Creators | LexOrbis, (Jan. 17, 2022), https://www.lexorbis.com/importance-of-intellectual-property-for-social-media-influencers-and-content-creators/ (last visited Feb 16, 2025).

traditional copyright enforcement mechanisms.

AI and Blockchain for Real-Time Copyright Protection

The combination of Artificial Intelligence and Blockchain Technology creates disruptive solutions that help prevent copyright violations in real-time along with digital piracy activity.

Artificial Intelligence for Copyright Detection

AI-powered systems now operate in automated copyright enforcement to locate unauthorised live stream content before big viewer audiences experience it. AI-based copyright protection tools currently used in the market include:

The Content ID system of YouTube monitors new uploads and live streams in real time and verifies the content against its database of copyrighted material. Between blocking and monetisation, content tracking options become available to the rights holder when matching occurs with detected content.

Facebook Rights Manager uses AI algorithms to scan live content with videos and music for rights holder protection when managing unauthorised streams.[343]

The automated takedown bots enable real-time piracy monitoring of social media sites and other platforms, which immediately notify their content to both platforms and ISPs.

AI-based copyright protection demonstrates excellent efficiency but needs ongoing system development because it faces problems regarding wrong matches and changing piracy methods and restrictions related to machine learning systems.

Blockchain for Digital Content Protection

Through decentralisation, blockchain technology offers enhanced transparency and security it is better for managing copyright protection in live streaming platforms. Rights holders gain several benefits when they implement blockchain-based solutions.

- Digital assets must carry embedded stored information ownership, which defends them from unauthorised replication.
- A system of smart contracts enables automated licensing procedures and distributes payment to all involved stakeholders.

[343] Niva Elkin-Koren, *Contesting Algorithms: Restoring the Public Interest in Content Filtering by Artificial Intelligence*, 7 BIG DATA & SOCIETY 2053951720932296 (2020).

- The system enables the tracking of copyrighted content in real-time, which can identify piracy through digital signatures.

Computer programming protocols built upon Blockchain technology are active in music and video distribution industries to track unauthorised content use through secured digital ledgers. AI and blockchain systems produce an effective method to detect copyright infringements immediately and enforce copyright ownership rights within live streaming platforms.

Role of Licensing Agreements and Monetization Strategies

Through a forward-thinking licensing approach, rights holders will avoid piracy better while receiving suitable payments for their productions. Through collaborative licensing structures, digital content can be monetised by platform users, content creators and distributors together without exposing themselves to excessive infringement chances.

Types of Licensing Models

1. Streaming platforms YouTube by association with Twitch and TikTok reach agreements with content creators and record labels and studios through Platform-Based Licensing to assist them in legally displaying copyrighted materials in exchange for sharing advertising proceeds with owners of rights.
2. The entertainment sector uses subscription packages like Netflix and Spotify alongside pay-per-view access resembling UFC and WWE to sell premium content through necessary payments.
3. People who create small amounts of content benefit from Micro-Licensing Creative Commons platforms, enabling them to license their content at lower prices, thus driving legal distribution without needing pirated materials.[344]

Business strategies combining advert revenue co-partnerships and paid content platforms have established a secure business framework which motivates proper streaming and reduces copyright violation risks.

Policy and Regulatory Approaches to Address Digital Piracy

Digital piracy control and live streaming infringement defence require a complete policy and regulatory system performing intellectual property protection while handling digital rights and technological progress. Various laws on the global and national level work to stop the

[344] Banashree Roy & Nisha Sarma, *UNDERSTANDING THE IMPORTANCE OF INTELLECTUAL PROPERTY FOR CONTENT CREATORS AND SOCIAL MEDIA INFLUENCERS*, 2.

unauthorised streaming of copyrighted content. These measures become controversial since they face opposition from new technological advances, difficulties from jurisdictional boundaries, and enforcement obstacles. The chapter examines public anti-piracy laws in combination with industry associations' efforts and judge-aligned decisions to evaluate present-day piracy protection strategies.

Global Legal Frameworks for Addressing Live Streaming Infringement

Live streaming infringement requires international cooperation because the problem spans across borders which the *"World Intellectual Property Organization (WIPO) Copyright Treaty (WCT) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the Digital Millennium Copyright Act (DMCA)"* jointly address. The legal agreements supply fundamental rules to manage digital copyright issues. However, their implementation differs among jurisdictions.

The WIPO Copyright Treaty (WCT)protects copyright rights in digital transmissions by granting rights for live streaming and digital delivery. All countries that signed the agreement must state proper procedures to tackle unauthorised online distribution of copyrighted content. Implementation standards between different jurisdictions produce gaps that allow infringers to take advantage of.

Through the TRIPS Agreement, member states of WTO must establish legal mechanisms to respond against violations of intellectual property rights, including digital piracy. All countries joining the TRIPS arrangement must establish civil and criminal penalties to penalise copyright infringement acts. The lack of explicit content about live streaming piracy in TRIPS means every country must design guidelines for emerging digital piracy patterns.

The Digital Millennium Copyright Act (DMCA)[345] presents one of the most extensive authorities in the United States to regulate digital piracy. The notice-and-takedown procedure defined under this law allows copyright holders to demand digital platform content removals. Critics point out that DMCA enforcement procedures move slowly after infringed content appears but before takedown orders are completed, thus making the system unfit to combat real-time piracy because offenders switch their actions to new platforms.

The European Union's Copyright in the Digital Single Market Directive (2019) established

[345] Safe Harbors for Online Service Providers Under Copyright Law, JUSTIA (2019), https://www.justia.com/intellectual-property/copyright/copyright-safe-harbor/ (last visited Nov 28, 2023).

Article 17, which makes online platforms directly responsible for copyright violations through automated content detection technologies to block unauthorised streaming content. While this measure is proactive, it has raised concerns about over-blocking legitimate content & fair use and freedom of expression.[346]

Despite these global regulations, live-streaming piracy continues to thrive due to inconsistent enforcement, jurisdictional challenges, and technological evasions. Strengthening cross-border cooperation, increasing real-time takedown mechanisms, and enhancing platform accountability are crucial to making these legal frameworks more effective.

India's Legal Landscape and Judicial Interpretations

India has made significant strides in copyright enforcement, particularly in response to rampant digital piracy in the entertainment industry. The primary legislative framework governing live streaming infringement in India includes:

- The Copyright Act of 1957 (as amended in 2012)
- The Information Technology Act, 2000
- Judicial precedents on digital piracy and website blocking

"Under Section 51 of the Copyright Act of 1957", copyright infringement includes the unauthorised communication of a work to the public, covering live streaming of music, films, and sports events.[347] However, the Act does not explicitly address the emerging challenges of digital live streaming. The 2012 amendments introduced penalties for unauthorised digital reproduction and streaming but lacked clear provisions for real-time enforcement mechanisms.

The Information Technology Act, 2000 (IT Act) complements copyright law by empowering authorities to block access to infringing websites under Section 69A. This provision has been widely used in India to curb piracy, with courts issuing dynamic injunctions against pirate websites.

Judicial Interpretations and Anti-Piracy Orders

Indian courts have played a proactive role in curbing live streaming piracy through site-blocking injunctions and dynamic injunctions:

[346] Bernd Carsten Stahl et al., *A European Agency for Artificial Intelligence: Protecting Fundamental Rights and Ethical Values*, 45 COMPUTER LAW & SECURITY REVIEW 105661 (2022).
[347] Section 51 in The Copyright Act, 1957, https://indiankanoon.org/doc/1038145/ (last visited Feb 16, 2025).

The Indian judiciary has played a role in curbing digital piracy, particularly in live-streaming music, films, and sports events. Courts have relied on dynamic injunctions, site-blocking orders, and intermediary liability principles to prevent copyright infringement. However, challenges persist due to technological advancements, jurisdictional complexities, and evolving piracy models. This section explores key judicial interpretations and landmark anti-piracy orders shaping India's legal landscape.

Pre-emptive Injunctions Against Live Streaming Piracy

Indian courts have increasingly issued pre-emptive (ex parte) injunctions against websites and platforms known for streaming copyrighted music, films, and sports events without authorisation. These orders aim to prevent piracy before or during live events to minimise revenue losses for rights holders.

Case Study: Star India Pvt Ltd & Anr. vs Jackstreams.Com & Ors on 6 April 2022

Facts: Star India, which held exclusive broadcasting rights for the Indian Premier League (IPL), approached the Delhi High Court seeking an injunction against unauthorised live streaming of matches.

- Judgment: The court granted a John Doe order (Ashok Kumar order) directing internet service providers (ISPs) and intermediaries to block access to websites illegally streaming IPL matches.
- Impact: This case reinforced pre-emptive blocking measures as an effective tool against sports broadcasting piracy.

Similar pre-emptive orders have been issued for major events like the Cricket World Cup, FIFA World Cup, and Bollywood film releases.[348]

Dynamic Injunctions to Combat Mirror Websites

Pirates often circumvent judicial orders by creating mirror websites and identical copies of blocked platforms hosted under different domain names. To address this issue, Indian courts have granted dynamic injunctions, allowing rights holders to request the blocking of newly identified pirate websites without filing fresh lawsuits.

[348] Star India Pvt Ltd & Anr vs Jackstreams.Com & Ors on 6 April, 2022, https://indiankanoon.org/doc/122818095/ (last visited Feb 16, 2025).

Case Study: UTV Software Communication Ltd. v. 1337X.to & Ors. (2019)

- Facts: UTV Software, a major Bollywood production house, sued multiple piracy websites for illegally distributing copyrighted films.
- Judgment: The Delhi High Court issued a dynamic injunction allowing the plaintiffs to request ISPs and domain registrars to block mirror and proxy sites of infringing platforms.
- Legal Principle: The court introduced a "rolling injunction" mechanism, making it easier for content owners to combat evolving piracy techniques.
- Impact: This ruling has become a landmark precedent, empowering courts to continuously expand website blocking measures without requiring rights holders to initiate multiple lawsuits.[349]

Liability of Online Platforms for Hosting Pirated Live Streams

The question of platform liability in cases of live-streaming infringement has been debated in multiple instances. Indian courts have held that platforms facilitating copyright infringement can be held liable unless they take effective steps to prevent piracy.

Case Study: Tata Sky Limited vs YouTube LLC & Ors on 16 October 2023

Facts: Tata Sky, a leading DTH service provider, sued YouTube for allowing users to stream unauthorised content from its satellite channels.[350]

- Judgment: The Delhi High Court ruled that digital platforms must implement stringent content monitoring and remove infringing material proactively rather than relying on takedown requests.
- Impact: This case emphasised platform accountability and the need for AI-based content recognition systems to prevent real-time piracy.

Despite these rulings, platforms often claim "safe harbour" protection under Section 79 of the IT Act, arguing that they are not directly responsible for user-generated content. Courts continue to balance platform accountability with digital rights and freedom of expression.

Website Blocking Orders and the Role of ISPs

Website blocking orders have become a standard anti-piracy remedy in India. Courts frequently direct ISPs to block access to websites hosting infringing content. However, these orders are

[349] Utv Software Communication Ltd. ... vs 1337X.To And Ors on 10 April, 2019, https://indiankanoon.org/doc/47479491/ (last visited Nov 28, 2023).

[350] Tata Sky Limited vs Youtube Llc & Ors on 16 October, 2023, https://indiankanoon.org/doc/18140837/ (last visited Feb 16, 2025).

sometimes challenged by over-blocking and collateral damage to legitimate users.

Case Study: Yash Raj Films v. Bharat Sanchar Nigam Ltd. (2022)

- Facts: Yash Raj Films sought a court order to block multiple piracy websites streaming Bollywood films.
- Judgment: The Delhi High Court ordered ISPs to implement domain-wide blocking, preventing access to primary and mirror sites.
- Criticism: Critics argue that overly broad blocking orders can impact legitimate websites and raise concerns about internet freedom.[351]

A similar controversy arose in Viacom18 v. Reliance Jio (2023)[352], where a blanket blocking order was challenged for affecting non-infringing content hosted on the same servers. Courts have since emphasised the need for narrowly tailored blocking orders.

Criminal Prosecution for Digital Piracy

While civil remedies like injunctions and damages are commonly used, courts have also upheld criminal prosecution under the Copyright Act of 1957 and the IT Act of 2000.

Case Study: Tamil Rockers Case (2020)

- Facts: Tamil Rockers, a notorious piracy website, was targeted for illegally streaming newly released films.
- Judgment: The Mumbai Cyber Crime Cell arrested key operators under Sections 63 and 65 of the Copyright Act, leading to criminal penalties, including imprisonment and fines.
- Impact: This case highlighted the role of law enforcement in digital piracy enforcement.

Despite such actions, criminal prosecution remains rare due to jurisdictional challenges and the anonymity of online infringers.

Challenges and Future Directions

While Indian courts have been proactive in granting anti-piracy orders, several challenges remain:

2. Enforcement Difficulties: Pirates frequently shift to new domains and VPN-based access, making enforcement reactive rather than preventive.

[351] Yash Raj Films Pvt. Ltd vs Bharat Sanchar Nigam Limited on 14 July, 2022, https://indiankanoon.org/doc/117375131/ (last visited Feb 16, 2025).
[352] Viacom 18 Media Private Limited vs Union Of India on 18 January, 2018, https://indiankanoon.org/doc/86850376/ (last visited Jul 18, 2024).

3. Safe Harbor and Platform Resistance: Digital platforms often claim safe harbour protection, delaying compliance with takedown requests.
4. Balancing Copyright Protection with Digital Rights: Blanket website blocking can lead to censorship concerns and affect legitimate content creators.
5. Cross-Border Jurisdiction Issues: Many piracy operations are based outside India, making extradition and international cooperation difficult.

To address these issues, India may consider:

- Stronger AI-driven copyright enforcement mechanisms
- Expanding real-time takedown capabilities for live-streaming violations
- Negotiating international treaties for cross-border copyright enforcement
- Reforming intermediary liability laws to hold digital platforms more accountable

Indian courts have played a critical role in shaping anti-piracy jurisprudence, particularly in the live streaming. Through dynamic injunctions, site-blocking orders, and pre-emptive injunctions courts have empowered copyright holders to combat piracy. However, technological challenges and enforcement gaps necessitate continuous adaptation of legal and policy measures. Strengthening real-time detection mechanisms, platform accountability, and international cooperation will be crucial in addressing live streaming infringement in India's digital landscape.

Ethical and Economic Considerations in Digital Copyright Protection

Balancing Access to Content with Copyright Protection

The modern age revolutionised how content gets made and travels to audiences for reception. Intellectual property protection through copyright laws requires builders of creative works to balance copyright protection with unrestricted, public access to knowledge with cultural materials. Finding an equilibrium between opposing rights proves essential when watching live-streamed music or videos. Both automatic content removals and geographic blocking as part of stringent copyright enforcement restrict access to educational content that requires transformation for scholarly uses. When copyright enforcement remains lenient, piracy grows highly prevalent, reducing income sources for artists and content creators. The fundamental goal remains to develop an enforcement system that enables company revenues to grow through copyright protections yet gives consumers legal options to obtain multiple types of content. Improved licensing systems and fair use standards worldwide DRM policies, which adjust to local

economics and cultural realities, would help achieve this balance.[353]

Economic Impact of Live Streaming Piracy on Artists and Industries

The growing trend of illegal live streaming creates substantial economic difficulties for the entertainment and music industry. Unlawful communication of concerts, movies and sporting events removes large revenue streams from artists alongside record labels and production companies. Every year, billions of dollars disappear because of digital piracy, but this damage primarily impacts independent artists and smaller media companies. These industries face financial downturns from declining physical album revenues and movie ticket sales, leading them to depend on online profits. Piracy prevents these revenue sources from reaching their targets. The operation of illegal streaming services without regulations for licensing fees, advertisements and royalty payments produces an uneven business environment for official content providers. Financial losses caused by piracy spread further to prevent new projects and strategic development plans from businesses and creative industries. To resolve these problems, a combination of methods must be implemented, which centres on British copyright law protection through AI monitoring and platform-rights holder collaboration for fair compensation practices.

Consumer Rights, Free Speech, and Innovation vs. IPR Enforcement

Digital IPR enforcement activities create ethical dilemmas because they jeopardise the freedom of consumers and their speech rights and negatively impact technological development. The valid interest authors have to defend their work can lead to negative consequences from intense enforcement techniques involving automatic content-blocking systems, severe punishment measures, and digital limitations that affect users. Digital copyright enforcement tools operated by YouTube and Twitch face criticism since they frequently mistake legitimate content, such as valuable original works and educational materials, parodies for illegal material, resulting in subjective censorship practices. Implementing strict copyright regulations prevents users from using digital content, restricting their creative modifications. Creating appropriate regulations remains a task because they need to preserve creator rights without hindering the development of an unobstructed digital atmosphere. Balancing copyright protection with digital freedom becomes possible by implementing fair use doctrines combined with transparent content moderation systems and AI technology, which detects piracy from legitimate use.

[353]Copyrights: Protecting Creators and Their Creative Expressions | Berkeley International Office, https://internationaloffice.berkeley.edu/students/intellectual-property-guide-uc-berkeley-graduate-students/copyrights-protecting-creators (last visited Feb 16, 2025).

Future Trends in Digital Media Protection

The landscape of digital copyright protection is rapidly evolving, with emerging technologies playing a crucial role in enforcement strategies. Artificial intelligence (AI) and blockchain technology are at the forefront of innovative solutions for copyright management. AI-powered content recognition tools can identify unauthorised live streams in real time, helping rights holders detect and take down infringing content more effectively. Blockchain-based smart contracts offer a decentralised approach to copyright enforcement by enabling automatic royalty distribution, ensuring that creators are compensated whenever their work is used. New legislative efforts, such as the European Union's Directive on Copyright in the Digital Single Market, signal a shift towards more robust copyright frameworks that hold online platforms accountable for user-generated content. However, the future of digital copyright protection will depend on striking a balance between technological advancements and consumer rights. Policies that promote ethical enforcement, fair revenue-sharing models, and collaborative industry efforts will be essential to navigating the complexities of live streaming infringement in the digital era.

Conclusion and Recommendations

Summary of Key Findings

The digital era has significantly transformed the entertainment industry, particularly with the rapid rise of live-streaming platforms, making music and video content more accessible than ever. However, this increased accessibility has also led to widespread infringement, posing significant challenges to intellectual property rights (IPR). The research highlights that traditional copyright enforcement mechanisms are increasingly ineffective against real-time streaming piracy. The study finds that a combination of technological advancements, such as artificial intelligence (AI) and blockchain, along with stringent legal frameworks, can enhance copyright enforcement. The role of Digital Rights Management (DRM), takedown notices, and automated content recognition systems has been critical but still faces limitations in effectively addressing real-time infringements. Additionally, jurisdictional complexities and the global nature of the internet make enforcement more challenging, requiring international cooperation and harmonisation of copyright laws.

Strengthening IPR Mechanisms for Digital Content Protection

To effectively combat live streaming infringement, strengthening IPR mechanisms requires a multi-pronged approach. First, digital platforms must integrate AI-driven content identification systems to proactively detect and prevent unauthorized broadcasts. The use of blockchain

technology can ensure transparency in content ownership and licensing, reducing the risks of unauthorized use. Additionally, reforming copyright laws to address the real-time nature of streaming is essential. Current legal frameworks often rely on post-facto enforcement, which is ineffective in cases where pirated content is streamed live and removed before action can be taken. Enhancing collaboration between content creators, digital platforms, and enforcement agencies can create a more robust system for preventing piracy. Furthermore, imposing stricter penalties on offenders and ensuring that takedown mechanisms are swift and efficient will reinforce the deterrent effect.

Recommendations for Lawmakers, Streaming Platforms, and Content Creators

For lawmakers, there is a pressing need to update copyright laws to include provisions specifically addressing live-streaming piracy. Establishing stricter liabilities for platforms that fail to prevent infringement, coupled with incentives for those that actively combat piracy, can create a more balanced regulatory environment. Cross-border cooperation is crucial, as streaming platforms operate globally, and piracy laws vary from country to country. Developing international treaties and frameworks can help unify enforcement mechanisms.

Streaming platforms, on the other hand, must take a proactive role by implementing better technological solutions. AI-based monitoring, dynamic watermarking, and real-time tracking of illegal streams can significantly reduce unauthorised broadcasts. Platforms should also invest in user education, making audiences aware of legal alternatives to pirated content. Partnering with copyright holders to develop better licensing models can provide consumers with affordable and legitimate access to content, reducing the incentive for piracy.

Content creators and rights holders should leverage technology to protect their works more effectively. Utilising blockchain for transparent licensing, collaborating with anti-piracy organisations, and advocating for stronger copyright protection policies can help safeguard their creative assets. Additionally, adopting flexible business models, such as subscription-based services, pay-per-view options, and ad-supported streaming, can enhance revenue generation while discouraging unauthorised access.

Future Research Directions in Live Streaming and IPR

While significant progress has been made in addressing live-streaming infringement, further research is needed to explore new technological, legal, and economic dimensions of the issue. One critical area for future research is the role of decentralised platforms and how blockchain can

be integrated into IPR enforcement without creating additional barriers to legitimate content sharing. Additionally, studying the effectiveness of AI in real-time content moderation and its potential ethical implications is crucial. Future studies should also analyse the impact of evolving business models, such as non-fungible tokens (NFTs) and metaverse-based streaming services, on copyright protection.

Another vital aspect is the role of consumer behaviour in piracy. Understanding why users resort to unauthorised streaming, whether due to pricing issues, lack of access, or other factors, can help in designing more effective anti-piracy strategies. Moreover, cross-jurisdictional legal research can help develop a global enforcement framework that addresses the loopholes exploited by infringers. The convergence of IPR with cybersecurity laws to combat digital piracy more comprehensively is another emerging research avenue that warrants exploration.

In conclusion, while IPR remains a powerful tool for addressing live-streaming music and video infringement, its effectiveness depends on continual legal advancements, technological innovation, and global cooperation. Strengthening enforcement mechanisms, leveraging emerging technologies, and fostering collaboration among stakeholders are crucial in protecting digital content in an era dominated by real-time streaming. Future research should focus on refining these strategies to adapt to the ever-evolving landscape of digital piracy.

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CONSERVATION AND MANAGEMENT OF WETLANDS BIODIVERSITY UNDER RAMSAR CONVENTION FOR MITIGATING THREATS OF CLIMATE CHANGE

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Abstract

Wetlands are vital for human survival. They are among the world's most productive environments; cradles of biological diversity that provide water and productivity upon which countless species of plants and animals depend for survival. Wetlands are indispensable for the countless benefits or "ecosystem services" that they provide humanity, ranging from freshwater supply, food and building materials, and biodiversity, to flood control, groundwater recharge, and climate change mitigation. Over the years, a bunch of activities such as accelerated urbanization, industrialization, technological advancement in agricultural sectors along with changed land use pattern have unfortunately threatened the uniqueness of wetlands and affected their ecological, economical, and biological identity. Due to various natural and anthropogenic activities, wetland occupied areas throughout the world are decreasing and declining its water quality. This called for the attention towards conservation and protection of the wetlands before their extinction.

The Convention on Wetlands, called Ramsar Convention, is the intergovernmental treaty that provides the framework for the conservation and "wise use'' of wetlands and their resources. The convention was adopted in the Iranian city of Ramsar in 1971 and it came into force in 1975. India signed the treaty and became a contracting party to the convention on 1st February 1982. At present there are 85 Ramsar sites in India, third maximum among the entire member states. The United Kingdom leads the list with 175 while Mexico holds the second position with 144 sites. The first Indian wetlands of international importance under Ramsar convention were Chilka Lake in Odisha and Keoladeo National Park in Rajasthan.

This paper mainly reviews the present status, conservation and management plans for Indian wetlands with special reference to wetlands in the state of Bihar concentrating on various threats

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and their possible sources to wetland regions and focuses to investigate major factors responsible for overutilization of wetland wealth and various management practices for their present and future usage in sustainable way.

Keywords: *Wetlands, Biodiversity, Conservation, Sustainable use, Ramsar Convention.*

The Ramsar Convention: An International Treaty

An intergovernmental agreement known as the Convention on Wetlands was ratified on February 2, 1971, in the Iranian city of Ramsar, which is located on the Caspian Sea's southern shore. The earliest contemporary international intergovernmental agreement on the preservation and sustainable use of natural resources is Ramsar. All lakes and rivers, subterranean aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and any man-made locations like fish ponds, rice paddies, reservoirs, and salt pans are all considered wetlands under the Convention's broad definition.[355]

The Convention currently has 172 countries as Contracting Parties (COP), recognizing the importance of having a single international convention devoted to a single ecosystem. Managing wetlands is a worldwide concern.

The "wise use" of wetlands is central to the Convention on Wetlands' ideology. Through national plans, policies, and legislation, management initiatives, and public education, COP pledges to work toward the prudent use of all wetlands and water resources within its borders upon ratification of the Convention.

"Maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development" is how the Convention defines wise use of wetlands. For the benefit of both humans and the environment, wise usage can be defined as the preservation and sustainable use of wetlands and all the services they offer.

Article 5 of the Convention establishes that "*the Contracting Parties shall consult with each other about implementing obligations arising from the Convention especially in the case of a wetland extending over the territories of more than one Contracting Party or where a water system is shared by Contracting Parties. They shall at the same time endeavour to coordinate and support present and future policies and regulations concerning the conservation of wetlands and their flora and fauna.*"

[355] Article 1.1

The Ramsar Strategic Plan and the "three pillars" of the Convention are mentioned in the third Strategic Plan, COP seeks to deliver their commitments to wetland conservation and wise use through "three pillars" of action. These are:

a) Working towards the "wise use" of their wetlands through a wide range of actions and processes contributing to human well-being through sustainable wetlands, water allocation, and river basin management, etc.[356]

b) Devoting particular attention to the further identification, designation and management of a comprehensive suite of sites for the List of Wetlands of International Importance.

c) Cooperating internationally in the delivery of wetland conservation and wise use, through the management of transboundary water resources and wetlands and shared wetland species, collaboration with other conventions and international organizations, sharing of information and expertise, and increasing the flow of financial resources and relevant technologies to less-developed countries.

By setting international standards for wetland conservation and providing a forum for discussing global wetland issues, the Convention enables Contracting Parties to share information on wetlands and address issues together. Contracting Parties commit to work towards the wise use of all the wetlands and water resources in their territory, through national plans, policies and legislation, management actions and public education.

In 1990 the Contracting Parties adopted Guidelines for the implementation of the wise use concept. The Guidelines emphasized the importance of:

- adopting national wetland policies, either separately or as a component of wider initiatives such as national environmental action plans;
- developing programmes covering wetland inventory, monitoring, research, training, education and public awareness;
- developing integrated management plans at wetland sites.

These "Ramsar Sites" acquire a new national and international status. They are recognized as being of significant value not only for the country or the countries in which they are located, but for humanity. There are currently over 2,400 Ramsar Sites around the world. The inclusion of a wetland in the List embodies the government's commitment to take the steps necessary to ensure that its ecological character is maintained. The Convention includes various measures to respond

[356] for example, establishing national wetland policies; harmonizing the framework of laws and financial instruments affecting wetlands; undertaking inventory and assessment; ensuring public participation in wetland management and the maintenance of cultural values by local communities and indigenous people; promoting communication, education, participation, and awareness; and increasing private sector involvement.

to threats to the ecological character of Sites.

The Necessity of an International Convention on Wetlands

The Ramsar Convention on Wetlands was established to highlight the alarming rate at which wetland ecosystems are vanishing, largely due to a widespread lack of awareness regarding their vital roles, values, and the essential goods and services they provide. Nations that commit to this Convention express their dedication to combating the historical trends of wetland loss and degradation.

Additionally, numerous wetlands extend across the borders of multiple countries or are components of international river basins. The viability of these wetlands is intrinsically linked to the quality and quantity of transboundary water supplies from rivers, streams, lakes, or aquifers. The aspirations of nations neighbouring these wetlands can be hampered without an organized framework for international dialogue and collaboration aimed at achieving mutual benefits. Consequently, the Ramsar Convention emphasizes particular attention on sites designated as Transboundary Ramsar Sites by the participating parties.

Human activities can adversely affect water sources, like agricultural, industrial, or domestic pollution, often occurring far from the wetland areas themselves, sometimes beyond the borders of affected states. Such actions can lead to the degradation or outright destruction of wetland habitats, jeopardizing the health and livelihoods of local communities. The conservation and management of many migratory species, such as certain fish, various water birds, butterflies, dragonflies, and mammals including otters, also necessitate international collaboration.

In conclusion, wetlands represent a significant resource, holding considerable economic, cultural, scientific, and recreational value for humanity. The interdependence between wetlands and people is undeniable. Moreover, wetlands play an integral role in the global water cycle and are crucial for climate regulation. Thus, the ongoing encroachment upon and depletion of wetland areas must be halted, and steps must be taken to conserve and utilize wetland resources sustainably. Achieving this goal on a global scale requires coordinated intergovernmental efforts. The Ramsar Convention on Wetlands provides the necessary framework for such international, national, and local initiatives.

Ramsar Wetlands in India

India became a signatory to the Ramsar Convention in 1981, primarily for the purpose of protecting waterfowl habitats. The initial Ramsar sites in India, Chilika lagoon and Keoladeo National Park located in the states of Orissa and Rajasthan, respectively, were designated based

on their significance for waterfowl. Conservation entails managing resources effectively, minimizing waste, and safeguarding them for future generations.

Efforts to protect wetlands in India commenced in 1987, and various initiatives continue to be undertaken, supported by the government through biological, rather than engineering, methods. It has been noted that the launch of a national wetland mapping project fostered an integrated approach to conservation. Several national committees have been formed to advise on the implementation of suitable policies and management strategies for preserving wetlands, mangroves, and coral reefs. To ensure successful execution of these initiatives, steering committees comprising representatives from government agencies, non-governmental organizations, research institutions, and universities should be established in each state.

Threats to Wetlands in India

Wetlands are among the world's most threatened habitats, facing numerous challenges from both human and natural forces. Various natural processes, including the hydrologic cycle, rising sea levels, sedimentation, droughts, hurricanes, invasive species, and soil erosion, all influence the proper functioning of wetlands. The extent of wetlands is affected by local factors, particularly sea-level rise. In India, wetlands are under considerable threat due to a growing population and escalating anthropogenic activities such as industrialization and agriculture, leading to heightened risks of extinction and degradation.[357] The mismanagement of watersheds and significant land-use changes due to construction projects have dramatically reduced wetland resources in the country. The loss and degradation of vital wetlands result in numerous environmental and ecological problems that directly impact the socio-economic well-being of the communities that depend on them. It is estimated that, globally, one hectare of wetland is degraded every minute.

1. **Urbanization:** Wetlands in urban areas are increasingly under pressure from development activities. These urban wetlands serve as significant freshwater sources for communities. Often, open lands or wetlands in urban and suburban areas are viewed as wastelands and are repurposed for various developments. Local authorities are responsible for zoning these wetlands for light industrial or residential use. The effectiveness of urban wetlands in maintaining water quality and providing flood control has declined due to adjacent developmental activities. Urban and industrial development has reduced wetland areas, and the poor water retention capacity of concrete infrastructures leads to heightened runoff,

[357] Prasad SN, Ramachandra TV, Ahalya N, Sengupta T, Kumar A, Tiwari AK, Vijayan VS, Vijayan L (2002) Conservation of wetlands of India-a review. Tropical Ecol 43(1):173–186.

increasing flooding risks during heavy rains.[358] Additionally, pollutants carried by this runoff severely degrade water quality. Effluents from industries and untreated sewage from wastewater plants[359] are frequently discharged into wetlands, introducing harmful microorganisms.[360]

2. **Anthropogenic Activities:** Numerous human activities contribute to the deterioration of water quality[361] in lakes and catchment areas. The direct disposal of untreated sewage and solid waste significantly lowers water quality in wetlands. The immersion of idols and the unchecked disposal of both biodegradable and non-biodegradable waste also disrupt the physical, chemical, and biological properties of wetland waters. Human activities such as bathing, laundering, recreation, and motorized boating further affect the ecological balance of these ecosystems. Exploitation of wetland resources through dredging, harvesting aquatic plants, and fishing contributes to substantial ecological and economic losses.[362] Urban, agricultural, and industrial mismanagement has led to the depletion and alteration of wetlands, threatening their survival. While urban areas experience substantial pollution from storm-water runoff, rural areas face different pressures due to the presence of natural vegetation in their catchment areas. Overgrazing and cultivation have stripped catchments of their vegetation, rendering them more vulnerable to soil erosion, leading to the erosion of fertile soil with runoff.

3. **Agricultural Activities:** Rapid population growth and industrialized agriculture have led to the conversion of extensive wetlands, lakes, and floodplains into agricultural lands across India.[363] Increased agricultural activities to accommodate this growing population have resulted in the excessive use of synthetic fertilizers, which wash into wetlands and adjacent water bodies, leading to eutrophication.[364] The demand for water to irrigate crops in drought-prone regions has surged dramatically in recent decades, prompting the construction of numerous canals, dams, and reservoirs. This development has disrupted natural wetland hydrology. While these infrastructures might contribute to the economic success of the nation

[358] Romshoo SA, Altaf S, Rashid I, Dar RA (2017) Climatic, geomorphic and anthropogenic drivers of the 2014 extreme flooding in the Jhelum basin of Kashmir. India. Geomatics Natl Hazards Risk. 9:224–248.
[359] Brraich OS, Jangu S (2016) Comparative account of accumulation of heavy metals and structural alterations in scales of five fish species from Harike Wetland. India. Iranian J Ichthyol 3(4):275–282.
[360] Kumar G, Kaur A (2018) Status of Wetlands in Punjab: a review on policy frameworks. Asian J Multidimens Res 7(10):169–177.
[361] Farooq R, Chauhan R, Mir MF (2018) Deterioration of water quality of Anchar Lake as indicated by analysis of various water quality parameters. Int J Adv Res Sci Eng 7:2551–2558.
[362] MoEF [Ministry of Environment and Forests], Government of India (2010) National Wetland Atlas. Kerala, Space Application Centre, ISRO, Ahmedabad, p 146.
[363] Foote AL, Pandey S, Krogman NT (1996) Processes of wetland loss in India. Environ Conserv 23:45–54.
[364] Nune S (2016) Wetlands in India: Significance, Threats & Conservation.

by converting wetlands and mangrove forests into fisheries or aquaculture ponds, they have also significantly altered the wetlands' ecological and physiological characteristics.

4. **Hydrologic Activities:** The construction of dams and reservoirs to divert river flows for irrigation in arid regions has drastically changed the direction of water flow and drainage patterns, severely impacting local wetlands. For instance, in Gujarat, waters from the western Himalayan ranges are rerouted via canals to dry regions of the state and neighbouring Rajasthan, which has changed the soil's physicochemical properties and led to numerous ecological challenges, including the invasion of non-native plant species, salinization, regional water scarcity, and disrupted sustainable local lifestyles. Human-induced alterations in hydrological regimes have affected natural drainage patterns.[365] As rivers and lakes become isolated from their flood plains, groundwater recharge diminishes, leading to lower water tables and increased flood risks in lower areas during heavy rainfall.

5. **Change in Land Use Cover:** Altering land use patterns has contributed to wetland degradation, diminishing the availability and yield of vital resources such as fuel, fodder, fish, medicinal plants, honey, shellfish, and various chemicals. This economic harm accompanies a host of problems linked to land use changes, including sediment accumulation in water bodies, soil erosion, and pollution from waste. Changes in hydrological conditions have intensified soil erosion, leading to the direct loss of wetlands, especially in urban regions where land is filled in. Over-extraction of groundwater has exacerbated soil salinity issues and reduced crop yields, significantly impacting the nation's economic health.

6. **Deforestation:** Recent decades have seen notable shifts in both water quality and availability, primarily driven by deforestation. The rate of wetland degradation has outpaced that of forest loss. The removal of extensive vegetation in catchment areas contributes to soil degradation and sedimentation in water bodies. Mangroves, which are specialized wetlands, are often replaced with agricultural lands and aquaculture ponds, adversely affecting their ecological integrity. Mangrove forests are invaluable for their myriad direct and indirect uses.[366] Changes in land use and the expansion of aquaculture have led to the conversion of substantial mangrove areas into agricultural spaces, disrupting wetland hydrology.

7. **Pollution:** In India, only one-third of the wastewater produced in urban areas is processed,

[365] Gopal B (1982) Ecology and Management of freshwater wetlands in India. In: Proceedings of the International Scientific Workshop (SCOPE-UNEP) on ecosystem dynamics in Freshwater Wetlands and Shallow water bodies, pp 127–162. Centre for International projects, GKNT, Moscow, USSR.

[366] Ahmad N (1980) Some aspects of economic resources of Sundarban mangrove forest of Bangladesh. In Asian Symposium on Mangrove Environment, Research and Management, Kuala Lumpur (Malaysia), pp 25–29

with the remaining untreated waste being discharged into various natural and artificial water bodies, compromising their water quality. The Yamuna River, which flows through six major cities, receives significant quantities of untreated sewage and industrial effluents daily. An overload of nutrients in lakes has polluted freshwater resources, depleting oxygen levels and creating dead zones.[367] Pollution in wetlands primarily arises from two categories: point source pollution (from identifiable sources like sewage and industrial discharge) and non-point source pollution (from diffuse sources such as agriculture and urban runoff). Improper and excessive resource utilization without adequate conservation measures has resulted in the degradation of numerous lakes and wetlands.[368]

8. **Invasive Species:** The introduction of invasive species poses a significant threat to many wetlands in India, as these species often outcompete native flora and fauna for nutrients and space. Water hyacinth and salvinia are among the most prevalent exotic plant species invading local ecosystems. The altered habitats have allowed these non-native plants to flourish at the expense of native species. Since the late 1960s, the issue of invasive species has become pronounced, particularly with the proliferation of salvinia in the Kakki reservoir of Kerala.

9. **Climate Change:** UNESCO reports[369] indicate that climate change is anticipated to be a primary factor driving transformative changes and losses in wetland ecosystems. Alterations in climate patterns, such as the rise in water levels in Tsomoriri Lake in Ladakh, threaten vital breeding habitats for endangered migratory bird species, which may lead to their extinction. Projections suggest that a 1-meter rise in sea levels due to climate change could result in the loss of 84% of coastal wetlands and 13% of saline wetlands. Climate change impacts a multitude of factors—including rainfall patterns, storm frequency, air temperature fluctuations, droughts, floods, and increasing levels of greenhouse gases—which subsequently disrupt the ecological balance of wetlands. While climate change presents challenges, it can also create opportunities; for instance, paddy fields, a type of wetland, are significant sources of methane, a greenhouse gas that contributes to global warming. The rapid population growth in India has reshaped landscapes and topographies, continuously impacting water and wetland resources and reducing their suitability for habitation by both humans and wildlife.

[367] Shan V, Singh SK, Haritash AK (2020) Water crisis in the Asian Countries: Status and Future Trends, Resilience, Response, and Risk in Water Systems, 173–194

[368] Singh SK, Shan V (2017) Biodiversity and its conservation. In: Environmental studies New Delhi: Bharti Publications.

[369] United Nations Educational, Scientific and Cultural Organization (UNESCO) (2007) Case studies on climate change and world heritage. UNESCO World Heritage Centre, France.

Conservation of Wetlands under the Biodiversity Act of 2002

The Biological Diversity Act of 2002 was enacted in India with the principal goal of safeguarding biological diversity, promoting sustainable utilization of biodiversity components, and ensuring the fair and equitable sharing of benefits derived from biological resource use. Wetlands, recognized for their ecological significance, fall under this Act's jurisdiction but are also safeguarded by various other national and state regulations.

The Act facilitates the establishment of Protected Areas (PAs) within the National Biodiversity Action Plan (NBAP), which may encompass ecologically important wetlands. The State Biodiversity Boards (SBBs) and the National Biodiversity Authority (NBA) are tasked with identifying critical areas for biodiversity, including wetlands, and ensuring their legal protection.

Biodiversity Management Committees (BMCs) are formed at the local administrative levels (i.e., panchayat, municipal, or district levels) as set forth in Section 41 of the Biodiversity Act. These committees are responsible for creating People's Biodiversity Registers (PBRs), which document local biological resources and their uses. Wetlands, being essential biological resources, must be included in these registers, thereby empowering local communities in their conservation efforts.

Furthermore, the Biodiversity Act includes provisions addressing Access and Benefit Sharing (ABS), which pertains to wetlands where biological resources are exploited for commercial purposes, such as fishing, tourism, and medicinal plants. This framework ensures that the benefits derived from utilizing wetland resources are equitably shared with local communities and stakeholders, encouraging sustainable utilization and conservation practices.

Although the Biodiversity Act does not exclusively focus on wetlands, the National Wetlands Conservation Programme (NWCP) initiated by the Ministry of Environment, Forest and Climate Change (MoEFCC) aims specifically at the protection of wetland ecosystems. The objectives of this program are:

- To avert further wetland degradation.
- To promote the sustainable use of wetland resources.
- To encourage the conservation of wetlands with active involvement from local communities.

Ramsar Sites in Bihar, India

North Bihar boasts a well-developed network of rivers originating from the Himalayas, along with numerous natural and manmade water bodies. The region is characterized by thousands of ponds, tanks, chaurs (land depressions), and moins (ox-bow lakes), which serve as essential sources for irrigation and pisciculture. Several wetlands, including Kabartal (Begusarai), Kusheshwarsthan (Darbhanga), Baraila (Vaishali), Saraiyaman (West Champaran), and Gogabeel

(Katihar), are recognized as key birding locations. Some of these wetlands have been proposed as potential Ramsar sites, having the capacity to be developed as ecotourism destinations.

Kabartal, located in the Begusarai district of Bihar, has been designated as a wetland of international significance, marking the state's first Ramsar site. Recently, the Union Ministry of Environment, Forest and Climate Change has recognized Nakti and Nagi bird sanctuaries in Bihar as additional Ramsar wetlands of international importance. Both sites are artificial and situated within the Jhajha forest range of Jamui district. As it stands, Bihar is home to three sites recognized under the Ramsar Convention.

Nagi Bird Sanctuary has been acknowledged as India's 81st Ramsar Site. This manmade wetland, covering 791 hectares in the Jamui district, was created by damming the Nagi River. The reservoir attracts wintering migratory birds from Eurasia, Central Asia, Russia, and Northern China. Nagi was declared a bird sanctuary in 1984 and subsequently recognized by Bird Life International as an Important Bird and Biodiversity Area (IBA). It is notable for hosting one of the largest concentrations of bar-headed geese (Anser indicus) within the Indo-Gangetic plain.

Nakti Bird Sanctuary, designated as the 82nd Ramsar site in India, is also an artificial wetland created by the Nakti Dam, spanning across 332 hectares. This sanctuary lies adjacent to the Nagi Bird Sanctuary and is situated in the same Jamui district. The lake formed by the dam functions as a habitat for over 150 species of birds, mammals, fish, aquatic plants, and more. Established as a bird sanctuary in 1984, it provides a habitat for one of the largest gatherings of red-crested pochards (Netta rufina) on the Indo-Gangetic plain.

In 1986, the state government designated Nakti as a protected area, which was later officially recognized by the central government to prevent bird poaching. According to notification No. G.S.R 1203 (E) dated 26.09.2017 from the Ministry of Environment, Forest & Climate Change (MoEFCC), Wetlands (Conservation and Management) Rules 2017 were implemented for the integrated management of wetlands. Additionally, the Government of Bihar, as per its notification No: Wildlife – 16/2012 34 (E) dated 31.01.2020, established the Bihar Wetland Development Authority (BWDA) with the Minister for Environment, Forest, and Climate Change serving as Chairman, the Development Commissioner as Vice Chairperson, and the Chief Conservator of Forest (Wetland & Climate Change) as Member Secretary.

One of the world's most endangered environments is wetlands. Like everywhere else, wetlands in India are rapidly being impacted by a number of human-caused factors. Therefore, the country's wetland resources have significantly declined as a result of the fast growing human population,

extensive changes in land use and land cover, growing development projects, and inappropriate usage of watersheds. Its conversion risks from industrial, agricultural, and diverse urban activities have caused significant losses. These have resulted in pollution, hydrological disturbances, and their consequences. Wetlands have also degraded as a result of fishing and grazing at unsustainable levels.

Environment and bird experts have sounded an alarm over the state of the lake. Kanwar Lake, a Ramsar site, is slowly drying and dying. This is a big threat for birds, both migratory and local. Water is missing in the large part of this big wetland — a bad sign.[370] The birds have been facing habitat destruction, habitat encroachment and massive hunting,

Kanwar Lake, which covered 6,000–7,000 hectares, was the largest migratory bird hotspot until three or four decades ago. However, as time went on, the lake's size shrank, its water content decreased, and certain regions dried up.

Thousands of local fishermen have been negatively impacted by the drying of Kanwar Lake, and many have been forced to relocate outside in pursuit of other employment opportunities. The fishing community used to rely on this lake as a source of revenue. However, tensions between fishermen and farmers became evident when the lake began to dry up and some strong farmers violently encroached on it. Farmers assert their right to farm, and fishermen assert their right to fish in the lake.

Since Kanwar Lake has been struggling for years, the government should take action to preserve this special wetland. In addition, the lake's growing silt buildup, deforestation, and farmland disputes need to be addressed.

The lake is now overly dependent on monsoon rainfall because the natural water sources surrounding it have disappeared over time and the water passage from the Burhi Gandak River to the lake has been completely disturbed, according to Mishra. To guarantee water flow, the government is being urged to connect the lake to the river via a canal.

Conclusion

Because these habitats offer a wide range of services to humans and aid in maintaining natural balance with human demands, wetlands are the foundation of the economy and human society. However, the state of wetlands today is a topic of worry that has to be acknowledged, debated,

[370]https://www.downtoearth.org.in/wildlife-biodiversity/kanwar-lake-bihar-s-only-ramsar-site-faces-challenge-of-survival-but-not-a-poll-issue-96172

and addressed in order to guarantee their conservation, restoration, and protection. In order to do this, an integrated approach to the planning, implementation, and monitoring of different wetland regions should be used, along with productive cooperation with specialists in watershed management, hydrology, ecology, economics, planning, and decision-making for their appropriate resource management and sustainable and efficient use. Prerequisite conditions include local awareness of wetland restoration and conservation.

While the Biodiversity Act, 2002 does not single out wetlands as a specific focus area, the broad framework it establishes for biodiversity conservation indirectly supports wetland conservation. It encourages the inclusion of wetlands in People's Biodiversity Registers, their sustainable use through Access and Benefit Sharing, and their protection as part of India's overall biodiversity conservation strategy. Wetland conservation is also directly addressed through various other programs like the National Wetland Conservation Programme (NWCP) and linked international agreements like the Ramsar Convention.

To raise awareness of the value of wetlands and the necessity for their conservation, educational initiatives should be implemented in rural regions, at colleges, schools, and among the local population. According to the current analysis, the government's numerous conservation and management plans for major National and Ramsar sites have so far been likely to be ineffectual and impractical in terms of achieving the intended outcomes. These government conservation plans completely ignored little wetlands. Therefore, by giving states and districts more authority, a common whole of government strategy should be implemented to conserve both large and small wetlands. Wetlands may only be sustained with adequate care and effective management; otherwise, ongoing neglect and depletion of the same will dead to crisis for life on this planet.

However, the practical enforcement of these legal frameworks remains a challenge and calls for greater coordination between various stakeholders, including government agencies, local communities, and conservation organizations.

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