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AI AS A CREATOR: LEGAL CHALLENGES IN COPYRIGHT INFRINGEMENT AND FAIR USE UNDER INDIAN LAW.

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Abstract

The enforcement of copyright law has become increasingly complex in the digital era, raising significant challenges in protecting creators' rights. This paper examines issues related to copyright infringement, fair use, and legal liabilities across different jurisdictions, with a particular focus on India. It explores the fair use doctrine in India, the United States, and the European Union, analyzing key legal interpretations and distinctions that influence copyright enforcement. The study also addresses secondary liability, including vicarious and contributory infringement, in the context of unauthorized digital content distribution. Additionally, recent legislative changes, such as the EU's Copyright Directive, are reviewed to assess their impact on copyright regulation and intellectual property law. The paper further evaluates the role of the World Intellectual Property Organization (WIPO) in promoting international copyright standards. As digital content consumption continues to rise, this study highlights the necessity of evolving legal frameworks to balance the protection of intellectual property with public access to information. The findings provide insights into potential policy reforms that ensure greater clarity and adaptability in copyright law while addressing emerging legal challenges.

Keywords: Copyright Law, Fair Use, Infringement, Intellectual Property, Legal Framework, India,

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Introduction

Artificial Intelligence (AI) has become a transformative force across various domains, with its origins tracing back to 1956 when John McCarthy[1] first introduced the term. AI aims to replicate human intelligence in machines, enabling them to learn, reason, and make decisions. One of the most significant advancements in AI is machine learning, introduced by Arthur Samuel[2] in 1959, which allows machines to analyze vast datasets and make predictions without explicit programming. Since the 1980s, AI-based systems such as IBM's Deep Blue, Kismet, Dragon Systems, and AlphaGo have emerged, demonstrating AI's increasing sophistication. Today, AI applications extend across multiple industries, including healthcare, finance, space exploration, and the creative arts.

AI's influence in the creative sector is exemplified by projects like 'The Next Rembrandt,' which utilized AI to analyze and replicate Rembrandt's artistic style, and Google's 'Deep Dream Generator,' which produces unique artwork by blending existing images. These developments highlight AI's expanding role in both functional and expressive domains, where it engages in human-like creativity.

Arend Hintze categorizes AI systems into four stages: reactive machines, limited memory, theory of mind, and self-awareness. Reactive machines, such as IBM's Deep Blue, operate without memory and respond solely to present stimuli[3]. Limited memory systems, like autonomous vehicles, rely on historical data for improved decision-making. Although AI has yet to achieve 'theory of mind' capabilities, ongoing research seeks to develop systems that comprehend human emotions and cognitive states[4]. Self-aware AI, representing the most sophisticated stage, remains an aspiration for future technological advancements[5].

Despite AI's vast potential, ethical and legal concerns, particularly regarding copyright laws,

[1] *What is AI? / Basic Questions*. (n.d.). Professor John McCarthy. http://jmc.stanford.edu/artificial-intelligence/what-is-ai/
[2] Nystrom, P. (2017, July 13). *Machine Learning: Intro to the Future of Computing*. Global Web and Mobile Application Development Company | Seamgen. https://www.seamgen.com/blog/machine-learning-future-computing
[3] Boyden, B. E. (2016). Emergent Works. *The Columbia Journal of Law & The Arts*, *39*(3), 377–394. https://doi.org/10.7916/jla.v39i3.2077
[4] Arya, Nisha. (2024, June 10). *Theory of Mind AI in Artificial Intelligence*. EJable. https://www.ejable.com/tech-corner/ai-machine-learning-and-deep-learning/theory-of-mind-ai-in-artificial-intelligence/
[5] Elizabeth Rocha, "Sophia: Exploring the Ways Al May Change Intellectual Property, Protections", 28 Dr PAUL J. ARt, TECH. & INTELL. PROP. 1. 126 (2018).

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have emerged. The rapid digitization of content has made enforcing copyright protections more complex. Copyright infringement occurs when copyrighted material is used without authorization, leading to direct, indirect, or unintentional violations. Copyright laws differ globally; some jurisdictions impose strict penalties, while others consider factors such as intent and economic impact. A key defense against infringement is the doctrine of fair use (or fair dealing in some countries), which permits limited use of copyrighted material for education, research, and journalism. In the United States, fair use is assessed based on four factors: purpose, nature, extent, and market effect. Similarly, India's Copyright Act of 1957[6] includes fair dealing provisions that allow certain exceptions.

A comparative analysis of copyright enforcement highlights significant legal differences. The European Union's 2019 legislation permits text and data mining for research, reflecting a balanced approach to copyright protection and technological innovation. India's legal framework, influenced by British and American laws, attempts to accommodate both the rights of content creators and public interests. Examining landmark cases and legislative developments offers insights into how copyright laws are adapting to technological advancements.

As AI evolves, concerns regarding its training processes and potential copyright violations have grown. Machine learning models require vast datasets, which may include copyrighted works, raising legal compliance questions. AI training involves multiple stages, such as data collection, preprocessing, and pattern recognition, where unauthorized use of copyrighted content can result in infringement. Additionally, deepfake technology exemplifies the ethical dilemmas posed by AI-generated content. Deepfake models manipulate images, videos, or audio using adversarial training techniques to produce realistic yet artificially generated content, often without the consent of the original creators.The absence of comprehensive regulations for AI-generated content necessitates a reassessment of copyright laws to ensure a fair balance between intellectual property protection and innovation. By exploring legal precedents, technological challenges, and evolving regulations, this research aims to provide a comprehensive understanding of copyright implications in the digital era.

[6] Copyrights act of 1957

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Legal Research Questions:

(1) To what extent does Indian copyright law recognize AI-generated works as eligible for copyright protection, and how does it compare with international frameworks?

(2) What are the legal challenges and liabilities associated with copyright infringement in AI-generated content under Indian law, and how do they align with global trends?

(3) How does the fair use doctrine in India apply to AI-generated content, and what legal reforms are necessary to address emerging copyright issues in AI training and data mining?.

Research methodology

This study employs a **doctrinal legal research methodology**, which involves an in-depth examination of **statutes, case laws, and international legal frameworks** governing copyright infringement and fair use under Indian law. A **comparative legal approach** is adopted to analyze India's copyright framework in relation to the United States and the European **Union**, identifying key similarities, differences, and areas for potential reform. The research is based on **primary sources**, including the ***Copyright Act, 1957*, decisions, and relevant international treaties**, supplemented by **secondary sources** such as **scholarly articles, reports from the World Intellectual Property Organization (WIPO), and policy documents** such **as India's National Strategy for Artificial Intelligence (NITI Aayog),** provide contextual insights into evolving regulatory trends. The study follows the ***Bluebook Citation, 20th Edition***, ensuring standardized referencing of legal sources. Based on the findings, **policy recommendations** are proposed to enhance copyright protection while fostering innovation within the AI-driven creative economy.

Copyright Infringement and AI-Generated Works.

Machine learning processes vast amounts of data, including potentially copyrighted content, leading to legal concerns[7]. It generally follows 3 kinds of Leaning: Supervised Learning which uses structured, labeled data to produce expected outcomes. An Unsupervised Learning, where it Analyzes unstructured data without predefined labels. And Finally, Reinforcement Learning which Adapts to new environments by learning from past or existing decisions, data etc[8].

[7] Kevin P. Murphy, "Machine Learning: A Probabilistic Perspective", MIT Press (2007)

[8] Michael Copeland, "What's The Difference Between Artificial Intelligence, Machine Learning, And Deep Learning?", NVIDIA BLOG (July 29, 2016), Available At Https://Blogs.Nvidia.Com/Blog/2016/07/29/Whats Difference-Artificial- Intelligence-Machine-Learning-Deep-Learning-Ai/ (Visited On Feb. 14, 2025).

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During this process of Training Of AI it or Date processing it undergoes several stages which may includes ***Data Collection:*** Gathering extensive datasets; ***Data Cleaning:*** Eliminating errors, inconsistencies, and biases;***Data Formatting***: Standardizing data for compatibility; ***Pattern Identification:*** Extracting relevant insights and ***Training & Evaluation***: Dividing data into training and test sets for analysis.

2.1 AI Training and Copyright Infringement Risks

The process of training artificial intelligence (AI) models raises significant concerns about copyright infringement. Machine learning systems often utilize unauthorized datasets, creating digital copies of existing copyrighted works, which can be considered an act of reproduction[9]. During the training phase, AI models may engage in literal reproduction when datasets are copied multiple times, leading to multiple instances of potentially infringing copies[10]. Additionally, non-literal reproduction occurs when vast amounts of unauthorized copyrighted content are used as input data, which can result in AI-generated outputs that closely resemble the original material, potentially violating copyright protections[11].

A notable example of potential copyright infringement in AI training is **deepfake technology**[12]. Deep-fake technology uses advanced neural networks to manipulate images, videos, and music, creating content nearly identical to original works. It operates through adversarial training, where a generator produces synthetic data while a discriminator attempts to differentiate it from real content[13]. The process continues until the distinction becomes indistinguishable. Legal concerns arise as deepfakes rely on copyrighted material, yet specific regulations governing AI-generated works remain absent, making their legality uncertain[14].

2.2 Legal framework for infringement:

AI-generated content can potentially infringe on third-party copyrights, trademarks, and even

[9] Sujith Ravi, "On-Device Machine Intelligence", Google Research Blog (Feb. 9, 2017) Available At Https://Perma.Cc/WQ8L-WS5D (Visited On Feb 13, 2025).
[10] Brendan Mcmahan & Daniel Ramage, "Federated Learning: Collaborative Machine Learning Without Centralized Training Data", Google Research Blog Available At Https://Perma.Cc/XVA2- J96J(Visited On Feb 13, 2025).
[11] Andres Guadamuz, "Artificial Intelligence And Copyright", 23 WIPO MAG (2017) Http:/Www.Wipo.Inti Stpo Magazinerenl20l7/05/Article_0003.Html [Https:/Iperma.Cc/SD4Q-KE9E (Visited On Feb 13, 2025).
[12] R Chesney, DK Citron, "Deep Fakes: A Looming Challenge For Privacy, Democracy, And National Security" 107 California Law Review 17 (2019.)
[13] Ravindra Kumar & Pankaj Kumar, Training AI And Copyright Infringement: Where Does The Law Stand?, 2 INDIAN J. INTEGRATED RSCH. L. 1 (January-February 2022).
[14] Ibid

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an individual's right to privacy and publicity. Under U.S. law, copyright infringement by AI-generated works is assessed based on two key factors: (a) whether the AI had access to the copyrighted work, and (b) whether the output is substantially similar to the original work.

A critical question that arises is determining liability in cases of AI-generated infringement. Under current legal doctrine, both the user and the AI developer or company may be held liable. If a user is found directly responsible, the AI company may also be held liable under the doctrine of vicarious infringement.

Liability

Indian copyright law:

Under Indian copyright law, secondary liability for infringement can arise through either **vicarious liability** or **contributory infringement**.[15] **Vicarious liability** applies when an entity has the right and ability to control the infringing activity and derives financial benefit from it[16]. **Contributory infringement** occurs when an entity knowingly induces, causes, or materially contributes to the infringement, even without directly engaging in it[17].

While Indian courts have yet to address liability for AI-generated works specifically, rulings on secondary liability in digital contexts offer some guidance. **In** *MySpace Inc. v. Super Cassettes Industries Ltd*[18]., the Delhi High Court ruled that MySpace was not liable for copyright infringement by its users, as it complied with India's "safe harbor" provisions, which protect intermediaries from liability if they implement notice-and-takedown mechanisms and avoid involvement in content creation. Conversely, in ***Christian Louboutin SAS v. Nakul Bajaj & Ors***[19]., the court held that an e-commerce platform facilitating counterfeit sales was liable for contributory infringement, as it had knowledge of the infringing activity and materially contributed to it[20].

[15] Thushar V. Senan, Abey Augustine & Aswathy Krishnan, AI, Creativity, And Copyright Law In India: Navigating The Boundaries Of Originality And Authorship, 6 INT'l J.L. MGMT. & HUMAN. 2941 (2023).
[16] Dr Mohan Dewan, *Vicarious Liability In IP Violations*, LEXOLOGY (Aug. 30, 2021), Https://Www.Lexology.Com/Library/Detail.Aspx?G=D191f4e5-3c0c-4541-B9b4-3435ae8c6f33.
[17] Ibid
[18] My Space Inc. Vs Super Cassettes Industries Ltd. On 23 December, 2016
[19] Christian Louboutin Sas Vs Nakul Bajaj & Ors On 2 November, AIRONLINE 2018 DEL 1962
[20] Supra Note 10

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United States-An Established Doctrines of Liability:

In the United States, copyright liability extends beyond direct infringement to include **secondary liability**, which can arise under two key doctrines: **Vicarious Liability** which applies when an entity has the right and ability to control infringing activity and derives a financial benefit from it, even if they did not directly participate in the infringement[21].And **Contributory Infringement** that occurs when an entity knowingly contributes to or facilitates infringing activity.

Beyond these traditional doctrines, U.S. law also recognizes *inducement liability*, which applies when a party actively promotes or encourages infringement[22]. This doctrine was established in the landmark case ***MGM Studios Inc. v. Grokster, Ltd. (2005)[23]***, where the U.S. Supreme Court held that companies distributing peer-to-peer file-sharing software could be held liable if they intentionally encouraged users to engage in copyright infringement. If AI developers or platforms actively design their systems to enable or encourage unauthorized copying, they may also be subject to this form of liability[24].

European Union:-Safe Harbor and Mere Conduit Protections:-

In the European Union, the E-Commerce Directive (2000/31/EC) governs the liability of online intermediaries for copyright infringement. The Directive establishes key exemptions for service providers: (i) **Hosting Safe Harbor** – Platforms that host user-generated content (such as social media and cloud storage services) are protected from liability, provided they do not have actual knowledge of infringing content and act promptly to remove it when notified[25]. (ii) **Mere Conduit Exception** – Internet service providers (ISPs) and other intermediaries that simply transmit infringing content without modifying it are exempt from liability[26].

However, recent EU copyright reforms, such as the **Copyright Directive (2019/790[27])**, have introduced stricter obligations for digital platforms. Under Article 17, platforms that facilitate content sharing may be required to implement content recognition systems, making them more accountable for infringing material uploaded by users. This raises an important questions about

[21] Ibid
[22] Ibid
[23] MGM Studios, Inc. V. Grokster, Ltd. | 545 U.S. 913 (2005)
[24] Ibid
[25] Supra Note 10
[26] Ibid
[27] **Copyright Directive (2019/790[27]),**

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how the AI-generated content will be regulated under these evolving legal standards?.

Fair use

USA:

Text and Data Mining (TDM) refers to the computational process of extracting patterns and discovering new information from large sets of unstructured data. This process often involves analyzing text or other types of data through algorithms to find useful insights. The United States lacks a specific statutory exception for Text and Data Mining (TDM)[28]. However, TDM activities typically fall under the 'Fair Use Doctrine' in Section 107 of the U.S. Copyright Act[29]. Fair use is assessed using a four-factor test to determine whether a particular use constitutes copyright infringement.

The four-factor test evaluates:

a) ***Purpose and character of the use*** –

it examines whether the use is **commercial** and whether it **is transformative (**i.e., whether it adds new meaning, expression, or purpose to the original work). **A transformative use** weighs in favor of fair use, while a commercial use weighs against it. However, if a work is highly transformative, its commercial nature becomes less significant.

b) Nature of the Copyrighted Work:

Factual and non-fiction works are generally granted less protection than creative works under copyright law. This means that TDM involving factual data (e.g., research articles, databases, public records) is more likely to be considered fair use than TDM involving creative works like literature, art, or music.TDM often involves factual data, which makes this factor favorable for those who argue that TDM activities should be protected under fair use.

[28] Ravindra Kumar & Pankaj Kumar, Training AI And Copyright Infringement: Where Does The Law Stand?, 2 INDIAN J. INTEGRATED RSCH. L. 1 (January-February 2022).

[29] Section 107 Of US Copyrights Act:-Notwithstanding The Provisions Of Sections 106 And 106A, The Fair Use Of A Copyrighted Work, Including Such Use By Reproduction In Copies Or Phonorecords Or By Any Other Means Specified By That Section, For Purposes Such As Criticism, Comment, News Reporting, Teaching (Including Multiple Copies For Classroom Use), Scholarship, Or Research, Is Not An Infringement Of Copyright. In Determining Whether The Use Made Of A Work In Any Particular Case Is A Fair Use The Factors To Be Considered Shall Include—
(1) The Purpose And Character Of The Use, Including Whether Such Use Is Of A Commercial Nature Or Is For Nonprofit Educational Purposes;
(2) The Nature Of The Copyrighted Work;
(3) The Amount And Substantiality Of The Portion Used In Relation To The Copyrighted Work As A Whole; And
(4) The Effect Of The Use Upon The Potential Market For Or Value Of The Copyrighted Work.

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c) Amount and Substantiality of the Portion Used:

This factor examines how much of the copyrighted work is used in relation to the entire work. A limited, non-substantial use is more likely to be deemed fair use.In the case of TDM, the amount of copyrighted material used depends on the scope of the data collected. Since TDM often involves the extraction of large amounts of data, the use of substantial portions of copyrighted works may be necessary for the analysis. However, the transformative nature of the use may outweigh the quantity used.

d) Effect of the Use on the Market:

This factor evaluates the impact that the use has on the potential market for the original work. If the use replaces the original work in the market or causes economic harm to the copyright owner, it is less likely to be considered fair use.TDM typically does not harm the market for original works, particularly if the use is non-commercial and transformative. However, the economic impact of using copyrighted works for commercial purposes (e.g., training AI models) may need to be assessed on a case-by-case basis.

Courts Through several case laws have provided significant guidance on how **digital reproductions of copyrighted works which includes** searchability or artistic reinterpretation which constitutes fair use.

In ***Authors Guild, Inc. v. HathiTrust***[30], the defendant, 'HathiTrust', created ***a full-text searchable*** **database** by scanning books from university libraries. The digital collection allowed users to search for specific terms without providing full access to entire books. The Second Circuit ruled that **digitizing books for search functionality was transformative** because the digitized copies served **a different function f**rom the original works. While the books were originally intended to be read in their entirety, the digitized versions enabled users to search and analyze text data, making the use distinct from the original purpose. This case reaffirmed that **creating digital tools that enhance accessibility and research capabilities can constitute transformative use under copyright law.**

NXIVM Corp. v. Ross Institute[31] **&** ***Oracle America, Inc. v. Google LLC***[32] cases established

[30] Authors Guild, Inc. V. Hathitrust, 755 F.3d 87, 103 (2d Cir. 2014)
[31] NXIVM Corp. V. Ross Inst., 364 F.3d 471 (2d Cir. 2004)
[32] ***Oracle America, Inc. V. Google LLC*** 886 F.3d 1179 (Fed. Cir. 20a18).

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that an alleged infringer's **bad faith or improper conduct does not automatically preclude a fair use defense.** Courts ruled that fair use should be assessed based **on the nature of the use itself,** rather than the intent behind it. This principle suggests that **if a use meets the legal criteria for fair use, it remains protected regardless of the defendant's motivations.**

In *Cartoon LP v. CSC Holdings*[33]: The court ruled that non-volitional uses of copyrighted works by computers, such as "intermediate operational use," do not constitute infringement because they are not creative in nature. In ***Burrow-Giles Lithographic Co. v. Sarony*[34]**: The court found that mechanical processes or transcoding of copyrighted works are not considered expressive works and therefore do not infringe copyright.

Further in the case of ***Sega v. Accolade*[35]**:, the court recognized non-expressive fair use, where copying functional code for reverse engineering purposes was found to be fair use because the copying involved functional elements, not creative ones. In ***Kelly v. Arriba*[36]**: The court determined that using copyrighted images to create thumbnails for search results was transformative fair use, as the purpose of the use was different from the original purpose of the images.In another Case Of ***Authors Guild v. Google*[37]**: Google's scanning of books for keyword searches was deemed transformative fair use, as the purpose was distinct from the original use of the books.

While the fair use doctrine protects uses of copyrighted works in training technologies, it should be applied judiciously to avoid diminishing the market value of the works. In ***Harper & Row Publ v. Nation Enters*[38]**, the court emphasized that fair use should not be interpreted too broadly, especially in commercial contexts, to prevent harm to the copyright owner's rights.

When considering expressive uses of works in training, such as creating music or advertisements, the legal challenges become more complicated. Tools like Jukedeck, which use copyrighted music in their training data, could harm the market for sound recordings by

[33] Cartoon Network LP, LLLP V. CSC Holdings, Inc., 536 F.3d 121, 129-30 (2d Cir. 2008)
[34] Burrow-Giles Lithographic Co. V. Sarony, Ill U.S. 53 (1884).
[35] Sega Enterprises Ltd. V. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992)
[36] Kelly V. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003); Perfect 10, Inc. V. Amazon.Com, Inc., 508 F.3d 1146 (9th Cit. 2007).
[37] Authors Guild V. Google Inc., 804 F.3d 202 (2d Cir. 2015).
[38] Harper & Row Publ V. Nation Enters 471 U.S. 539, 560 (1985).

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lowering licensing rates and disrupting established business models[39]. There is currently a lack of clear legal guidance on regulating these uses, making it crucial to strike a balance between protecting copyright owners' rights and fostering innovation in content creation[40].

EUROPEAN UNION (EU):-

The European Union (EU) recognizes the economic potential of Artificial Intelligence (AI) and aims to enhance its competitiveness through increased research and development funding. However, the EU's AI policy has largely overlooked intellectual property (IP) aspects[41], which may explain its lag behind Asia and North America in private investment and AI-related patents[42]. As AI development relies on large datasets, a flexible and industry-friendly copyright regime is necessary to support data access for AI training. However, tensions arise between promoting AI innovation and protecting creators of original works used in AI datasets[43].

Text and data mining (TDM) is crucial for machine learning, as it helps identify patterns from large datasets[44]. While works not under copyright can be freely mined, using copyrighted works for TDM may infringe on the copyright holder's reproduction rights[45]. There are differing views on whether TDM activities should lead to copyright infringement liability[46]. Some argue that using copyrighted works for AI development shouldn't be considered fair use, particularly if the resulting AI output is commercially exploited, as it could harm the copyright holder's market. Allowing AI developers to use copyrighted works without liability could create inequitable circumstances, potentially disadvantaging human creators. A balance must be struck between the copyright holder's rights and the developer's needs[47]. The World Intellectual Property Organization (WIPO) currently offers no clear guidance on whether using data from copyrighted works without permission constitutes infringement, leading to different approaches in various jurisdictions. Many countries have introduced exceptions in their

[39] Edward Rex, "Jukedeck: Building A Creative Al Business", Available At Https:// Entrepreneurship.Blog.Jbs.Cam.Ac.Uk/Author/Ed-Newton-Rex/(Visited On Feb. 14, 2025)
[40] Ibid
[41] Joseph Straus, "Artificial Intelligence-Challenges And Chances For Europe", 29 European Review (2020)
[42] Ibid
[43] Supra Note 8
[44] Ibid
[45] Ibid
[46] Enrico Bonadio & Luke Mcdonagh, "Artificial Intelligence As Producer And Consumer Of Copyright Works: Evaluating The Consequences Of Algorithmic Creativity", I.P.Q. 112, 13(2020) Https://Eprints.Lse.Ac.Uk/105272/1/Bonadio_Mcdonagh_IPQ_2020.Pdf
[47] Supra Note 8

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copyright laws for TDM, though these exceptions vary in scope[48]. Restrictions on the types of works, rights covered, commercial use, and cross-border transfers, as well as requirements for lawful access, all limit the application of these exceptions. Whether these restrictions are conducive to AI growth remains to be examined.

Regarding their Legal Framework - The European Union (EU) does not recognize the concept of fair use and transformative use in the same way as the United States[49]. EU copyright law, particularly the 2001 Information Society Directive, sought to harmonize copyright laws across Europe, especially concerning copyright exceptions[50]. The Directive allows for exemptions from copyright infringement for transient copies created during technological processes, as long as the copies are necessary and do not have independent creative value. These copies must also be lawfully accessed. This exception applies to machine learning processes, where temporary copies are made during training without being permanently stored.

However, the use of copyrighted works under this exception must comply with a three-step test[51]. This test ensures the exception applies only in special cases that don't conflict with the normal exploitation of the work or harm the legitimate interests of the copyright holder. The first part of the test limits the exception to specific purposes, while the second part requires that the use does not interfere with the commercial exploitation of the work[52]. The third part ensures the use does not cause unreasonable loss to the copyright holder, potentially requiring compensation[53].

In 2019, the EU introduced a specific exception for text and data mining (TDM) under the Copyright in the Digital Single Market Directive[54]. This new provision expanded the existing framework and allowed research organizations and cultural heritage institutions to use the TDM exception for scientific research. However, to apply this exception, researchers must

[48] Sean Flynn Et Al., *Implementing User Rights For Research In The Field Of Artificial Intelligence: A Call For International Action*, 2020 SSRN ELEC. J., , Https://Doi.Org/10.2139/Ssrn.3578819.
[49] Supra Note 8
[50] Ibid
[51] Ted Shapiro & Sunniva Hannson, "The DSM Copyright Directive- EU Copyright Will Indeed Never Be The Same", EIPR 404, 6 (2019). Https://Www.Wiggin.Co.Uk/App/Uploads/2019/08/2019_41_EIPR_Issue_7FINAL_SHAPIRO.Pdf
[52] Daniel Gervais, "Exploring The Interfaces Between Big Data And Intellectual Property Law", 10 J. INTELL. PROP. INFO. TECH. & ELEC. COM. L. 3 (2019) Https://Papers.Ssrn.Com/Sol3/Papers.Cfm?Abstract_Id=3360344
[53] Ibid
[54] Pierre N. Leval, "Towards A Fair Use Standard", 103 HARV. L. REV. 1105, 1111 (1990). Https://Archive.Blogs.Harvard.Edu/Copyrightosc/2020/02/26/

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lawfully access the works being mined, typically through a contract, unless an open access policy is in place.

Article 7[55] of the Directive renders contractual clauses that limit the TDM exception unenforceable. Article 4 [56]also broadens the scope of the exception, allowing categories beyond research organizations to use it for non-commercial purposes. One notable feature of the 2019 Directive is the reinforcement of the public domain: once a visual artwork's copyright expires, its derivative materials are no longer protected by copyright.

Despite these advancements, the 2019 Directive has some limitations, particularly for AI development[57]. Private companies developing AI systems encounter barriers to TDM exception implementation except through public-private partnerships that might impede their capability to capitalize commercially from their developed products. Natural rights holders under the Directive possess the option to deny mining rights which potentially undermines innovation development. AI research teams along with technology companies encounter implementation problems due to undefined TDM parameters in the exception framework and diverse EU member state interpretations. Several unresolved matters as well as ambiguity in the Artificial Intelligence industry persist under the current Directive until Europe achieves digital market unification.

Indian Perspective

The absence of a comprehensive legal framework for regulating and supervising emerging technologies has led to ambiguity in various legal aspects. In Indian some of the initiatives, such as the policy paper released by NITI Aayog titled *National Strategy for Artificial Intelligence,* . NITI Aayog which has decided to focus on five sectors that are envisioned to benefit the most from AI in solving societal needs: a) *Healthcare*: increased access and affordability of quality healthcare; b) *Agriculture*: enhanced farmers' income, increased farm productivity and reduction of wastage; c) *Education*: improved access and quality of education; d) *Smart Cities and Infrastructure*: efficient and connectivity for the burgeoning urban population,ande) Smart Mobility and Transportation: smarter and safer modes of transportation

[55] Article 7 In Directive 2019/790 (CDSMD)
[56] Article 4 In Directive 2019/790 (CDSMD)
[57] Christophe Geiger Et Al., *Text And Data Mining In The Proposed Copyright Reform: Making The EU Ready For An Age Of Big Data?*, 49 IIC - INT'L REV. INTELL. PROP. & COMPETITION L. 814, (2018), Https://Doi.Org/10.1007/S40319-018-0722-2

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and better traffic and congestion problems[58]. Additionally, a committee led by V. Kamkoti has been formed to promote research and development in this domain and established the National AI Mission[59].The policy emphasizes self-regulation, advocating for principles such as transparency, privacy, equality, safety, inclusivity, and accountability. However, uncertainty remains regarding the legality of Text and Data Mining (TDM) and the use of data under existing copyright laws[60]. Section 52[61] of the Copyright Act provides a detailed list of activities that qualify as fair dealing and do not amount to copyright infringement, but it does not explicitly address TDM. While Section 52(1)(a) permits the use of literary works for private or personal purposes, including research, criticism, review, or news reporting—subject to certain conditions—it does not extend to commercial use[62]. This principle was reinforced in *Saregama India Ltd. v. Alkesh Gupta*[63]and *Tips Industries Ltd. v. Wynk Music Ltd*[64]., where the courts clarified that fair dealing protections apply only to non-commercial purposes, specifically for research and development, but not for commercial exploitation[65].

To conclude, Copyright law is constantly changing to keep up with digital advancements. The rise of artificial intelligence, which relies on large amounts of data, has raised new concerns about copyright infringement. Questions about who owns AI-generated content, who is responsible for misuse, and how to balance innovation with copyright protection remain unanswered. Different countries have taken different approaches to these issues, leading to various legal interpretations.

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[58] Https://Www.Niti.Gov.In/Sites/Default/Files/2023-03/National-Strategy-For-Artificial-Intelligence.Pdf

[59] PTI, *Central Task Force On AI Recommends Setting Up Of N-AIM*, INDIAN EXPRESS (Mar. 28, 2018), Https://Indianexpress.Com/Article/India/Central-Task-Force-On-Ai-Recommends-Setting-Up-Of-N-Aim-5114130/ .

[60] Ibid

[61] Section 52(1) Of Indiasn Copyrights Act Of 1957 The Following Acts Shall Not Constitute An Infringement Of Copyright, Namely,--
1[(A) A Fair Dealing With Any Work, Not Being A Computer Programme, For The Purpose Of--
(I) Private Or Personal Use, Including Research;
(Ii) Criticism Or Review, Whether Of That Work Or Of Any Other Work;
(Iii) The Reporting Of Current Events And Current Affairs, Including The Reporting Of A Lecture Delivered In Public;
Explanation.-- The Storing Of Any Work In Any Electronic Medium For The Purposes Mentioned In This Clause, Including The Incidental Storage Of Any Computer Programme Which Is Not Itself In Infringing Copy For The Said Purposes, Shall Not Constitute Infringement Of Copyright.]

[62] Section 52(1)(A) A Fair Dealing With A Literary, Dramatic, Musical Or Artistic Work Private Use Including Research

[63] *Saregama India Ltd*. & Ors. *V*. *Alkesh Gupta* & Ors. (2013)

[64] Tips Industries Ltd. V. Wynk Music Ltd AIRONLINE 2019 BOM 1452

[65] Divij Joshi, "Crawl Cautiously: Examining The Legal Landscape For Text And Data Mining In India" Available At Https://Spicyip.Com/2020/06/Crawl-Cautiously-Examining-The-Legal-Landscape-For-Text-And-Data-Mining-In-India-Part-I.Html Visited On Feb. 13 2025).

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In India, copyright law includes fair use provisions under Section 52 of the Copyright Act, allowing limited use of copyrighted material for education, research, and news. However, it does not clearly address AI-generated content or text and data mining. In contrast, the United States follows a flexible four-factor test to decide fair use, but court rulings can vary. The European Union has taken a stricter approach with its 2019 Copyright Directive, requiring online platforms to take more responsibility for copyright violations. Even with these regulations, AI-generated content remains a gray area, and more legal clarity is needed.

The issue of liability is also evolving. Digital platforms, AI developers, and internet service providers are being held increasingly accountable for copyright violations. While some legal protections exist, recent court rulings indicate that companies can be responsible if they knowingly allow infringement. Courts have played a key role in shaping these rules, and legal trends suggest stronger enforcement measures in the future.

As technology advances, copyright laws need to strike a balance between protecting creators' rights and promoting public access to knowledge. The complexities of AI-generated works highlight the need for updated legal frameworks. Policymakers and legal experts must work together to create laws that support both innovation and copyright protection in the digital world.

Conclusion and Suggestions

Conclusion

The evolving landscape of copyright law presents significant challenges in the digital era, particularly concerning the intersection of legal frameworks and technological advancements. The study highlights that while copyright laws have traditionally been designed to protect human creators, they now face difficulties in addressing digital content creation, unauthorized usage, and liability concerns. In India, fair use provisions under the Copyright Act, 1957, provide certain exceptions for education, research, and journalism. However, they require further clarity in addressing digital reproduction, data mining, and unauthorized content distribution.

A comparative analysis reveals that different jurisdictions adopt varied approaches to copyright enforcement. The United States applies a flexible fair use doctrine, allowing courts to interpret

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cases based on key legal principles. Meanwhile, the European Union, through the 2019 Copyright Directive, has imposed stricter obligations on digital platforms to prevent copyright violations. Despite these advancements, emerging digital challenges necessitate further legal refinements and harmonization to ensure a balance between protecting intellectual property rights and allowing legitimate public access to information.

The study further examines legal liability, emphasizing the increasing responsibility of content-sharing platforms, digital service providers, and intermediaries in cases of copyright infringement. Judicial decisions continue to shape the enforcement landscape, determining liability based on intent, economic harm, and technological impact. As digital content consumption increases, the need for a comprehensive and adaptive legal framework becomes imperative to safeguard intellectual property without stifling access to knowledge and innovation.

Suggestions

5.2.i. Amending the fair dealing provisions:

India**'s fair dealing provisions** under **Section 52 of the Copyright Act** should be expanded to **explicitly define the scope of permissible uses** of copyrighted works. The **U.S. fair use doctrine** offers courts discretion in assessing **transformative use,** while **Japan's approach** allows limited content use for research and education.

India should introduce clearer statutory language distinguishing permissible digital reproductions from unauthorized use, ensuring alignment with evolving digital consumption patterns.

5.2.ii. ***Addressing Digital Content Liability (EU's Copyright Directive & U.S. Safe Harbor Law)***

Digital platforms that **facilitate content sharing** play a crucial role in copyright enforcement. The **EU's Copyright Directive (Article 17)** holds online platforms accountable for unauthorized content distribution, while the **U.S. Safe Harbor provisions** provide liability exemptions for platforms that comply with takedown requests.

India should implement a tiered liability framework, ensuring digital service providers take proactive measures to prevent copyright infringement while preserving safe harbor protections for legitimate content-sharing platforms.

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5.2.iii. ***Digital Rights Management and Licensing Mechanisms (South Korea's Model)***

South Korea has implemented a **compulsory licensing model** that ensures copyright holders receive fair compensation for the use of their works in digital spaces.

India should establish similar licensing mechanisms that promote transparency in digital content distribution, ensuring that copyright owners receive appropriate remuneration for content reproduction and public dissemination.

5.2.iv. ***4. Enhancing Intermediary Regulations and Compliance (EU Digital Services Act, US DMCA)***

The **EU Digital Services Act & U.S. Digital Millennium Copyright Act (DMCA)** regulate intermediary liability, ensuring online platforms maintain accountability for copyright violations while providing due process for content takedowns.

India should introduce clearer compliance obligations for online intermediaries, requiring them to implement effective monitoring and takedown mechanisms to prevent unauthorized content distribution.

5.2.v. ***Aligning India's Copyright Law with Global Standards (WIPO & International Conventions)***

The **World Intellectual Property Organization (WIPO)** has established **international guidelines for copyright enforcement**, and several jurisdictions have updated their laws to align with these standards.

India should participate in global intellectual property discussions and modernize its copyright framework to align with WIPO's evolving principles, ensuring international compatibility in copyright enforcement.

5.2.vi. ***Public Awareness and Digital Literacy Programs***

A significant challenge in copyright enforcement is the **lack of public awareness regarding intellectual property rights** and **the consequences of copyright infringement**.

India should introduce educational initiatives that promote awareness about copyright laws among digital content creators, consumers, and businesses, ensuring ethical content use and

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compliance with legal norms.

By adopting these measures, policymakers and legal experts can ensure a balanced and effective copyright system that supports intellectual property rights while fostering accessibility, legal compliance, and technological advancement.