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INTERSECTION OF IPR AND ARTIFICIAL INTELLIGENCE **AND ITS IMPACT AND CONSEQUENCES**

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ABSTRACT

Artificial Intelligence (AI) and Intellectual Property Rights (IPR) are two areas of the contemporary legal discourse where the intersection is changing at an exceptionally rapid pace. Nowadays AI associated systems are able to compose music, literature, designs, and even technical solutions with minimal or no human input. This has mangled the conventional legal notions of authorship, inventorship and originality and consequently has caused unimaginable tension to the current IP systems in jurisdictions.

One of the main issues that could emerge out of this intersection is the matter of legal ownership and protection of AI driven outputs. The majority of law systems including the Indian, the US and EU still extend IP rights to natural persons alone. Consequently, AI-generated copyrights might not necessarily fit within the current types of copyright, it is not always obvious whether such outputs can be subject to copyright, patent or not, and who is supposed to be a rightful owner of the right to copyright or patent.

The AI technologies are largely reliant on huge amounts of data and much of this data is protected by either copyright or database right, which is a concern since they can be utilized without authorisation during training. In the meantime, the ability of AI to produce and reproduce content on a large scale complicates the enforcement of the law since rights owners and enforcers can find it difficult to detect infringement, especially in the context of automated copying, deepfakes, and synthetic media. The developments reveal the weaknesses in conventional enforcement paradigms.

AI and IPR interpenetration imply important legal, innovation and creative industry implications. International jurisdictions such as India, United States and the European Union are gradually responding by interpreting the law via the judiciary, policy efforts and changes in legislation, but internationally there is no standard. Continuous advances of AI necessitate dynamic and progressive modifications in the legislation to ensure that IP regimes are effective, equitable, and capable of fostering innovations and safeguarding the rights of creators.

Key words: Artificial Intelligence, Copyrights, Patents, Trademarks

INTRODUCTION

The fast pace of development of AI has essentially changed the environment of innovation and creativity, which has posed serious challenges to traditional IPR in India. The legislation in India regarding IPR, e.g. copyright, patent and trademark, has traditionally been based on the concept of human authorship and inventorship. But, as AI systems are now able to create artistic works, inventions, and analytical work on their own, these legal structures are becoming more and more stressed. The lack of clearly defined provisions on AI-generated creations has led to confusion on ownership, originality, and the extent of protection, and it is necessary to explore how the current laws can be modified to reflect new technological realities.¹

The rationale of this research paper is the necessity to examine the changing association among AI and IPR in the Indian context, especially considering the global trends and political discussions. With the increased use of AI in all sectors, the issue of data usage, the risk of infringement, and accountability have been on the rise. Meanwhile, the fact that India wants to become a global digital innovation leader highlights the need to have a powerful and future-oriented IPR regime. The study aims to draw attention to gaps in existing literature by delving into legal, economic and ethical aspects of this intersection in order to add to the current debate regarding the need to reform the IPR laws to achieve a balance between innovation and protection of rights.

The monetary effects of AI regarding IPR are high. On the one hand, AI can improve productivity, decrease costs, and speed up innovation in any industry. It can facilitate business to develop new products and services, hence, economic growth. Conversely, the lack of a clear and balanced IPR framework on AI might also result in issues, including market power concentration, decreased competition, and unequal benefit redistribution.² This intersection is further complicated by ethical and social factors. AI systems are not always accountable and responsible because they may generate biased, misleading or harmful outputs. When an AI-generated work infringes on IP or harms a person, the question of liability becomes a complicated one. Whether the developer, the user, or some other participant in the AI lifecycle is to bear responsibility is not always evident. These issues underscore the necessity of a holistic

¹ Karun Sanjaya and Rajavenkatesan, Artificial Intelligence and Intellectual Property Rights JIPR (2025)

² Shivani Bisht, <https://ijlpp.com/role-of-artificial-intelligence-in-intellectual-property/>

solution that transcends the conventional legal framework to deal with the greater implications of AI.

LITERATURE REVIEW

Bharadwaj (2026)³ strongly criticizes interactions between legal, economic, and policy frameworks in regulating IPR in such settings, and it is necessary to have balanced strategies to safeguard innovators and to guarantee access to implementers and end-users. It also addresses the role of standard-setting organizations, and their impact on the governance of new technologies, especially in areas where AI and digital infrastructure are the key drivers of innovation.

Abhishek Singh (2019)⁴ maintains that the current IPR laws are ill-equipped to answer the questions of authorship and inventorship in the case of AI systems. The paper notes that Indian law remains based on a purely human-centric paradigm, which poses a question of uncertainty in situations when AI plays a significant role or a vital part in the production of works or inventions. Singh also stresses that although AI has the potential to improve efficiency and innovation, it makes it difficult to determine who owns the law, particularly when the developers, users, and data providers are numerous.

Menon R (2023)⁵ claims that India does not have a specific regulatory policy towards AI at the moment, and the use of the available IP regulations towards the products of AI is inconsistent and unpredictable. Some of the challenges that are reviewed in the paper include authorship, inventorship, liability and data ownership, which cannot be addressed using the traditional legal interpretation alone.

A study of Taplin (2023)⁶ synthesizes several views of law and technology and policy to suggest that AI systems, regardless of their growing complexity, cannot be considered as independent legal persons, able to possess IPR. The author highlights that the current IP regimes, especially the copyright and patent laws, are inherently designed to support human ingenuity and inventorship, and thus, are not well-placed to facilitate AI-generated works.

Narayanan (2020)⁷ describes that Indian patent legislation presupposes a human inventor and does not consider AI systems to be inventors, which leaves an empty legal framework as AI

³ Ashish Bharadwaj, *Global Intellectual Property Licensing in Technologies of the Future*, Springer, 2026.

⁴ Abhishek Singh, "Artificial Intelligence and Intellectual Property Rights: Emerging Legal Challenges in India," *JIPR* (2019)

⁵ R. Menon, "Regulating Artificial Intelligence in India: Intellectual Property and Policy Challenges," *IJLT* (2023)

⁶ Ruth Taplin (Ed.), *Artificial Intelligence, Intellectual Property, Cyber Risk and Robotics* (Routledge, 2023.)

⁷ P. Narayanan, "Impact of Artificial Intelligence on Patent Law in India," *JILI* (2020)

systems are becoming more and more significant in the field of scientific discovery and technical innovation. Narayanan talks about AI-assisted inventions that make it hard to tell who contributed to the invention and who did not, as well as how to gauge inventorship and evaluate inventive step.

In a research paper Desai (2022)⁸, tried to analyze the interactions between AI technologies and trade secret law and confidentiality. The author describes how most AI systems are based on proprietary algorithms, data, and training models that are not patented or copyrighted and instead they are kept as trade secrets. The article points out that the Indian law, although acknowledging trade secrets based on the principles of contract and equity, does not have a systematic statutory framework, and thus the enforcement of the principle is unlikely in AI-related disputes.

RESEARCH OBJECTIVES

1. To analyze the adequacy of existing IPR laws in addressing AI-generated works and inventions.
2. To assess the legal and ethical challenges arising from authorship, inventorship, and ownership of AI-generated outputs.
3. To identify whether a legal and policy consensus exists in India regarding the regulation of AI under IPR laws.

IMPORTANCE OF AI IN IP

The role that AI plays in the realm of IPR includes the promotion of innovations and inventions. AI technology has the ability to process large chunks of data, analyze and come up with new inventions or ideas at an extremely fast rate as compared to humans. In the pharmaceutical industry, for example, AI contributes towards the process of inventing drugs through predicting molecular structure. Similarly, in the engineering sector, AI helps to design systems that work effectively.⁹

Furthermore, AI plays a significant role in enhancing IP management and administration. Today, IP authorities are increasingly employing AI technology in examining the patent applications, conducting prior art search, and finding similar trademarks or copyrighted works. For instance, AI algorithms may analyze databases with existing patents to ensure the

⁸ S. Desai, "Artificial Intelligence and Trade Secret Protection in India," NALSAR Law Reviews (2022)

⁹ Impact of AI on Global IP Systems <https://www.iiprd.com/impact-of-ai-on-global-ip-systems/>

uniqueness of new inventions. In such cases, it will enhance the speed, eliminate mistakes, and facilitate granting IP rights.

One more importance of AI in IPR relates to IP protection and enforcement. Modern AI technologies allow detecting copyright infringement on websites, selling counterfeit products, and other trademark infringements in the online space. For instance, online platforms such as YouTube and various social networking sites utilize AI technologies for detecting any infringement of copyrighted works. At¹⁰

AI also becomes significant in data analytics and decision making for IP strategies. Firms and inventors make use of AI-based tools in analyzing the dynamics of markets, analyzing the patent landscape, and identifying the technologies that have scope for development. This ensures that they make well-informed decisions on investing in research and effectively managing IP portfolios.¹¹

LEGAL FRAMEWORK

Legal system Governing Patents in India

Patents Act, 1970 forms the framework for granting and regulating patents in India. According to Section 6 of the Act, the patent may be filed by the "true and first inventor," his assignee, or his legal representative. As stated above, this suggests that the inventor is a person who has legal personality and thus can have duties and rights.

The term "true and first inventor" mentioned in Section 2(1)(y) of the Act provides another instance where an individual is required to possess an attribute that cannot be associated with a machine. The law does not provide for a case where the inventor may not be a human being, which causes some problems with AI inventions.

According to Section 3 of the Act, there exist inventions that cannot be patented. In particular, one needs to mention Section 3(k). It defines as unpatentable the inventions that include mathematical methods, business methods, computer programs per se, and algorithms. Given the dependence of AI technologies on algorithms, this section becomes particularly important for AI invention.

The case of *Ferid Allani v. Union of India & Ors.*¹² is an important judgment delivered by the Court that made it clear regarding the issue of patenting of computer software inventions in India. This case concerned the invention of an information accessing method and device

¹⁰ Amit Aggarwal, AI and IPRs: Redefining patent laws in India, *Economic Times*, Dec 19, 2019

¹¹ Vishal KUMar, Criminal Liabilities of AI Entities, *India Law Portal*, June 30, 2020

¹² 2020 (81) PTC 489[Del]

using the internet. The court was asked whether computer software inventions cannot be patented in India or only those with some technical innovation can be patented.

Regarding infringement of a patent using AI technology, in the Indian legal perspective, it is regulated as per Patents Act, 1970 which does not include provisions relating to AI specifically. According to section 48 of this act, a patent infringement will take place when a “person” without permission manufactures, uses, offers to sell, sells, or imports the invention or employs any process covered by the patent.

Copyright laws and AI

The Indian copyright legislation is founded on the premise that humans create the protected works through intellectual efforts. However, the creation process for works generated by AI systems is different. There are many legal questions related to such works in regards to their protectability under copyright, the ownership, and whether the use of copyrighted material to train AI systems infringes the rights of the copyright holder.

The Indian copyright regime revolves around several critical sections which define the nature of the works that are protectable, the concept of ownership, infringements, and exemptions. The said sections are currently being challenged on account of developments in AI. Section 13 of the Indian Copyright Act defines what constitutes copyright in terms of works that qualify for protection. The essential criterion under this section is that the works must be original in nature.

With regard to the applicability of AI within this definition, there is a problem in categorizing the output of the AI technology as an “original work.” This is because in India, courts have historically emphasized that originality implies the presence of human effort and creativity. If the creation of the work is done solely by an AI system without any human input, it will become challenging to treat the work as an “original work” in Section 13.

The issue arises in regard to AI in situations where the AI creates output material that is an exact copy of or very similar to copyrighted materials. For example, if an AI were to create text that was almost exactly copied from a copyrighted book or images that were almost exact copies of existing artwork, this could be viewed as an infringement on the author's right to reproduce and adapt their works. According to section 17, ownership of a copyrighted work initially goes to its creator. There are, however, certain exceptions to this rule, including employee or work for hire situations.

Statutory Framework Governing Trademarks in India

The basic law regulating trademark protection in India is the Trade Marks Act, 1999. According to Section 2(zb), a trademark can be defined as a mark which is capable of being represented graphically and is capable of distinguishing the goods or services of one person from those of others. Such a definition makes it easy to protect any kind of trademark, even one generated or aided by an AI system.

The main provisions of the Act that determine trademark protection relate to its registration, examination, opposition, infringement, and other related procedures. Sections 9 and 11 regulate refusal on absolute and relative grounds respectively; Sections 28 and 29 outline rights of proprietors of trademarks and infringement criteria. Moreover, Section 27 provides that unregistered marks may be protected by the traditional remedy of passing off. All these provisions together form the basis of the legality of the trademark protection and enforceability for trademarks generated or aided by AI technology.

Infringement under Section 29¹³ means using a mark that looks like or resembles another company's trademark without permission, in a way that causes confusion or unfairly benefits from its goodwill. AI technology may unknowingly play a role in infringement by creating logos, slogans, or even brand names similar to those protected trademarks.

JUDICIAL APPROACH

*Ferid Allani v. Union of India*¹⁴ The most important aspect of this ruling is the focus on the term "technical effect" or "technical contribution." According to the Court's ruling, any invention that shows a clear improvement in terms of technical effects such as enhanced processing efficiency, superior performance of the system, or a new technical solution for solving a technical problem should not be regarded as excluded from patentability just because it was made using software.

*Chamberlain Group Inc. v. Controller of Patents*¹⁵ Court ruled upon a patent application where an intelligent automatic device with the help of digital communication technology and software was used for controlling, and this is structurally quite similar to automation devices with the help of AI. The Court examined whether the invention was mere software invention or a technical invention comprising hardware and functional features. The Court ruled that mere exclusion of invention from the ambit of Section 3(k) would not be applicable, but the

¹³ Section 29 of the Trade Marks Act

¹⁴ 2019 SCC OnLine Del 11867

¹⁵ 2022 SCC Del 4103

entire invention should be examined as such.

Lifestyle Equities CV v. Amazon Seller Services¹⁶ In Court, the most important case related to trademark infringement in India's online business environment involved the "Beverly Hills Polo Club" mark. The plaintiffs argued that counterfeited or infringing products, which had trademarks that resembled the real ones, were being marketed on Amazon's website. The primary question raised was whether a host company would be responsible for the infringement of a trademark in a situation where the infringed listings were made available via its infrastructure. This case is very pertinent to AI due to the heavy reliance of current online marketplaces on AI algorithms in their recommendation engines and listing services.

CONCLUSION

IPR and AI is not only a theoretical problem, but a rapidly changing reality in the legal field, especially when considering the case of India, where technological advancements are increasingly being made. Traditional regimes of IPR, which encompass the copyright, patent, trademark and design among other types of IP, have long rested on the fundamental belief that all the processes involved were based on the human intellect and imagination. However, this assumption is becoming increasingly difficult to sustain in light of what AI systems are capable of doing – producing content, inventions and brands on its own.

The question of authorship becomes particularly difficult in the case of the copyright law. According to the copyright law of India, the copyright act of 1957 describes the author as an entity who created something, and it refers to natural persons, most often. While the Act also provides for protection of computer-generated works, where the authorship of such works is transferred to the individual who makes them into existence, the said provision was formulated without considering AI technologies. This may create a number of conflicts between developers, users, and firms, and lead to loss of copyright by some AI-generated works due to the lack of author identification.

The convergence of IPR and AI in the Indian context raises many questions concerning legislation, policy-making, economics, and ethical considerations. While the present legal framework provides some foundation, it cannot provide an answer to all of the questions raised by contemporary AI technologies. Thus, India should move on to creating a more

¹⁶ 2023 SCC OnLine Del 6645

sophisticated legal environment, probably through new legislative acts, judicial interpretation, and global cooperation.

India should remain an active participant in international discussions on the matters related to AI and IPRs, taking positions that favor international norms while keeping India's national interests in consideration as well. Adoption of international norms will help develop innovations through collaboration, although consideration for national interests is also necessary.

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