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Artificial intelligence and intellectual property laws

Anuj Raj[1], Dr. Shailja Thakur[2]

[1] LL.M. (Master of Laws), University Institute of Legal Studies, Chandigarh University, Mohali (Punjab).
[2] Assistant Professor, University Institute of Legal Studies, Chandigarh University, Mohali (Punjab).

ABSTRACT

AI is transforming sections of industries across the globe, raising questions over the established conventions of IP laws, especially in India. When AI systems are producing creative works from inventions to art, there is newfound debate over who owns these products as well as how (and how much) they should be protected from the realm of IP. IP laws, including the Copyright Act of 1957 and the Patent Act of 1970, are not yet adapted to accommodate AI creations. This paper aims to discuss such aspects as originality, inventorship, and ownership of artificial intelligence-created content. In the following international cases, examples include "Thaler v. Commissioner of Patents" can indicate legal outlooks, which Indian legislation might consider for changes. Recommendations include changes to IP laws to allow for split or sui generis authorship when an AI creates a work, improving on fair use regimes, and setting rules about ownership of innovations developed with the aid of AI. Other measures include international collaboration through organizations, in and out of WIPO, to achieve a standard setting that is reactionary to the members. That is how the IP framework has to be developed in India with a focus on the new system that would embrace all results of creativity both by man and machine and would further strengthen India's position in terms of new technological advancements.

Keywords: artificial intelligence, intellectual property, authorship, ownership, copyright, patent law, trademark, fair use, AI innovation, WIPO, India

Introduction :

Artificial intelligence, more commonly termed AI, has rapidly gained popularity in many fields like finance, healthcare, legal systems, etc. The subject of AI in India creates not only risks but also opportunities for the legislation regulating IP laws. One area where the interaction between AI and IP law has elicited copious legal commentary is when such systems themselves generate works that have typically formed the subject of IP law: inventions, literary works, and artistic works. This scenario raises issues of authorship, ownership, and the degree of protection under current legal framings of IP laws, laws that were mainly framed for human authors. With AI systems increasingly generating works independently, the Indian legal system faces a compelling challenge: how best to evolve IP laws to a world in which machines are involved in the process of creation. Although AI has the potential to enhance innovation and assist IP law by analysing data to detect infringement, the legal use of AI raises many questions, as far as the legal/IP protection of works created by AI is concerned, as well as the extent of liability in cases of infringement. [1]

Till now, the Indian legal framework remains silent regarding detailed parameters for artificial intelligence-based intellectual property. However, certain principles common to IP laws, such as the "Copyright Act of 1957" and "the Patent Act of 1970", contain some ideas as to how this might be done. The Indian judiciary and policymakers are not unaware of the impact of AI on IP; however, a legal lacuna appears to exist where exhaustive statutory provisions about creations or inventions made by/s using AI are lacking. This article discusses how the existing framework of IP laws meets, or otherwise, the requirement emerging from AI advances and how legal changes needed to integrate AI permeation into the Indian IP rights system are.

Artificial intelligence, therefore, means the ability of a machine to emulate human intelligence to solve problems on its own. In the legal context, these capabilities of AI go beyond simple automation for analyses, language translation, image identification, predictive analysis, and decision-making. In the context of India, such AI systems are most applicable in fields like research, contract analysis, and intellectual property rights. The legal community is now finally staring into several important questions, including whether AI can be considered a legal person and what its legal status is in IP. AI systems can produce outputs that are new creations such as art, music, and inventions, which makes AI systems resist the IP framework that was set for humans.

Another issue regarding the legal status of an AI is where it is possible to apply for a patent or copyright in the case of an inventor or creator being introduced as the AI system that generated the innovation. This concern crops out in various events like *"Naruto v. Slater"*[2], where the Ninth Circuit in the U.S. discussed the timely issue of authorship of photographs captured by monkeys and ruled against that nonhumans could not be authors under the premise of copyright law as well. Although this decision does not hold the Indian court's decision-makers, therefore it serves as an intelligently shocking mimic. Indian courts may interpret such precedents in the lack of clear statutory provisions, and Indian legislation regarding IP rights has not embraced nongraphical entities so far, which puts together a large legal void.

Consequently, the protection for the creators and innovators in India is vested in a range of statutes that constitute India's IP law lawsuits. The first is the "Copyright Act of 1957", the second is the "Patent Act of 1970", the third is the "Trademark Act of 1999", and the last one is the "Designs Act of 2000."

[1] Purvi Pokhariyal, Amit K. Kashyap, and Arun B. Prasad, *Artificial Intelligence: Law and Policy Implications* 58 (Eastern Book Company, India, 1st ed., 2020, 2024).
[2] [2018] 888 F.3d 418.

Still, every one of these laws provides a unique type of protection depending on the kind of creation or invention. For instance, copyright law governs literary, artistic, and musical production; patent law governs new inventions on technology; and trademark law protects business symbols, including logos. Heretofore, such laws were designed presupposing a human author or the inventor and the emphasis on individual freedom along with the economic stimuli to spur inventions. [3]

The "Copyright Act of 1957" outlines the owners of copyrights as well as authors, which had been centrally concerned with human input to creation. In the same way, the "Patent Act of 1970" limits inventorship to natural persons, thus making it difficult to protect AI-generated inventions. This framework is altered with the appearance of AI technologies because outcomes produced by AI can be of categories protected by IP legislation, but at the same time, they can have no human creator or designer. On the legal level, this lack of definition creates difficulties for IP law being explored in the recent and historical case, such as *"Thaler v. Commissioner of Patents"*[4], in which an artificial intelligence system, DABUS, appeared as an inventor of a patent application. This is quite in contrast to recent happenings in the Federal Court of Australia in favour of AI as an inventor while Indian IP law mandates human creator, agitating the necessity of India to similarly consider such adjustment or clarification in IP laws.

The Indian judiciary has not been faced with the AI inventorship question yet.

The Interplay between Artificial Intelligence and Intellectual Property

The mainstream of AI and IP intertwines and deepens as the efficiency of AI increases, with extended consequences for technologies and laws. AI is not only an instrument for creating new solutions but also often co-author. Creation can be defined as the AI systems' ability to create products without human input, which raises new questions under the IP law, including authorship, ownership, and requirements of IP protection. Historically, IP legislation in India including the "Copyright Act of 1957", the "Trade Marks Act of 1999", and the "Patent Act of 1970", etc. works on the assumption of human authorship and inventorship. Prologue Previously, this depends on the basic assumptions of the brands that create the product. However, with the use of AI as a creator, such fundamental postulates are now being questioned. This has left courts and legislators with the complex challenge of identifying how extensions of IP laws should provide for these changes. In essence, at the core of this debate is an attempt to try to meet the needs of AI innovators users, and the general public while keeping intact the IP laws that offer essential incentives to creators. New thinking toward IP policies and statutes in India might be required to cope with the unforeseeable IA role of a creative process. [5]

AI as a Creator of Intellectual Property: Emerging Legal Issues

The originality of works created by AI outside an author's supervision has raised a new range of legal concerns that deviate from traditional IP paradigms. For example, if an AI system creates an art or invention, there is a legal question of who, if anyone, owns the IP in the art or invention. The latest is the "Copyright Act of 1957", under which the copyright is automatic and vests with the author of the work, and under the "Patent Act of 1970", patents vest with human inventors. There is a serious legal loophole in this legal structure because this legal structure does not take into account AI-generated works. Internationally, there are such examples as *"Thaler v. Commissioner of Patents"*[6] has explained the difficulty in granting inventorship to AI itself, as the Australian Federal Court decision that was offered does not correspond to the flexibilities not presently available in Indian law. Unlike current international norms, Indian IP legislation does not acknowledge non-natural persons or non-legal entities as authors or inventors where the device is posed with certain difficulties in seeking IP protection on the works created domestically. Legal regimes comprehending these peculiar situations must start to emerge, either by granting IP protection to works that have been created by AI or by offering a different sort of protection for these novelties. [7]

Challenges of Defining 'Authorship' and 'Ownership' in AI-Created Works

The problem of attempting to define authorship and ownership for the work produced by AI is one of the most complex at the intersection of AI-IP law. In the current legal frameworks regarding IPs, authorship is deemed to be ownership of human creativity and personality. For example, the "Copyright Act of 1957" states that a work to be protected has to be created originally by a human being. In the said case of *Eastern Book Company v. D.B. Modak*[8], a division bench of the Supreme Court of India expounded on the principles of originality in copyright, where it said that a work cannot attract copyright unless it bears a minimal degree of originality. However, this type of work overwrites the paradigm as it doesn't have the input of the human hand. If an AI-generated painting or song lacks human input, who qualifies as the author? The question is, who will be the main beneficiary—the AI developer, the user, or maybe the AI system? Surprisingly, Indian law has not dealt directly with this gray area, and the protection of IP rights to such works remains unanswered. Currently, ownership and rights of an AI-created work are assigned by the law in most countries, including India, to the person who is the owner or user of the AI. At the same time as AI systems become more sophisticated and autonomous, the status of these parties as entitled to authorship or ownership becomes far more problematic. Therefore, it becomes important to establish who is an author and who owns the work in the Indian context, especially considering the developing role of AI development in society.

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[3] Kaveri Sharma and Inderpreet Kaur Saggu, *Artificial Intelligence, Robotics, and Law* 108 (Central Law Publication, India, 1st ed., 2024).

[4] [2021] FCA 879.

[5] Rodney D Ryder and Nikhil Naren, *Artificial Intelligence and Law: Challenges Demystified* 145 (Law and Justice Publishing Company, India, 2nd ed., 2024).

[6] [2021] FCA 879.

[7] Reto Hilty, Jyh-An Lee, and Kung-Chung Liu, *Artificial Intelligence and Intellectual Property* 200 (Oxford University Press, 1st ed., 2021).

[8] [2008] 1 SCC 1.

Patenting AI Innovations: Possibilities and Constraints

The filing of artificial intelligence innovations attracts some unconventional opportunities and limitations in the Indian IP system. "Patent Act of 1970" covers inventions relating to novelty, non-obviousness, and industrial use of the invention. However, there is the assumption of a human inventor, and this poses a lot of problems when the invention results from an AI system. AI innovations can therefore be treated as algorithms or machine learning models, both of which fall under the provisions of Section 3(k) of the Patent Act of 1970. Courts in India have thus upheld this position by calling for human intervention in patent filings for purposes of AI. In *"Ferid Allani v. Union of India"*[9], the Delhi High Court opined that computer program simpliciter cannot be patented, but inventions involving AI as technical innovation can be patented if they meet the criteria. Nevertheless, AI creations' patenting is not extensive enough. About inventions resulting from AI algorithms that create objects that are more complicated and do not involve human interaction, the absence of an inventor poses a major problem in patentability. While their offices are trying out cases of AI inventions, India for a long time bans inventions by creations that lack human inventorship, which denies patents to AI inventions. It limits the growth and business prospects of AI in India, which may slow down AI-facilitated progress in bioinformatics, manufacturing, IT, and other sectors. She also found that an approach that attends to the sui generis character of AI as a creative actor is necessary for Indian IP law to retain its pertinence and potential as a regulator of innovation in the age of artificial intelligence. [10]

Copyright Issues in AI-Generated Content

AI presents some challenges for copyright, especially when such AI creates content on its own. In India, copyright law is based on the "Copyright Act of 1957", which was promulgated with human authorship in view. Given the current advancements of AI in generating music, literature, and artistic pieces on its own, the existing copyright laws are shifting under this pressure. One major debate is deciding whether or not any given work created by an AI system is owned by the creator, the company, or no one at all. As the law anchors itself on human input as a source of protectable content in copyrights, recognizing putative rights in the results of AI creates conflicts with conventional understandings of authorship, originality, and ownership. Currently, there does not exist any specific regulation of copyright in India regarding AI-related creations, which legal loophole the courts as well as policymakers would be likely to encounter accepting the increase of AI production outputs. To establish an appropriate legal framework regarding newly emerging forms of AI-generated art, it is necessary to clarify what aspects of copyright protection are relevant to AI creations, such as who owns the copyright and what is considered original rather than a reproduction.

Copyright Ownership in AI-Generated Works: Who Holds the Rights?

As big of a concern as there is in ownership and control of AI-related copyrights, one central question is: who owns the rights to AI works? Attaching copyright to a work is designated by the "author" of the work under the "Copyright Act of 1957", a term traditionally used for a human being. But when an A.I. system turns out, for example, an image or a music piece on its own, the idea of authorship has a different perspective. There are possibilities where the creator has some rights, the owner has potential rights, or even the user who triggered the process can have rights to the AI. AI-authored works currently do not legally belong to any of these categories in India due to the absence of existing laws governing their use; they remain in a legal limbo that easily benefits large corporations while creating tremendous uncertainty for creators and users of these services alike. There are international examples of such circumstances; for instance, *"Naruto v. Slater"*[11], is a case of the US court that denied a monkey to own the copyright to the photograph that the monkey took, implying that copyright does not exist to an animal. Indian courts may treat creations produced by AI in the same way unless parliament changes legislation to include AI as an author. This creates problems for developers because AI might be trained to produce useful content using lots of developer's time and resources. There is no obvious legal clarification of who—they as the ones who created it or the ones who use it—gets to have the rights to the products. [12]

Originality Requirement in Copyright: Applicability to AI Creations

Originality is the bedrock of any copyright regime in the world in the sense that it serves as a filter, identifying what may be protected and what cannot be protected. The Apex Court of India in *"Eastern Book Company v. D.B. Modak"*[13] has ruled that copyright can be protected as a work of little creativity. One interesting element about this standard is that it assumes a human author was involved in an act of creation. However, the algorithms that AI systems use instead derive from a set of programmed algorithms and datasets, which makes the 'originality' requirement rather problematic for AI-generated works. In the conventional copyright law, originality (?) means that it was done by a human and has his/her input of his/her creativity—a component lacking in a work produced by an AI. Courts might have to say whether output generated by AI can be granted the level of originality when the authorship lacked a human creative intervention. One of the concerns that the present work sought to establish is that the "Copyright Act of 1957" is unclear on whether originality encompasses works generated autonomously by computers and machines for AI control, putting an obstacle to the registration and protection of copyrights on all AI-generated content. But if the Indian law evolves a liberal definition of originality, then there is the possibility to make a stamp for AI works, but then again there has to be a new output. However, questions like the originality of such work that originated by an artificial

[9] [2020] SCC OnLine Del 350.

[10] Ratnesh Kumar Srivastava, *Artificial Intelligence and Intellectual Property Laws: Prospects and Challenges* 90 (Independent Author, India, 1st ed., 2023).

[11] [2018] 888 F.3d 418.

[12] Swapnil Tripathi and Chandni Ghatak, "Artificial Intelligence and Intellectual Property Law," 7 *Christ University Law Journal 83* (2018).

[13] [2008] 1 SCC 1.

intelligence system are still unanswered, as such definitions are yet to develop. This presents a lot of issues as to how such works could be protected under the current Indian copyright laws.

Fair Use and AI-Generated Content: Legal Implications

Legal interpretations of the Copyright Act of 1957, Section 52, which allows for the use of copyrighted material for a limited number of reasons, such as research, education, or criticism. Since many AI systems generate content based on large datasets, many of these datasets contain copyright materials, thus leaving open the question of what constitutes fair use. This scenario of training AI models on content having copyrights without the consent of the copyright owners regarding infringement of law poses the following question globally: In India, though fair use allows some leniency, the parameters about copyrighted works when used in large datasets are not well defined. As much as AI creates independent new work that is interpreted similarly to the copyrighted material, the chance exists that it will violate the copyright. It is noteworthy that Indian courts still have not directly confronted these problems, although they have recently reflected similar experiences to those of the old *"Authors Guild v. Google, Inc."*[14], the use of alteration and digitization of books for purposes of entering them in search catalogues and other databases have been held valid exercises of fair use. But this raises new issues when AI models apply copyrighted material to create other likely infringing material. In India, how developers are allowed to use copyrighted works (without infringement or civil liability) in training data for AI could be decided by fair use. There is a thin line between the promotion of AI education and the protection of writers and creators, and as more content produced by AI is created, India may have to relook at the fair use policy and laws that benefit both creators of AI and copyright owners. [15]

Patent Law and AI Innovations :

Patents and AI are different from most other areas of application of artificial intelligence and certainly have their legal and technical issues, most notably the question of whether inventions created by an AI can be patented and who exactly owns the patent when they can be. As AI systems continue to evolve and become more autonomous, they add more to the innovation process, and this leads to new considerations about how the Indian patent system as defined by the "Patent Act of 1970" needs to evolve as well. It also outlines new criteria aimed at the assessment of the inventiveness of inventions and novelty of inventions based on which inventions of AI systems are patented but which cannot respond to the idea itself of inventive activity carried out by an AI system, since such inventions may be created by AI systems, meeting all the requirements of certain criteria for such inventions. Besides, when invention is created through automated means by AI, the problem of inventorship and ownership appears to be rather problematic. current patent laws presuppose a human inventor, thus posing for Indian policymakers and courts the question of whether AI could ever be treated as an inventor or inventor's right-holder or not. Moreover, the structural application of AI in patent searches and examination, as well as in the processing and evaluation of applications, has brought a novel dimension to the field and its operations. However, this shift demands consideration of how AI may improve, not diminish, the quality and quality drives of patent examination and protection. [16]

Patentability of AI Innovations: Meeting Novelty and Inventiveness Standards

Requirements of novelty and inventiveness are traditionally at the center of the concepts of the protection of patents by the state. To these requirements, AI innovations pose specific difficulties as AI-generated inventions subvert conventional understandings of novelties and inventiveness. According to the "Patent Act of 1970", Section 2(1)(j) says that an invention should be new and should involve an invention step, which means that it should not be apparent to a person skilled in that particular sphere. However, this setup is typical of AI, as many systems process massive amounts of data and pattern recognition to arrive at an answer in ways that would be obvious to human participants but that are not themselves designed by the participants.

Inventorship and Ownership in AI-Generated Patents: A Legal Dilemma

The idea of inventors in patent law has historically been tied solely to a human inventor's distinctive idea. However, where AI systems are now independent in creating inventions, the question of ownership is a major question. Some jurisdictions, such as the United States, lay down a legal presumption of inventor liability through the "Patent Act of 1970", which would be problematic when the invention stems from AI system, autonomous processes. AI as a Tool for Patent Searches and Examinations: Enhancing Efficiency

IP knowledge is not only an invention generator but also serves as a very effective tool for patent search and examination, providing significant gains in the sphere of patents. Computer systems are capable of scanning large numbers of databases of invention disclosure documents, scientific journals technical literature, and related documents to discover pertinent prior art and appraise the novelty and inventiveness with great experience and less-than-perfect error margin. India has often witnessed high patent pendency rates, and therefore the utilization of AI-based examination tools may potentially result in the decentralization of the authorization of patents and prompt the official patent review. For example, filtering the obtained results using machine learning algorithms for searching and eliminating the mass of similar or non-novel applications will reduce the load on patent examiners and allow them to be involved in complex, non-trivial cases. The AI-assisted examination also results in consistent patent grants because the system uses standard parameters in determining the applications. However, the use of AI in patent examination also has its downside; although the AI-determined analyses are

[14] [2015] 804 F.3d 202.

[15] Aakib Khan and Prashant Vaishnav, "Intellectual Property Law in the Era of Artificial Intelligence," 6 *International Journal of Law, Policy, and Social Review* 125 (2024).

[16] Komal Dixit, "Intellectual Property Rights in the Age of Artificial Intelligence: Challenges and Opportunities," 6 *Indian Journal of Law and Legal Research* 62 (2024).

almost certainly correct, the concept of inventive step or even contextual novelty is not something that an AI understands. In addition, talents can ignore some fine details particular to certain industries, like biotechnology or medicine, where patentability involves a focus on the particular industry. The challenge here will be to ensure that the use of AI serves to strengthen the human part of the process of patent examination in the country to avoid distortion of the patent system. As AI will bring about effectiveness in the examination, Indian patent law needs to set standard protocols for the use of AI, which should supplement human intelligence in the examination without diluting novelty, inventiveness, or comprehensive analysis that forms the backbone for granting patents. [17]

Trademark Issues with AI in Branding and Marketing :

These developments are true to the epithet artificial intelligence (AI) is adapting a transformative mode of undertaking branding and marketing, especially within the purview of trademark law. Pursuing trademark rights has been made easy through the use of AI but has also come coupled with some complexities. Trademarks in India are regulated under the "Trademark Act of 1999", under which symbols, logos, or names used about products or services are shielded so that there is no confusion between the consumers and the brands on which they rely. Using the case of trademarks, AI technology has allowed businesses to enhance the protection of their marks as it can easily incorporate analysis of large data sets to search for infringements, and also compare similarities of marks, including across social media and other online platforms, and between national borders. However, growing AI use in branding also creates quite nuanced legal issues of responsibility and risk. Since AI systems exist on a spectrum of being partial to fully autonomous, the law must decide whose fall it is to bear culpability for any transgressions or contraventions that the systems detect or direct. While India struggles with these technological advancements, the possibility of AI in the realms of trademark law is evident, which opens the view to the legal issues that AI brings to trademark enforcement. [18]

AI in Trademark Infringement Detection: Legal Implications

This is where AI becomes critical since it helps to identify instances of trademark infringement by constantly scanning branding aspects, especially in what is rapidly becoming the dominant environment, namely the online world. Machine learning prescient systems prepared by AI can police a large population of digital content to detect infringement of protected marks and take further action. This capability enables the owners of the trademark to move promptly, thus preventing brand image erosion and confusion for customers. In India, trademark infringement is unlawful and punishable by the "Trademark Act of 1999." However, AI detection tools create concerns about the legal repercussions and suitability of such a tool in an infringement situation. For example, AI may find a similarity between marks that is such that even a layperson will not confuse a trademarked product with the other or even fail to note that the marks are quite deceptive similar—such things that a court or trademarks officer will consider before applying the legal principles to a case.

AI and Deceptive Similarity in Branding: Legal Challenges

A major additional issue in trademark law that AI brings is the threat of creating deceptive similarity in branding. Deceptive similarity concerns the uncertainty that consumers could have after comparing two trademarks and probably end up perceiving that unrelated products or services originate from the same source. Trademark Act of 1999 2(h) deals with deceptive similarity and exclusive use of deceptive similarity for infringement due to the possibility of confusion between consumers. Since AI solutions are increasingly involved in branding, as they generate logos or suggest the name of a brand, they can produce a mark that is similar to the trademark. This setting presents specific legal issues since the AI system does not have the motivation or knowledge of the possible legal consequences of its result. For example, if an AI-designed brand logo looks a lot like a distinct mark, the owner of which has national and international protection, they may be able to bring an action in passing off under the doctrine of deceptive similarity.

The Role of AI in Enhancing Trademark Law Compliance

AI possesses great potential within the spheres of both enhancing compliance with trademark law and helping businesses protect and manage their brands while guaranteeing that used branding strategies are compliant with the law. By enabling the analysis of the compatibility of new propositions with already registered trademarks, AI can effectively decrease the probability of the company getting in conflict with the owners of other marks, including through filing applications. Also, AI can help legal professionals in their handling of portfolios, in finding unauthorized uses, and in creating opportunities for suitable insights for brand protection. With the developments of AI in the Indian trademark law, AI can play an important and instrumental role in timely compliance and proactive approach to trademark management and gain positive impact for the trademark holders and the consumer. [19]

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[17] Mauritz Kop, "AI & Intellectual Property: Towards an Articulated Public Domain," 28 *Texas Intellectual Property Law Journal* 298 (2020).

[18] Lawrence Oguama, "Intellectual Property and Artificial Intelligence: Emerging Prospects and Challenges," 3 *IIC—International Review of Intellectual Property and Competition Law* 87 (2022).

[19] Artificial Intelligence Presents Challenges for Intellectual Property Laws' Focus on Human Creation, *available at* https://www.beneschlaw.com/resources/artificial-intelligence-presents-challenges-for-intellectual-property-laws-focus-on-human-creation.html (last visited on October 15, 2024).

International Perspectives on AI and Intellectual Property Laws :

AI has raised new issues about IP laws worldwide as countries try to incorporate this revolutionized ability into their middle-of-the-road legislation. The United States, the EU, and India have been exploring various approaches towards mitigation of implications of AI in IP. The approaches of each region are consistent with their main concerns, economic considerations, and legal frameworks, and therefore the protection of IP rights concerning AI is a global puzzle. Growing AI systems aimed at delivering inventions, art, and, more importantly, creative content raises issues of ownership, inventorship, and protection. The United States and the European Union have different approaches to considering AI and IP, which is still being formed in India, but its policies are aligned with global trends and judicial practices. With the use of these international approaches, we can identify the legal issues and possibilities that AI is bounding within the IP systems, which, in turn, can help to shape the policy to achieve the policies regarding AI IP laws harmonization internationally.

Comparative Analysis: Approaches of the US, EU, and India

The United States has been timid or cautious when it comes to AI and IP law, sticking to the conventional legal doctrines of IP and its rightful owners being natural individuals. For example, in *"Naruto v. Slater"*[20], backing the human authors are entitled to copyright only provisions of the American copyright law were affirmed. This case, while focused on animal authorship having brought attention to AI works, also indirectly drew the US position on copyrighted works generated by artificial intelligence because non-human authorship remains unrecognized in the copyright and patent law. Also, the USPA approves human inventorship, and therefore any invention generated by AI is not eligible for patent protection. On the other hand, the European Union has proved more flexible in this issue. While the European Patent Office (EPO) does not recognize AI as an inventor either, the EU institutions are already scrutinizing the ethical-legal impact of possession by AI. In its responses, such as the "White Paper on Artificial Intelligence", the EU signalled its willingness to update the IP systems to embrace AI within the innovation-ethics continuum. [21]

Harmonizing Global Standards for AI-Related IP Laws

Increased globalization of AI and the creation of products and services that require standard legal recognition across jurisdictions have made it important to have coherence and compatibility between jurisdictions' standards for IP rights on AI. Today the conflict of the existing approaches in connection with IP issues in the field of AI generates legal risks for innovators and developers, who have to work in different legal environments as to authorship, inventorship, and IP protection. The absence of such consistency is addressed by harmonized standards that guarantee equal treatment of stakeholders across these regions. WIPO has commenced such debates on new international frameworks that consider the new invention opportunities of AI relative to the conventional World Intellectual Property Organization values. The WIPO-led 'Conversation on Intellectual Property and Artificial Intelligence' seeks to address these gaps by engaging international players to outline harmonized policies. This could eventually help create a system that acknowledges the worth that AI brings to the table while delineating definite humanistic principles that govern the distribution of intellectual properties to the satisfaction of the creators or developers and assure them to freely venture into the international market.

Conclusion :

AI has evolved faster in recent years, placing pressure on the Indian IP systems to provide sovereign protection to AI-generated results as well as the human brains behind these innovations. As discussed In India, the IP laws are aligned to human authorship and inventorship, including the "Copyright Act of 1957", "Patent Act of 1970", and "Trademark Act of 1999." Today, with AI systems generating inventions, artwork, and even brands on their own, the rigidity of these traditional fundamentals turns out to be quite obvious. References like *"Eastern Book Company v. D.B. Modak"*[22] and international recent case law in *"XEROX Australia Pty Ltd & Ors v. Commissioner of Patents"*[23] means the moment has come to reconsider definitions of originality, authorship, and inventorship within IP law.

The assessment identifies numerous policies needing changes, including extending the governing legislation so that AI can be attributed as creators while keeping the human actors as the primary and dominant IP rights holders. Furthermore, primary and secondary protection have to be achieved simultaneously to address the issue of AI motivation and encourage human creativity. Due to the faster growth of AI interfaces in trademark watching, patent searching, innovation examination, and even legal analysis, India needs to start deliberation on AI's role in augmenting the enforceability of IP laws without compromising on accuracy and authenticity.

WIPO and other international bodies can help India in the due process of aligning its IP legislation with the best practices in the world. Current interaction to foster common approaches to AI and IP will be beneficial for making the international IP landscape more foreseeable and fairer for India. Finally, it will be crucial to build India's IP environment relevant to the utilization of AI to create a conducive environment towards innovation and creativity as the globe evolves to be dependent on this technology.

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[20] [2018] 888 F.3d 418.

[21] Webinar – International Perspectives on AI and IP Law, *available at:* https://aihealthalliance.org/2021/04/13/ international-perspectives-on-ai-and-ip-law-webinar/ (last visited on October 12, 2024).

[22] [2008] 1 SCC 1.

[23] [2021] FCA 879.

Suggestions :

To resolve new advances of AI within IP regulation in India, several specific recommendations could assist in meeting the goals of innovators, developers, and society as well as maintaining the aims of IP laws. These proposals aim to update India's IP regulations to accommodate AI's capabilities and mitigate legal ambiguities:

- India is also considering of redesigning its IP laws to enable joint or co-authorship and co-inventorship for AI-produced works. This approach may enable rights to be passed to developers or controllers of AI, guaranteeing that human stakeholders remain in total control and possess the copyrights of the AI-created content.
- Thus, instead of the conventional IP categories for India, it could consider a separate category for creations birthed by AI that receive limited protection meant for non-human entities. These assurances could be temporal or selective in their application, thus lowering the chances of complicating IP enforcement while fostering AI's values.
- There need to be rules about who truly owns an AI-generated work to specify authority over an AI work, in part because such ownership often remains ambiguous, although it can vest in either the AI's creator or the user who put the work in motion. This clarity would benefit organizations, as well as individuals, who would want to invest their capital in artificial intelligence innovation.
- AI solutions could complement activities related to IP registration and examination, including patent and trademark examination. It should also be noted that guidelines should prevent AI from replacing human judgment in an examiner's process while at the same time helping the said examiner with analysis of the prior art and inventiveness evaluation.
- Since AI mostly requires big datasets for training, India may improve the conception of fair use regarding dataset usage to reconcile both AI innovators and rights holders. This may encompass an approach to AI training licenses that allow usage of copyrighted material and accommodation of the right's owner.
- India might desire to collaborate with international organizations such as the WIPO to develop universal standards on AI and IP, thus ensuring that enterprising Indian inventors and creators are given fair treatment in foreign countries and that cross-border IP related to the use of AI and robotics may encounter few foreseeable legal difficulties.
- Generally, the legal rules may demand that the AI developers do not act contrary to the prevailing ethical precision and accountability standards when developing such tools in various sectors, such as trademark surveillance and patent search. This can minimize possible errors or preconceptions in AI's IP functions and foster the general population's dependability on AI-directed IP authority.

Therefore, these suggestions are intended for building a sound and adaptive IP regime in India that looks into future transformations with AI while ensuring equitable rights of innovation, ownership, and protection.