Jus Corpus Law Journal

Open Access Law Journal – Copyright © 2025 – ISSN 2582-7820

Editor-in-Chief – Prof. (Dr.) Rhishikesh Dave; Publisher – Ayush Pandey

Understanding the Influence of AI Tools like ChatGPT on Intellectual Property Regulations in India

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Received 20 December 2024; *Accepted* 22 January 2025; *Published* 27 January 2025

AI improves automation, decision-making, and content development in several sectors. Its fast growth has prompted IPR problems, notably in India. AI-generated works require urgent legislative revisions to authorship, copyright, patents, and trademarks. This paper analyses AI and IPR cases, including Thaler v Commissioner of Patents[1], which refused patent recognition to AI-generated ideas, and Eastern Book Company v D.B. Modak[2], which investigated copyright eligibility for AI-assisted works. These decisions create key precedents and reveal the changing legal environment of AI and IPR. The study examines AI's involvement in IPR, including accountability, algorithmic bias, and AI-created content. This paper also compares AI-related IP legislation in the UK, Ireland, and India to show differences and prospects for harmonization. The Ministry of Electronics and Information Technology's AI Committee and the Bureau of Indian Standards (BIS) AI Committee, which regulate AI applications and promote innovation, are also examined. Key issues including AI's influence on patents, trademarks, geographical indications, design rights, and suggestions for legislative changes to resolve ownership conflicts and culpability, such as introducing specific AI-related provisions in existing IP laws and establishing a framework for AI-assisted works, are examined. The report emphasizes AI-adapted IP rules, human supervision, ethical AI development, and international collaboration to provide a balanced, fair, and

[1] *Thaler v Comm'r of Patents* [2021] FCA 879

[2] *E. Book Co. v D.B. Modak* (2008) 1 SCC 1

legally sound approach to AI-driven innovation. This article proposes a strong legislative framework to protect human intellectual property while allowing AI's expanding influence.

Keywords: *ipr, ai, generative ai, copyright law, patent law, copyright protection, patentability.*

INTRODUCTION

Artificial intelligence (AI) is a transformative force in computer science, empowering machines to learn, analyze data, identify patterns, and make independent decisions. Its impact is felt across various sectors, from healthcare to finance and media, where it streamlines processes and boosts efficiency. These models significantly enhance reasoning capacity, content creation, and automation, positioning themselves at the forefront of the convergence between AI and intellectual property rights. They raise urgent questions about the ownership of AI-generated material and the pressing need for legislative reform. Intellectual Property Rights (IPR) are increasingly crucial in the digital era, protecting inventions, creative works, trademarks, and patents. The emergence of AI-generated content has brought significant legal issues to the forefront, particularly in the areas of authorship, copyright, and accountability. The question of whether AI can independently hold copyrights and patents, or if these rights are reserved for human creators, is a pressing one. Cases like Thaler v Commissioner of Patents, where an AI-generated invention was denied patent protection due to the absence of a human inventor, highlight the need for resolution in these complex issues. This study scrutinizes the impact of AI on intellectual property rights, dissecting key legal precedents, ethical challenges, and the compelling need for legislative reforms. These changes are vital to align technological progress with rightful ownership, understanding and involvement in this matter are crucial.

CONCEPT OF ARTIFICIAL INTELLIGENCE AND ITS BRANCHES

AI systems are designed to learn, reason, and make[3] conclusions. They analyse information, recognise patterns, and operate autonomously. AI has significantly enhanced decision-making

[3] 'Investigation Specialists, To AI or Not to AI' (*Ntitle,* 28 November 2023) <https://www.ntitlesolutions.com/to-ai-or-not-to-ai/> accessed 18 December 2024

processes, particularly in banking and health, because of technological advances like faster processors and improved algorithms, and data science discoveries such as better data collection and analysis methods.[4] Machine learning is the process of designing algorithms that learn from data. It is utilised in applications such as image recognition, spam filtering, and natural language processing.[5] It has proven extremely useful in language processing, picture identification, and audio analysis applications.[6] Natural language processing allows computers to comprehend and interact with human languages. It is used for machine translation, speech recognition, and text analysis.[7]

INTELLECTUAL PROPERTY RIGHTS (IPR) OVERVIEW

The primary international organisation responsible for the global management of intellectual property rights (IPRs). Foundational treaties, such as the Paris Convention (1883) for industrial property protection and the Berne Convention (1886) for the protection of literary and artistic works, are administered by it.[8] Intellectual property rights (IPR) are the legal ownership of intangible works emerging from human intelligence, creativity, and invention. WIPO[9] defines intellectual property rights (IPR) as exclusive rights given to people or companies for their unique creative works. Article 2(viii) of the 1967 WIPO Convention defines intellectual property rights as artistic performances, phonograms, literature, scientific discoveries, trademarks, industrial designs, and protection against unfair competition. These rights provide legal acknowledgement and protection for intellectual contributions in the scientific, industrial, literary, and creative domains.

[4] Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford University Press 2014)
[5] Ian Goodfellow, *Yoshua Bengio & Aaron Courville, Deep Learning* (MIT Press 2016)
[6] Yann LeCun et al., 'Deep learning' (2015) 521 Nature <https://www.cs.toronto.edu/~hinton/absps/NatureDeepReview.pdf> accessed 18 December 2024
[7] Daniel Jurafsky and James H. Martin, *Speech and Language Processing* (3rd edn, Pearson 2021)
[8] Paris Convention for the Protection of Industrial Property 1883
[9] 'Access and Benefit Sharing' (*Kenya Biodiversity National Clearing House Mechanism*) <https://ke.chm-cbd.net/access-and-benefit-sharing> accessed 18 December 2024

INTELLECTUAL PROPERTY RIGHTS TYPES

IPR is a powerful tool that protects your individual rights by ensuring legal ownership and preventing illegal use of your creative works. The main types:

1. Copyright: Copyright protects original literature, music, art, and films. Creators have unique rights to prohibit unauthorized replication, which means their work's unauthorized copying, distribution, or performance. Copyright is automatically granted; however, registration provides further legal protection.[10]

2. Trademark: Brand names, emblems, and slogans help customers distinguish products and services. Companies like Apple, LG, and Dell brand themselves using trademarks. Though voluntary, registration protects exclusive rights and prohibits abuse.[11]

3. Geographical Indication: GI tags differentiate items by origin, highlighting distinctive attributes. For instance, Darjeeling tea, Nagpur oranges, and Kashmir Pashmina wool are all products that have unique qualities due to their specific geographical origin. To preserve tradition and reputation, GI tags safeguard these regional peculiarities.[12]

4. Patent: Patents give innovators exclusive rights to create, use, and sell their creations. Patents cover innovations like the telephone (Alexander Graham Bell), which are new and useful products or processes, but not scientific laws like gravitation (Isaac Newton), which are fundamental principles that describe the behaviour of natural phenomena.[13]

5. Design Rights: Maintains the aesthetics of industrial and handcrafted goods like vehicles, phones, and appliances. Visually unique objects are manufactured, imported, and sold under design rights.[14]

[10] Copyright law of the United States 1976
[11] Lanham Act 1946
[12] Geographical Indications of Goods (Registration and Protection) Act 1999
[13] United States Patent Act 1952
[14] Designs Act 2000

CHALLENGES POSED BY AI IN IPR WITH LANDMARK JUDGEMENTS

IPRs encourage and protect creative and innovative ideas. However, AI has made identifying ownership, authorship, and culpability more difficult. AI's potential to create innovations, brand symbols, and creative works has complicated IP law. While courts have interpreted statutes to address these issues, AI's growing capabilities continue to test intellectual property protection.

1. Patentability of AI-made inventions: Patents protect innovative, non-obvious, industrially relevant innovations. If AI-generated ideas qualify for patent protection, who should be recognised as the inventor—the AI system or its human creator? AI-generated inventions are forbidden under patent regulations since inventors must be human.

Landmark Case: *In Thaler v Commissioner of Patents, Stephen* Thaler claimed that his AI system, DABUS, independently invented innovative innovations and should be recognised as an inventor under the Patents Act. The court found that patent regulations need human inventors; hence, AI cannot be inventors. This verdict shows that present patent frameworks cannot accommodate AI-generated discoveries and demands legislative amendments to define AI's position in patent law.[15]

AI and Trademark Infringement: Trademarks protect the exclusive use of brand symbols, emblems, and phrases. AI-powered technologies that generate brand names and logos may accidentally copy trademarks. The legal issue is whether AI developers, users, or platforms hosting AI-generated material are liable for infringement.

Landmark Case: *Christian Louboutin SAS v Nakul Bajaj & Ors. (2018)* claimed that e-commerce platforms sold counterfeit red-soled shoes. The court considered trademark infringement by AI-driven internet platforms. To avoid trademark abuse, e-commerce platforms must make proactive efforts and cannot claim full exemption. The precedent created by holding digital platforms liable for AI-enabled trademark infringements emphasises the need for greater regulation.[16]

[15] *Thaler v Comm'r of Patents* [2021] FCA 879
[16] *Christian Louboutin SAS v Nakul Bajaj & Ors* (2018) 250 DLT 452

3. AI-Created Unique Designs: Aesthetic and visual design rights safeguard original product designs and provide legal recognition. AI can automatically produce elaborate patterns, raising the question of whether they are original enough for protection. Legal ambiguity concerning AI-generated design authorship hampers design rights enforcement.

Landmark Case: In 2006, *Microfibres Inc. sued Girdhar & Co.* for copying its textile designs. The court assessed originality when designs were created mechanically or computer-assisted. The court stressed the importance of originality in design protection, even when AI or automated methods are used. This instance suggests that AI-assisted works need more substantial originality criteria to distinguish AI-generated designs from human-created ones.[17]

4. AI/GIs: Geographical Indications (GIs) protect products with regional characteristics. However, AI-driven systems may undercut these regulations by reproducing location identifiers and misrepresenting GI-tagged objects. This is especially important in businesses where AI-driven research or marketing might imitate regional qualities.

Landmark Case: In 2011, *the Tea Board of India sued ITC for exploiting* the 'Darjeeling' GI to sell its goods and deceive customers about authenticity. The court stressed GI protection in the digital age and set instructions to prohibit unauthorised usage. This example shows how AI's capacity to analyse and duplicate regional attributes might compromise GI protections, requiring greater regulation.[18]

5. Copyrighting AI-Generated Works: Copyright protects literary, musical, and creative creations. AI can create music, art, and literature, raising problems about ownership and authorship. The main legal problem is whether AI-generated works are copyrighted and who owns them—the AI system, its creator, or the user.

Landmark Case: The court addressed AI-processed compilation problems in *Eastern Book Company v D.B. Modak (2008)*. The argument was how AI-generated legal compilations qualify as original literary works for copyright protection. The court protected the publisher by ruling

[17] *Microfibres Inc. v Girdhar & Co.* (2006) SCC OnLine Del 1647
[18] *Tea Bd. of India v ITC Ltd.* (2011) CS No 250/2010

that copyright eligibility requires originality in selection and arrangement. If humans are involved in AI creation, this verdict indicates copyright protection—the unanswered question of whether AI may own copyright points to the need for more transparent laws.[19]

POSITIVE IMPLEMENTATION OF GENERATIVE AI IN BUSINESS

1. Access Control & Data Input Restrictions: Implement rigorous access controls and data input restrictions to protect proprietary and sensitive information.[20]

2. Enterprise AI and Licensing Agreements: To secure data protection and deletion procedures, use enterprise versions of generative AI accompanied by rigorous End-User License Agreements (EULAs).[21]

3. Employee and third-party compliance: Ensure workers, contractors, and third parties follow generative AI policy through training and awareness initiatives.[22]

4. Proactive Security Measures: Review and update security policies regularly to properly reduce threats associated with generative AI.[23]

5. Encryption and Incident Response: Encrypt data transfer and create a solid incident response plan to address breaches.[24]

6. Legal Compliance and AI Monitoring: Develop security protocols with legal counsel to guarantee compliance with data regulations and perform regular AI audits.[25]

7. Ethical AI Culture & Risk Assessment: Promote an ethical AI culture and regularly analyse risks in the corporate environment.[26]

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[19] *E. Book Co. v D.B. Modak* (2008) 1 SCC 1
[20] General Data Protection Regulation 2016, art 32
[21] Digital Millennium Copyright Act 2018, s 512
[22] California Consumer Privacy Act 2017
[23] Joint Task Force, 'Security and Privacy Controls for Information Systems and Organizations' (*National Institute of Standards and Technology*, 09 December 2020) <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r5.pdf> accessed 18 December 2024
[24] Health Insurance Portability and Accountability Act 2021, s164.312
[25] General Data Protection Regulation 2016, art 5
[26] Joint Task Force (n 23)

8. External Certifications and Industry Collaboration: Obtain certifications, perform audits, and participate in industry collaborations to maintain security standards and avoid new risks.[27]

LEGAL AND ETHICAL CONSIDERATIONS FOR AI AND IPR

Ethical Considerations -

Algorithmic Bias and Discrimination: AI systems can be biased towards gender, ethnicity, and other protected factors, resulting in discriminatory consequences.[28]

Accountability in AI-generated material: There is currently no clear legal framework to create accountability for AI-generated material and potential infringement of intellectual property rights.[29]

Human Oversight is Required: Ethical AI deployment needs human oversight to avoid prejudice and discrimination in decision-making.[30]

Global AI Adaptation and Justice: AI systems should be updated for technical differences between nations to maintain justice, transparency, and accountability.[31]

Lack of Emotional and Cultural Sensitivity: AI cannot comprehend emotional depth and cultural context, posing issues in the creative arts[32].

Concentration of Power: AI technology is controlled by a few large corporations, generating ethical questions regarding accessibility and fairness.[33]

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[27] *Ibid*
[28] Ryan Calo, 'Artificial Intelligence Policy: A Primer and Roadmap' (2017) 51 UCD Law Review <https://digitalcommons.law.uw.edu/faculty-articles/640/> accessed 18 December 2024
[29] Annabelle Lever, 'Ethics and the patenting of human genes' (2001) 1(1) The Journal of Philosophy, Science & Law < https://doi.org/10.5840/jpsl2001112> accessed 18 December 2024
[30] Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press 2015)
[31] Lilian Edwards And Michael Veale, 'Slave To The Algorithm? Why A 'Right To An Explanation' Is Probably Not The Remedy You Are Looking For' (2017) 16(1) Duke Law & Technology Review <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1315&context=dltr> accessed 18 December 2024
[32] Edward Lee, 'Prompting Progress: Authorship In The Age Of Ai' (2024) 76 Florida Law Review <https://www.floridalawreview.com/article/126449-prompting-progress-authorship-in-the-age-of-ai/attachment/255789.pdf> accessed 18 December 2024
[33] *Ibid*

AI and Human Creativity Debate: The growing usage of AI in creative and innovative processes has raised fears that it would hinder human invention and creativity.[34]

Legal Considerations -

Challenges to Patent Laws: Traditional patent laws have challenges addressing AI inventorship, ownership, and enforcement questions as AI advances rapidly.[35]

Global Differences in AI Rules: Legal frameworks and standards for AI technology vary around the globe, necessitating collaboration across organisations to develop uniform rules.[36]

AI usage in Intellectual Property Offices (IPOs): It has improved trademark application procedures, decreased workload, and sped up patent exams.[37]

Regulating AI's Economic Impact: Legal frameworks are required to manage AI-related concerns such as employment displacement, energy usage, and global technical inequities.[38]

Data Privacy and Regulation: Because AI systems require large datasets, strong legal frameworks are required to control data sharing and responsible usage while preventing data misuse.[39]

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[34] Shlomit Yanisky-Ravid and Luis Antonio Velez- Hernandez, 'Copyrightability of Artworks Produced by Creative Robots and Originality: The Formality-Objective Model' (2018) 19(1) Minnesota Journal of Law, Science & Technology <https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1437&context=mjlst> accessed 18 December 2024

[35] *Ibid*

[36] Hin-Yan Liu et al., 'Artificial Intelligence and Legal Disruption: A New Model for Analysis' (2020) 12(2) Law, Innovation and Technology <https://doi.org/10.1080/17579961.2020.1815402> accessed 18 December 2024

[37] *Ibid*

[38] Matthew U. Scherer, 'Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, And Strategies' (2016) 29(2) Harvard Journal of Law & Technology <https://jolt.law.harvard.edu/articles/pdf/v29/29HarvJLTech353.pdf> accessed 18 December 2024

[39] *Ibid*

AI AND INTELLECTUAL PROPERTY GOVERNMENT INITIATIVES

India has made significant progress in developing AI development and governance legislation and standards but has not fully incorporated AI into its intellectual property laws. Important initiatives include: [40]

1. Ministry of Electronics and Information Technology AI Committee: The AI committee has released studies on AI's progress, safety, and ethics. These publications emphasize the need to address AI's ethical issues in intellectual property rights.[41]

2. BIS Artificial Intelligence Committee: The BIS has a committee to develop Indian AI standards. This program aims to create a framework for AI quality, safety, and accountability.[42]

3. Promote Innovation Policies: India's main AI policy has been pro-innovation policies. These policies encourage AI research and development while balancing innovation and regulation, securing India's AI future. These policies and intellectual property regulations are currently being integrated.

FUTURE DIRECTIONS AND RECOMMENDATIONS

As AI and IPR rapidly advance, the urgent need for proactive regulations becomes increasingly apparent. These regulations are crucial to ensure fair, responsible, and beneficial outcomes for authors, consumers, and the public. The issues of AI-generated works, responsibility, and ethics demand immediate legal reform.

Creation Ownership via AI: Current copyright and patent rules only identify human inventors, making AI-generated work ownership questionable. Legislation is needed to clarify the legal status of AI-assisted and AI-created works, as courts have concluded that AI cannot be a creator.[43]

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[40] Ministry of Electronics and Information Technology, *Report of the Committee on Artificial Intelligence: Development and Safety* (2023)
[41] Bureau of Indian Standards, *AI Standards Committee Report* (2023)
[42] *Ibid*
[43] *Thaler v Comm'r of Patents* [2021] FCA 879

Adjusting AI IP Laws: IP structure may need to be modified to suit AI creators. Developers negotiate AI-generated content ownership through broad user agreements. Legislative revisions must protect human authorship and promote equitable rights distribution, especially in creative and inventive industries.[44]

Liability Issues with AI Evolution: AI's growing involvement complicates copyright infringement, privacy issues, and biased decision-making. AI faults and damages, such as biased algorithms leading to discriminatory outcomes or privacy breaches due to data mishandling, are not effectively addressed by current legislation. Future policies must build accountability structures to address these AI dangers.[45]

Human Duty and Authority: A robust legal structure is needed to keep AI under human monitoring, especially in situations of injury or violation. Laws should hold human developers and inventors accountable for AI faults through enforceable measures.[46]

CONCLUSION

Artificial intelligence (AI) has rapidly changed intellectual property rights (IPR), necessitating urgent legal and ethical reforms. As AI-generated material grows, existing legal frameworks struggle to resolve ownership, authorship, and responsibility issues. Research on AI's effects on copyright, patent law, trademarks, geographical indications, and design rights highlights the need for legislative changes to accommodate AI's status as an independent creator. Landmark cases like Thaler v Commissioner of Patents and Eastern Book Company v D.B. Modak demonstrate the challenges traditional IPR regulations face in accepting AI-generated works, emphasizing the need for clarity and policy involvement. The ethical issues surrounding AI-generated material, algorithmic biases, and potential threats to human creativity underscore the need for human oversight and regulation. India, the UK, and Ireland have taken steps to formalize AI's position in IPR, but global AI governance standards are crucial. Generative AI holds transformative potential for enterprises, industries, and society, but robust data security,

[44] *Christian Louboutin SAS v Nakul Bajaj & Ors* (2018) 253 DLT 728
[45] *Eastern Book Co. v D.B. Modak* (2008) 1 SCC 1
[46] *Microfibres Inc. v Girdhar & Co.* (2006) 32 PTC 157 (Del)

licensing, and compliance frameworks are essential to mitigate risks. Governments, legal institutions, and technological players must unite to create a balanced regulatory framework that fosters innovation while ensuring legal safeguards. This involves adapting intellectual property laws to include AI-generated content, implementing accountability mechanisms, and, importantly, fostering international cooperation to standardise AI policies. Ethical AI deployment is not just desirable, but necessary to prevent misuse, protect human ingenuity, and ensure sustainable development in the evolving digital economy. The paper concludes that proactive legislative action, ethical considerations, and global policy harmonisation are critical to addressing the complex challenges of AI in intellectual property law and that international cooperation is a key factor in achieving these goals.