-Innovation Innovation and Integrative Research Center Journal

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

# An Overview of Intellectual Property Rights in The Age of Artificial Intelligence

<sup>1</sup>Adv Sunil L Kalagi, <sup>2</sup>Mr. Ranjan Kumar Ray
<sup>1</sup>Master's Student of Law, <sup>2</sup>Assistant Professor
<sup>1,2</sup>Department of Law, Kalinga University Raipur C.G.
<sup>1</sup>sunil.kalagi2024@gmail.com, <sup>2</sup>ranjan.ray@kalingauniversity.ac.in

### ABSTRACT

Artificial Intelligence (AI), which looked very difficult to achieve or happen in real, is now emerging from films about science fiction and into our reality, accumulating speed over the past few decades. It has made many innovative breakthroughs in practically every industry. Thes intelligent machines are playing key role in shaping and defining the industries of various sectors including rights for intellectual property. The intersection of AI and Intellectual Property Rights (IPR) has both positive and negative outcomes. On the Positive Side, AI plays key role in the field of patent for searching patents worldwide, accurate and timely research for granting patents and for maintain the authenticity and eliminating fraud claims. It also offers a support for sorting ideas and mechanism to assist the innovator. However, Intelligent machines may pose a danger to innovation by Infringement. Our review paper examines the Laws provisions controlling IP rights in the context of AI-generated compositions. It emphasizes the difficulties around authorship and ownership. Furthermore, the potential for AI to aid in the development of creative technology raises concerns about the effectiveness of existing regulations to protect and encourage creativity. Our study examines the potential created by combining AI with rights to intellectual property procedures. The paper also discusses some case studies across developed countries like USA, UK and European Union (EU) and developing countries like India. To conclude our study proposes guidelines and reveal gaps in various countries which help policymakers and industry stakeholders for enacting new laws. The study provides insights and guidance for policy makers, legal researchers and law makers to build a balanced environment which encourages innovation while protecting the creator rights.

Keywords: Artificial Intelligence, Intellectual Property Right, Copyright, Patent, Trademarks.

### **1. INTRODUCTION**

The fast development of 'Artificial Intelligence' (AI) technology has influenced many different sectors notably healthcare, banking, entertainment, and the creative arts. Artificial intelligence (AI) is an imitation of human intelligence in computers engineered to think and learn in a manner analogous to humans.<sup>1</sup> This includes skills such as pattern recognition, natural language comprehension, and solving problems. The increasing capability of AI systems to generate content, make decisions, and automate processes raises significant issues over the safeguarding of Intellectual

<sup>&</sup>lt;sup>1</sup> Raj, A. "Artificial Intelligence", (2024), *12*(11), 646–655, International *Journal For Science Technology And Engineering*.

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

Property Rights (IPR).

Intellectual Property Rights (IPR) confer exclusive authority to authors and inventors over their creations, designs, and artistic works. Intellectual Property Rights encompass several protections, including trade secrets, patents, trademarks, and copyrights. These rights are designed to foster innovation and creativity by ensuring that writers can benefit from their works without concern for unauthorized use or reproduction.<sup>2</sup>

The intersection of AI and intellectual property rights presents both potential and challenges, necessitating a reassessment of existing legal frameworks to ensure they adequately address the unique characteristics of AI-generated works. When an AI system generates a painting, a song, or a software program, the issue of ownership arises—whether it belongs to the AI creator, the person who activated the AI, or the AI itself. Moreover, numerous challenges exist in training AI models using presently accessible copyrighted materials.

The legal implications of utilizing copyrighted material for training purposes must be meticulously analyzed to achieve equilibrium between writers' rights and the need of innovation and technical advancement.

Harmonized policies that promote the responsible development of AI technology are becoming essential as different jurisdictions address these concerns. They also protect the rights of creators and offer remedies for infringement. To establish adaptable legal frameworks that acknowledge the realities of artificial intelligence, stakeholders such as legislators, legal practitioners, engineers, and artists must engage in constructive dialogue.

# 2. ETHICAL ISSUES AND CHALLENGES DUE TO THE INTERSECTION OF AI AND IPR.

Global nations, including India, encounter challenges stemming from the intersection of artificial intelligence and intellectual property rights. This presents numerous challenges and ethical quandaries that are becoming increasingly urgent. AI technologies, as they evolve and become more integrated into economic, creative, and innovative processes, raise fundamental issues related to ownership, security, and ethics.<sup>3</sup>

The following are some of the main issues discussed with landmark case laws:

### i)Key Challenges and Ethical Issues in the following areas:

### a) Ownership of AI Created Content:

<sup>&</sup>lt;sup>2</sup> Shadofa, S, Intellectual Property Rights and Scientific Plagiarism. (2024). 31–40.

<sup>&</sup>lt;sup>3</sup> Torrance, A. W., & Tomlinson, B, "Training Is Everything: Artificial Intelligence, Copyright, and Fair Training", Dickenson Law Review, (2023).

ISSN: 2584-1491 | www.iircj.org

Volume-3 | Issue-4 | April-2025 | Page 919-926

i) Challenge: One major problem is figuring out who is the rightful owner of works produced by AI systems.

Which is it the user, the AI's creator, or the AI itself, if it is seen as an entity?

ii) Ethical Issue: This brings questions regarding how to recognize the achievements of intelligent systems while rewarding human inventors and encouraging innovation.

## b) Authorship of Original Works:

- i) Challenge: The foundation of traditional IPR systems is human authorship. Because AI systems can produce text, music, art, and more, disagreements regarding authorship and copyright eligibility may arise.
- ii) Ethical Issue: If AI generated art is viewed as being on par with human-produced art, there is a chance that human originality will be undermined.

## c)Patent Rights on AI Innovations:

- i) Challenge: Because of the uncertainty around inventorship and whether AI qualifies as an inventor, innovations created with its assistance may be more difficult to patent.
- ii) Ethical Issue: There are problems with the patenting system, which was largely created for human inventors, if AI can produce inventions on its own.

d)Data Privacy and Security:

i) Challenge: Large volumes of data, including copyrighted works or personal information, are frequently used by AI systems, which raises questions with data use, privacy, and rights violation.

ii) Ethical Issue: Consent and the appropriate use of private or copyrighted information to train AI systems can have serious ethical ramifications.

## e) Bias and Fairness:

i) Challenge: Biases in training data can be reinforced by AI systems, producing biased results and violating people's rights.

ii) Ethical Issue: This presents a serious ethical conundrum about equity, representation, and accountability and may lead to unfair treatment or harm to groups.<sup>4</sup>

### ii) Landmark Cases:

<sup>&</sup>lt;sup>4</sup> Feng, Z, Copyright Issues in the Artworks Generated by Artificial Intelligence Volume 1, No.9 (2024), Issue 9. *Interdisciplinary Humanities and Communication Studies*, Dean & Francis Publishing, ISSN 2959-61491

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

*India*: Case: Shyam Sunder Co vs State of Bengal (2021): This action centered on the utilization of software for tracking and monitoring, emphasizing the tension between private rights and public interest in data management and use, so illustrating a contemporary interpretation of intellectual property rights in an AI-driven context.

In the case of Google India Pvt. Ltd. v. Vishakha Jagdish (2021), the court assessed the necessity of extending protections to AI-generated works in contexts where the technology contributes to creative output, potentially indicating a transformation in intellectual property legislation. In this instance, issues around the utilization of copyrighted material and culpability were resolved. The concepts addressed concerning sharing and ownership may apply to AI-generated outputs and the utilization of existing works to create new content.<sup>5</sup>

*United States*: Case: Thaler v. Hirshfeld (2021): The AI system known as "Device for the Autonomous Bootstrapping of Unified Sentience" (DABUS) was designated as the inventor on a patent application that was rejected by the U.S. Patent and Trademark Office. The case ignited ongoing discussions over the implications for patent law by questioning the potential recognition of non-human entities as inventors.

In terms of Copyright Office's Stance, The U.S. Copyright Office clarified the laws governing the ownership and duplication of AI-generated works by ruling that works produced entirely by AI without human participation are not eligible for copyright protection.<sup>6</sup>

*UK*: - The most notable case law on AI work recognition is the recent Supreme Court decision in "Thaler v. Comptroller-General of Patents, Designs, and Trade Marks," in which the court unanimously ruled that an AI system cannot be considered an inventor under UK patent law, implying that an AI machine cannot be named as the inventor on a patent application; essentially stating that only a natural person can be recognized as an inventor. The Supreme Court denied Thaler's appeal, confirming that under the UK Patents Act 1977, an AI machine cannot be acknowledged as an inventor.

The UK Copyright, Designs and Patents Act is now being reviewed to see if any changes should be made to allow for AI-generated content. Even though existing guidelines claim that copyright only applies to human authors, it is acknowledged that the law needs to change to reflect AI capabilities.<sup>7</sup>

*European Union (EU)*: The Artificial Intelligence Act (2021) aims to regulate the development and implementation of AI, addressing ethical considerations and accountability, without explicitly resolving copyright issues for AI-generated products, while underscoring the importance of

<sup>&</sup>lt;sup>5</sup> Shyam Sundar Roy vs State of West Bengal & Ors, WPA 9361 of 2021

<sup>&</sup>lt;sup>6</sup> Irina Buzu, "<u>The Inventorship Paradox within Generative AI.</u>" The Journal of Intellectual Property, Science and Education "Intellectus", State Agency on Intellectual Property (AGEPI),2024, Issue 1, pages 34-47, July.

<sup>&</sup>lt;sup>7</sup> Matulionytė, R, "'AI is not an Inventor', Thaler v Comptroller of Patents, Designs and Trademarks and the Patentability of AI Inventions", 2024, Volume 88, Issue 1, Pages 205-218, Modern *Law Review, WILEY, Online Library*.

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

compliance with intellectual property rights.<sup>8</sup>

The ramifications for intellectual property rights will become increasingly complex and significant as AI technology progresses. Countries around are formulating their policies and legal frameworks to protect innovation and creativity while addressing the challenges posed by artificial intelligence.

## **3.OPPORTUNITIES DUE TO CONVERGENCE OF AI AND IPR**

The intersection of AI and IPR provides several opportunities, difficulties and ramifications for Artists, Companies, and Legislators.<sup>9</sup>

The following are some of the main advantages that come with this intersection.

**i**) **Better and Improved Innovation:** AI has the potential to accelerate innovation in several sectors by streamlining the research and development process. AI can find patterns, market gaps, and possible locations for new discoveries by analyzing enormous amounts of data, which can assist creators in producing intellectual property more effectively.

**ii) Management of IP with Automation:** Numerous facets of intellectual property management might be automated by AI technologies, including the following.

*Trademark searches*: AI can help with thorough trademark searches to prevent possible infringements.

*Monitoring and enforcement*: AI systems can keep an eye out for intellectual property infractions on websites, assisting owners of rights to better safeguard their assets.

*Filing and administration*: AI can assist in managing portfolios and expediting patent applications to guarantee timely deadline compliance.

iii)Better IP Analysis: AI-powered analytics help improve IP strategy and valuation:

*Valuation models*: By using predictive analytics and taking historical data and market conditions into account, AI can help determine the value of intellectual property assets.

*Risk assessment*: Based on past trends, AI algorithms can assess the probability of IP conflicts or infringements.

**iv**)**Development of New Types of IP:** The proliferation of AI-generated content calls into question ownership and authorship. There are chances to create fresh IPR frameworks that tackle as follows.

<sup>&</sup>lt;sup>8</sup> Manchev, A, World's first law for artificial intelligence. legal, ethical and economic aspects, (2024). *Obrazovanie i Tehnologii*, 15(1), 225–228.

<sup>&</sup>lt;sup>9</sup> Kashefi, P., Kashefi, Y., & Ghafouri Mirsaraei, A, Shaping the future of AI: balancing innovation and ethics in global regulation. (2024). *Uniform Law Review*.

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

*AI-generated inventions*: Investigating whether AIs are considered innovators or if the rights belong to their creators:

*Copyright for AI-generated content*: Creating rules for who owns works created only by AI, which may result in new business structures.

v)Cross-industry Collaborations: The intersection can encourage cross-sector cooperation.

For example, regarding Entertainment context, AI's capacity to produce art or music may open revenue streams and licensing opportunities.

In the field of Pharmaceuticals, AI in drug research could result in breakthroughs that call for shared ownership structures or new types of patent protection.

**vi)** Harmonization of IP Laws: There is a great chance to harmonize worldwide IP regulations pertaining to AI-generated content as AI technology crosses national boundaries. This could make international transactions and interoperability easier.<sup>10</sup>

vii)Training and Awareness: Workshops and training courses can enable artists, companies, and attorneys to successfully negotiate this challenging environment.

**viii)Sustainability Practices:** By guaranteeing adherence to rules AI can help advance moral IP management practices, lead to more sustainable innovation methods.

The opportunities at the intersection of AI and intellectual property rights are abundant and varied as AI continues to evolve. To ensure that innovation is harmonized with protection and equity, it is essential to meticulously evaluate the legal, ethical, and societal implications when exploring these opportunities. Engaging in dialogue among technologists, legal experts, and legislators will be crucial for fostering a dynamic and equitable future in this domain.

# 4.DISCUSSION AND CONCLUSION:

The following are some crucial recommendations for legislators looking to strengthen cooperative efforts to weigh the benefits and drawbacks of the junction of AI and IPR.

i) **Building a Unified Global Framework:** To create a unified framework for intellectual property rights in relation to AI-generated material, it is crucial that stakeholders from different countries collaborate.

<sup>&</sup>lt;sup>10</sup> Marchenko, V., Dombrovska, A., & Prodaivoda, V, Comparative analysis of regulatory acts of the EU countries on the protection of intellectual property in the conditions of the use of artificial intelligence. (2024). *Public Administration and Law Review*, *3*(*19*), 44–66.

ISSN: 2584-1491 | www.iircj.org Volume-3 | Issue-4 | April-2025 | Page 919-926

It's important that the key strategy is fostering collaboration between Policymakers, AI developers and IP rights holders. Without this cooperation, disparities in the legislation could cause misunderstandings, arguments, and a climate that inhibits innovation and creativity, which would ultimately impede the very developments that artificial intelligence (AI) can promote.

**ii)** Ensuring Fair Compensation and Protection: Establishing precise rules that safeguard creators' rights while yet taking technology developers' interests into consideration is crucial as AI systems become more and more integrated into creative industries. To secure their livelihoods in an increasingly automated world, stakeholders including legislators, business executives, and legal professionals must endeavour to guarantee that intellectual property laws develop in a way that ensures just compensation for human creators and artists whose works may be produced or influenced by AI.

**iii) Promoting Innovation and Creativity:** Continuous cooperation can result in a well-rounded strategy that fosters innovation while simultaneously defending IP rights. Because their rights and contributions are protected, creators will feel more empowered to experiment with AI technology if a stable legal environment is established. Maintaining a creative culture that has traditionally produced notable breakthroughs in literature, art, and technology depends on this equilibrium.

**iv**) Addressing Ethical Considerations: Addressing the ethical ramifications of AI in IP is becoming more and more crucial as conversations about it grow. The discussion should cover topics such as the societal effects of AI on creative sectors and who is responsible for outputs produced by AI. International dialogue can help establish moral principles that uphold the public good and represent shared ideals.

**v**) **Future-Proofing Legislation:** Given how quickly AI technology is developing, it is critical that laws continue to be flexible and progressive. To ensure that policies are both proactive and reactive, ongoing international discussion might aid in anticipating future opportunities and difficulties presented by AI.

**vi**) **Fostering Inclusivity in the Global Creative Ecosystem:** By acknowledging and considering the diverse perspectives of both wealthy countries and emerging economies like India, international collaboration can lead to more equitable policies that reflect the global nature of innovation and technology. This inclusivity is essential for creating systems that support a wider range of artists and foster a diverse and rich tapestry of human expression.

The fundamentals of 'Fair Use' in copyright legislation require reassessment to align with the changing global context. The Acts should be revised accordingly, incorporate new definitions, align with worldwide benchmark policies, prohibit infringement, and offer remedies to intellectual property rights holders by enforcing responsibilities.

Inside the realm of artificial intelligence systems, "Strict Liability" denotes the accountability of the creator or user for any harm inflicted by the system, irrespective of negligence; "Vicarious Liability" pertains to the responsibility of a party for the actions of an AI system due to their association with it (e.g., an employer for an employee); and "Absolute Liability" represents the most stringent form,



Volume-3 | Issue-4 | April-2025 | Page 919-926

wherein the developer or user is deemed culpable for any harm caused by the AI system, regardless of foreseeability. The accelerated progression of AI technology demands a comprehensive analysis of the consequences for intellectual property rights. The diverse solutions adopted by many nations, including the US, EU, UK, Japan, and India, underscore the range of legal frameworks and interpretations they have formulated in response to AI's ability to create, innovate, and disrupt, in accordance with advancing AI technology. Therefore, leveraging AI across all sectors of society to meet social and economic demands and tackle obstacles is essential for sustainable development. The legal system should implement a regulatory framework that fosters a healthy and sustainable AI environment.

