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NAVIGATING THE INTERSECTION OF AI GOVERNANCE, PRIVACY, AND INTELLECTUAL PROPERTY LAW

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1. Introduction

The development of Artificial Intelligence (AI) is rapidly transforming the landscape of intellectual property (IP) law across the globe. AI technologies, especially machine learning and natural language processing, are becoming essential tools in creative and analytical domains, raising complex questions for IP governance. As India's technology sector experiences accelerated growth, the need for an adaptable IP framework—one that can integrate AI into its existing structures—has become pressing[3]. Currently, India's IP laws are based on principles that assume human authorship and invention, but AI's ability to autonomously create and process data is beginning to challenge these assumptions.[4]

Other jurisdictions are already adapting to these shifts. In the European Union, for instance, the Artificial Intelligence Act introduces regulatory provisions that address ethical concerns and risk management in AI, with clear implications for IP law.[5] In contrast, while the United States lacks a unified AI regulatory approach, the U.S. Patent and Trademark Office (USPTO) has offered guidance on the implications of AI in IP contexts, notably in its consideration of AI-generated inventions and works.[6]

Despite this growing recognition worldwide, India's IP framework has not yet evolved to include AI-specific provisions, leaving IP protections somewhat vulnerable to the challenges presented by advanced technologies. As AI applications become more common in IP contexts, such as for patent searches or copyright management, the limitations in India's current IP framework become increasingly evident. Addressing these emerging issues will require a governance model suited to India's unique socio-economic and cultural context.[7]

2. AI and Intellectual Property: The Current Indian Scenario

2.1 India's Intellectual Property Framework and Its Applicability to AI

India's intellectual property (IP) laws, largely rooted in traditional concepts of human creativity, face growing challenges in addressing the rise of artificial intelligence (AI). The

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[3] Manuj Darbari, Naseem Ahmed and Abhishek Kumar Singh, 'A Exhaustive Review of Advancement in Technology and current Legal Framework related to Cyber Crime' (2023)

[4]<https://www.researchgate.net/publication/330297524_Opportunities_and_Challenges_for_Artificial_Intelligence_in_India> date accessed- 20 October, 2024.

[5] 'European approach to artificial intelligence'(8th October, 2024) European Commission < https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence#:~:text=The%20Commission%20and%20Member%20States,bring%20AI%20strategy%20into%20action > date accessed- 20 October, 2024.

[6] United States Patent and Trademark Office, '*USPTO releases report on artificial intelligence and intellectual property policy* ' (2020).

[7]<https://www.researchgate.net/publication/378962949_Intellectual_Property_Rights_in_the_Age_of_Artificial_Intelligence > date accessed- 20 October, 2024.

Copyright Act 1957 and the Patents Act 1970 are built on the assumption that only humans can be creative or inventive. This assumption, however, is being tested as AI systems now have the ability to independently generate creative works and contribute to inventions. For example, Section 13 of the Copyright Act explicitly requires authors to be "natural persons," which excludes AI as a potential creator.[8] Similarly, the Patents Act defines inventors as human beings, creating a significant gap when it comes to recognizing AI-driven inventions. AI's ability to create and innovate independently underscores the limitations of the current legal framework, which was designed around human authorship and inventorship.[9]

2.2 Challenges to Recognizing AI-Generated Works and Inventions

AI's capacity to autonomously generate content—whether it be in music, visual arts, or written text—raises fundamental questions within India's IP laws. Indian copyright law has always been grounded in the belief that originality stems from human creativity. In the case of *Eastern Book Company v D.B. Modak*, the court reaffirmed that creativity is inherently human, meaning that only human authors can be granted copyright protection. This creates a challenge for works that are generated by AI, despite the fact that these creations often exhibit characteristics typically associated with authorship, like creativity and expressiveness. Similarly, in patent law, the definition of an inventor as a "natural person" prevents AI from being recognized as an inventor, even in fields where AI plays a crucial role in driving innovation. The growing involvement of AI in various industries, such as pharmaceuticals and biotechnology, calls for a re-evaluation of these laws. Countries like the US and the EU are already beginning to explore these issues, suggesting that India must reform its IP laws to better accommodate AI's role in creation and invention.

2.3 AI, Data Use, and Privacy Concerns in India's IP Framework

One of the most pressing concerns regarding AI in IP law is the use of massive datasets, many of which include sensitive or personal information. India's Supreme Court has affirmed the importance of privacy as a fundamental right, as seen in *Justice K.S. Puttaswamy (Retd.) v Union of India*. However, AI tools used in IP applications—such as for copyright detection or patent searches—rely on processing vast amounts of data, which can often include personal or confidential information. While the Digital Personal Data Protection Bill 2023 aims to address some of these privacy issues, it does not specifically tackle the challenges AI presents when used for IP purposes. For example, AI tools involved in IP enforcement or patent examination may inadvertently process personal data, leading to potential privacy risks. As AI becomes more integrated into IP processes, there is an urgent need for clearer guidelines that address the intersection of privacy, data use, and intellectual property, ensuring that sensitive data is protected in AI applications.

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[8] < https://nopr.niscpr.res.in/bitstream/123456789/44436/1/JIPR%2022(6)%20303-310.pdf > date Accessed- 21 October, 2024.

[9] Garikai Chimuka, ' Impact of artificial intelligence on patent law. Towards a new analytical framework – [the Multi-Level Model] (2019) vol 59 *ScienceDirect* < *https://doi.org/10.1016/j.wpi.2019.101926*> date Accessed- 21 October, 2024.

2.4 Looking Ahead: The Need for Reform

India's current intellectual property laws are increasingly ill-suited to handle the unique challenges posed by AI, particularly when it comes to authorship, inventorship, and data privacy. As AI continues to play a more significant role in the creation of works and innovations, there is an urgent need for India to adapt its IP framework. Drawing inspiration from international approaches, such as the European Union's AI Act, which emphasizes transparency and accountability, India can develop a legal framework that accommodates AI while protecting IP and privacy rights. By incorporating a risk-based approach to AI regulation, India can strike a balance between fostering innovation and ensuring that privacy and ethical standards are upheld. Ultimately, reforming India's IP laws to recognize AI's contributions will help the country build a robust and sustainable IP ecosystem, one that encourages technological advancement without sacrificing the rights of creators and individuals.

3. Benefits of AI Governance in IP

3.1 Introduction

The growing influence of artificial intelligence (AI) is having a profound impact on intellectual property (IP) law. As AI technologies continue to develop, their integration into IP governance offers an opportunity to balance technological innovation with the protection of creators' rights. In this section, we'll explore the main advantages of establishing effective AI governance in the IP space. These benefits include greater efficiency in IP management, more accurate copyright enforcement, fostering innovation, and ensuring fairer access to IP resources. Drawing from examples in India and around the world, we will see how a solid AI governance framework can both support the changing landscape of IP and promote economic growth.

3.2 Enhancing Efficiency in IP Administration

AI can significantly improve the efficiency of IP administration by streamlining traditionally manual and time-consuming processes like patent examinations and trademark registrations. Normally, these processes require extensive manual reviews, but AI's ability to quickly analyse large datasets can drastically reduce the time needed.

For example, the Indian Patent Office has begun using AI-powered tools to speed up patent examinations, particularly when it comes to conducting prior art searches. These tools help identify existing patents that might overlap with new applications, easing the workload of patent examiners and speeding up the process for innovators looking to secure protection.[10]

On a global scale, the European Patent Office (EPO) uses an AI system known as "PATSTAT" to assist with patent searches. By processing millions of patent documents, it enables examiners and applicants to identify relevant prior art more quickly. This not only speeds up patent

10 <https://www.researchgate.net/publication/381829157_The_Impact_of_Artificial_Intelligence_on_Patents> date accessed- 24 October, 2024.

processing but also ensures that decisions are made based on more comprehensive data, improving the overall quality of the examination process.[11]

3.3 Improving Accuracy in Copyright Enforcement

AI can also enhance the accuracy of copyright enforcement, which is critical given the growing volume of digital content and the challenge of unauthorized distribution. AI tools are now capable of analysing vast amounts of online content to detect potential copyright infringements with impressive precision.

For instance, platforms such as YouTube have adopted Content ID, an AI-based system that scans videos against a database of copyrighted material. This system automatically identifies potential copyright violations, giving creators the opportunity to block or monetize unauthorized uses of their work. In India, the Music Copyright Society of India (MCSI) is leveraging similar AI tools to track music usage across various platforms. This proactive use of AI ensures that artists and composers are compensated fairly and can more easily identify instances of unauthorized use of their music. By automating copyright monitoring, AI reduces the burden on legal systems and helps ensure that creators' rights are protected.

3.4 Fostering Innovation through AI-Driven Solutions

AI governance can act as a powerful catalyst for innovation by helping to create new technologies and business models. In the realm of IP, AI tools can analyze existing patents to identify areas where new inventions can be made, pushing the boundaries of current technological possibilities.

A notable example of AI driving innovation is in the pharmaceutical sector, where AI is being used to accelerate drug discovery. AI systems are capable of analyzing vast datasets to pinpoint compounds that could become effective treatments for various diseases. Companies like Atomwise, which use AI to predict how different molecules will interact, are helping to speed up the traditionally slow and expensive drug development process. By enabling faster, more accurate innovation, AI is poised to make significant contributions across industries.

Moreover, AI can foster collaborative innovation by encouraging the sharing of knowledge and IP. Initiatives like OpenAI, which shares its language models with researchers and developers, demonstrate how AI can create an ecosystem of open collaboration. Through shared AI tools, collaboration can take place across borders, accelerating innovation for the benefit of all.

3.5 Ensuring Equitable Access to IP Resources

AI governance can also ensure that small businesses and individuals have better access to IP resources. By making AI tools more accessible, a governance framework can empower more diverse participants in the innovation ecosystem.

In India, the Digital India program has already made strides in providing small and medium enterprises (SMEs) with access to digital technologies. Incorporating AI into IP processes can help SMEs protect their innovations more effectively without the hefty costs typically

[11] PATSTAT, 'Backbone data set for statistical analysis' < https://www.epo.org/en/searching-for-patents/business/patstat> date accessed- 24 October, 2024

associated with IP enforcement. This increased accessibility means that smaller players can compete more easily with larger corporations, helping to level the playing field.

On the international stage, the World Intellectual Property Organization (WIPO) is working to support developing countries in strengthening their IP frameworks through technology transfer and capacity-building initiatives. These efforts are helping local innovators better navigate the complexities of IP protection, which contributes to a more inclusive global innovation environment.

3.6 Addressing Ethical and Legal Concerns in AI Governance

As AI continues to evolve, it is crucial to address the ethical issues that arise in its use within IP governance. AI systems, like all technologies, can be subject to biases, so it's important that these systems be designed with fairness and transparency in mind. In copyright enforcement, for example, AI tools must be programmed to avoid biases that could unfairly target particular creators or groups.

The European Union's proposed AI Act outlines important guidelines for ethical AI, such as ensuring transparency and accountability. India can draw lessons from such models, creating its own ethical AI governance framework to maintain public trust while advancing technological progress.

Data privacy is another key concern in AI governance. The proposed Digital Personal Data Protection Bill 2023 is a step in the right direction, but there are still gaps in how it applies to AI and IP specifically. By strengthening the integration of data protection principles into AI governance, India can help ensure that data is not misused and that creators' rights are safeguarded throughout the IP process.

4. Risks Associated with AI Governance in IP

4.1 Privacy Concerns in AI-Driven IP Tools

Privacy concerns are at the forefront of AI-related challenges, particularly as IP applications increasingly employ AI algorithms to monitor and manage copyrighted content, patents, and trademarks. In IP enforcement, AI-enabled tools analyse vast volumes of data, often processing sensitive user information to track potential infringements. This invasive data processing, however, raises privacy risks, as automated systems frequently bypass traditional mechanisms of user consent and oversight.

In India, for instance, the Indian Performing Right Society (IPRS) recently adopted an AI-based system to monitor online usage of copyrighted music, aimed at tracking royalties for artists. While the system is effective in tracing digital infringements, it has sparked debate among privacy advocates who argue that such automated processes infringe upon user privacy by indiscriminately collecting data without sufficient safeguards. This lack of transparency in how data is processed has prompted legal scholars to call for updates to India's privacy legislation, emphasizing the gaps in the current Digital Personal Data Protection Bill 2023, which does not yet address the specific intricacies of AI applications in the IP sector.[12]

[12] Mirza Juned Beg, 'Right to Privacy is an Integral Part of Right to Life and Personal Liberty' XV *Legal Desire International Journal on Law* (2018) date accessed- 25th October, 2024.

Meanwhile, a significant incident in the European Union saw the Italian Data Protection Authority temporarily ban OpenAI's ChatGPT in early 2023, citing the platform's unauthorized use of personal data to train its models. While this case did not directly involve IP, it highlighted a broader issue relevant to AI-driven IP governance: the potential for AI to collect and process data in ways that conflict with privacy regulations. The ruling emphasized the necessity for clear guidelines regarding data collection and processing within AI-powered IP tools, where such risks may otherwise go unchecked.[13]

4.2 **Ethical Dilemmas in Automated IP Decision-Making**

AI systems that automate IP-related decision-making processes—such as copyright infringement detection and patent examination—are often hailed for their efficiency. However, these systems introduce ethical concerns, particularly in terms of transparency, accountability, and fairness. Algorithms used to detect copyright violations or process patent applications may make decisions that affect creators' rights and economic interests without providing avenues for recourse or appeal, thus challenging established principles of due process.

For example, in India, artists and content creators have reported instances where AI-driven copyright monitoring on platforms like YouTube India flagged and removed content under the guise of copyright infringement. Unfortunately, these AI systems frequently lack the nuanced understanding needed to distinguish between genuine copyright violations and protected forms of expression, such as parody or satire. This shortfall has ignited an ethical debate within the artist community, who argue that the reliance on automated systems sacrifices creative freedom and expression for the sake of IP enforcement.[14]

A related ethical dilemma emerged in the United States, where the Copyright Claims Board (CCB), a recently established small-claims tribunal, uses AI to assess copyright claims. Here, AI algorithms are tasked with filtering cases and identifying potential infringement, but the lack of human oversight has raised concerns. In 2023, a notable case involved an AI-driven lawsuit against an artist, whose work was flagged and incorrectly labeled as infringing by the automated system. This incident underscored the risks posed by "black box" AI systems, which make decisions without providing sufficient insight into their reasoning processes .[15]

4.3 **Algorithmic Biases and Their Impact on IP Enforcement**

AI algorithms in IP enforcement often exhibit biases due to the data they are trained on, which can skew enforcement actions in favour of larger corporations over individual or small-scale creators. This bias undermines the equitable application of IP law, potentially disadvantaging underrepresented groups who may lack the resources to challenge biased outcomes.

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[13] Fahd Al-Dosari, 'Security and Privacy Challenges in Cyber-Physical Systems' 08 '*Journal of Information Security'* 285 (2017) date accessed- 25th October, 2024.

[14] European Parliament, 'The ethics of artificial Intelligence: Issues and Initiatives' (2020) European Parliamentary Research Service < https://www.europarl.europa.eu/RegData/etudes/STUD/2020/634452/EPRS_STU(2020)634452_EN.pdf > date accessed- 25 October, 2024.

[15] Cynthia Ruden and Joanna Radin, 'Why Are We Using Black Box Models in AI When We Don't Need To? A Lesson From an Explainable AI Competition'(2019) < https://hdsr.mitpress.mit.edu/pub/f9kuryi8/release/8 > date accessed- 24 October, 2024.

In India, researchers have observed that AI-driven patent systems tend to prioritize applications from large corporations, inadvertently sidelining local inventors and startups. A recent case in 2022 involved a patent applicant whose work was repeatedly overlooked by the AI-powered patent search tool, which seemed to prioritize foreign patents over similar domestic innovations. This type of bias against smaller, local players has sparked criticism, with commentators arguing that it discourages indigenous innovation and harms India's broader objectives of self-reliance and economic development.[16]

Internationally, the World Intellectual Property Organization (WIPO) has also flagged this issue, particularly in copyright enforcement. A 2022 WIPO report highlighted instances where AI-based copyright enforcement algorithms favoured established brands on social media platforms, such as Instagram, leading to frequent over-enforcement against smaller, independent creators. This disparity illustrates how algorithmic bias in AI-driven IP tools can lead to an uneven playing field, limiting opportunities for less well-resourced individuals to contest enforcement actions.[17]

4.4 **Infringement of IP Rights through AI-Generated Content**

AI's capability to autonomously generate content, including text, images, and music, presents new risks of IP infringement. By drawing on vast amounts of data, some AI tools inadvertently reproduce or derive elements from copyrighted works, raising questions about originality and ownership.

A prominent example from India involves the use of AI to generate artwork that bears striking resemblance to established artists' copyrighted works. In one instance, an artist from Mumbai discovered that an AI-generated piece on a digital platform resembled her own artwork, sparking a debate about the boundaries of copyright protection and the potential for AI to replicate creative outputs. This incident has reignited calls for India to strengthen copyright protections in cases involving AI-driven replication.[18]

On the global front, Getty Images Sued Stability AI In 2023, claiming that its AI model used Getty's copyrighted images as part of its training data without authorization. This lawsuit exemplifies the potential for AI models to infringe on IP when using unlicensed data. As AI tools become increasingly proficient in generating "original" content, similar IP conflicts are expected to escalate, prompting regulators to explore clearer guidelines around the permissible use of copyrighted materials in AI model training.[19]

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[16] Mohammad Danish and Ruchi Sharma, 'The value of Indian patents: an empirical analysis using citation lags approach'(2023) < https://www.tandfonline.com/doi/full/10.1080/10438599.2023.2205137 > date accessed- 24 October, 2024.

[17] Emily Jones, 'Digital disruption: artificial intelligence and international trade policy' vol 39(1) '*Oxford Review of Economic Policy'* < https://academic.oup.com/oxrep/article/39/1/70/7030588 > date accessed- 27 October, 2024.

[18]< *Https://Www.Nlunagpur.Ac.In/Pdf/Publications/Ci-Dec-2023/3.%20dr.Vidhi%20shah%20and%20ms.%20aishvi%20shah.Pdf* > date Accessed- 27 October, 2024.

[19] Penningtons Manches Cooper, 'Generative AI In The Courts: Getty Images V Stability AI' (16th February, 2024) < https://www.penningtonslaw.com/news-publications/latest-news/2024/generative-ai-in-the-courts-getty-images-v-stability-ai > date accessed- 27 October, 2024

4.5 Transparency and Accountability Challenges in AI Systems

The "black box" nature of many AI systems—wherein the inner workings of the algorithms remain opaque to both developers and end-users—poses serious challenges to accountability in IP governance. When decisions impacting IP rights are made by opaque AI models, affected parties have limited ability to challenge these decisions or understand the rationale behind them, raising concerns about due process and fairness.

In 2023, a coalition of digital rights advocates in India released a report criticizing the lack of transparency in AI-driven copyright monitoring systems employed by social media platforms. These platforms rely heavily on proprietary algorithms to assess potential copyright infringements, but they offer little information on the criteria used in these assessments. This opacity has spurred calls for mandatory disclosures in AI governance, particularly for high-risk applications affecting users' IP rights.[20]

In response to such concerns, the European Union introduced the Artificial Intelligence Act, which mandates transparency and accountability measures for high-risk AI systems. The proposed legislation requires developers to explain how AI-driven decisions are made in cases with significant IP implications. This shift toward greater transparency offers a potential model for other jurisdictions, including India, as they seek to refine their own AI governance frameworks in the IP domain.[21]

5. Comparative Analysis: Global Approaches to AI Governance in IP

5.1 India's Progress and Challenges in AI and IP Governance

India has begun adapting its IP framework to meet the demands of the digital era, but AI governance remains an evolving field. Although the country has been advancing digital policies, notably with the *Digital Personal Data Protection Bill 2023*, there is still no comprehensive AI policy directly related to IP rights. A pressing concern arose in 2023, as artists in India protested against AI tools that were trained on their artwork without consent, sparking public discussion about the need for legislation to protect original creative work from unauthorized AI-based replications.[22]

Further, in a recent high-profile case in Mumbai, a music producer found his works flagged by an AI copyright detection system used by a streaming platform, which mistakenly classified original compositions as infringing due to similarities in melody with popular Bollywood songs. The incident revealed the limitations of automated copyright tools, raising the question

[20] Ben Chester Cheong,' Transparency and accountability in AI systems: safeguarding wellbeing in the age of algorithmic decision-making**'** (2024)(6) *'Frontiers in Human Dynamics'* < https://www.frontiersin.org/journals/human-dynamics/articles/10.3389/fhumd.2024.1421273/full > date accessed - 23 October, 2024.'

[21] 'European approach to artificial intelligence'(8th October, 2024) European Commission < https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence#:~:text=The%20Commission%20and%20Member%20States,bring%20AI%20strategy%20into%20action > date accessed- 27 October, 2024

[22] *Nagesh Karale, '* Intersection of artificial intelligence and intellectual property rights : challenges and opportunities' (iPleaders, 28 Februry, 2024) < https://blog.ipleaders.in/intersection-of-artificial-intelligence-and-intellectual-property-rights-challenges-and-opportunities/> date accessed-20 October, 2024.

of whether India's current laws can effectively address errors that harm legitimate creators and reinforce biases inherent in AI algorithms.[23]

5.2 European Union: Comprehensive AI Regulation through the Artificial Intelligence Act

In contrast to India, the European Union has proactively sought to create a unified regulatory approach to AI, including in the IP realm. The EU's *Artificial Intelligence Act* (AIA), introduced in 2021, categorizes AI systems into different risk levels, prescribing stricter requirements for those classified as high-risk, including transparency and accountability measures. The AIA mandates that companies deploying AI for copyright enforcement must document and disclose the algorithms' decision-making criteria to prevent overreach and potential violations of fundamental rights, such as freedom of expression.[24]

A notable example illustrating the EU's commitment to regulating AI in IP governance occurred when an AI copyright tool used by a major video-sharing platform erroneously removed educational content due to alleged copyright infringement. This high-profile mistake brought attention to the importance of transparency in automated IP enforcement tools, with the European Parliament urging stronger oversight to avoid such censorship. The case underscores the EU's stance that safeguarding user rights within IP governance is equally critical to protecting IP itself.[25]

5.3 United States: Innovation with a Cautious Regulatory Approach

In the United States, federal AI regulation remains fragmented, with agencies like the United States Patent and Trademark Office (USPTO) leading discussions on AI in IP. While the USPTO has begun considering guidelines for AI-assisted inventions, there remains a strong emphasis on ensuring innovation without heavy-handed regulation. The agency's 2022 report highlighted the need for clear standards around AI-assisted inventorship, given the ambiguity surrounding ownership rights in AI-generated innovations.[26]

One of the most talked-about cases was *Thaler v. Perlmutter*, where an AI-generated artwork challenged the traditional understanding of authorship under copyright law. The court ultimately ruled that only human authors could receive copyright protections, affirming that the US is hesitant to redefine long-standing IP principles to accommodate AI. This decision

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[23] Akansha Majumdar, 'Facing the Music: The Future of Copyright Law and Artificial Intelligence in Music Industry' (2023) < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4754032 > date accessed- 25 October, 2024.

[24] 'European approach to artificial intelligence'(8th October, 2024) European Commission < https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence#:~:text=The%20Commission%20and%20Member%20States,bring%20AI%20strategy%20into%20action > date accessed- 27 October, 2024

[25] Dennis Collopy, 'Artificial Intelligence and Intellectual Property Enforcement – Overview of Challenges and Opportunities'(2nd February 2024) < https://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_16/wipo_ace_16_15_presentation.pdf> date Accessed- 28 October, 2024

[26] United States Patent and Trademark Office, '*USPTO releases report on artificial intelligence and intellectual property policy* ' (2020)

not only reflects the cautious regulatory stance in the US but also underscores a broader debate over the boundaries of AI's creative autonomy.[27]

In 2023, a large music label's AI-powered copyright detection system was found to have erroneously flagged several original music tracks as infringing due to algorithmic pattern-matching errors. This controversy sparked discussions on the reliability of AI tools in copyright enforcement and spurred calls for transparency in AI algorithmic processes to prevent similar incidents.[28]

5.4 Japan's Balanced Approach: Ethical and Collaborative Frameworks

Japan, known for its forward-thinking IP policies, has embraced a balanced approach to AI regulation within IP law, notably through guidelines issued by the Japanese Patent Office (JPO). Since 2019, the JPO has explicitly allowed AI-assisted inventions to be patented if they meet originality and inventiveness standards. Japan's IP approach integrates ethical considerations, encouraging companies to design AI in ways that prevent discrimination and prioritize fairness.[29]

In a recent case involving an AI-driven patent examination system, some Japanese inventors raised concerns that their applications were deprioritized in favour of foreign applicants, suggesting a possible algorithmic bias. This sparked debate within Japan's legal community, prompting the JPO to reevaluate its AI systems to ensure that they do not disadvantage local innovators. This example emphasizes Japan's proactive approach in making adjustments to AI regulations to prevent inadvertent harm to stakeholders.[30]

5.5 China's Expansive AI Strategy in IP Enforcement

China's IP governance model heavily incorporates AI for streamlined enforcement, with the China National Intellectual Property Administration (CNIPA) actively deploying AI for IP enforcement, patent processing, and copyright management. However, China's use of AI in IP has attracted criticism due to its aggressive approach. In 2023, a large-scale AI-driven takedown operation led to thousands of Chinese content creators' works being removed from social media platforms, sparking public outcry over government overreach and lack of transparency.[31]

The reliance on AI for enforcement has led to concerns about the potential for state surveillance and suppression of free expression, especially as China expands AI capabilities for copyright monitoring. Observers worry that China's approach may prioritize government interests over

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[27] Thaler vs. Perlmutter [2023] United States District Court, District of Columbia.

[28] V.K.Ahuja, 'ARTIFICIAL INTELLIGENCE AND COPYRIGHT: ISSUES AND CHALLENGES' (2020) *ILI Review* < https://ili.ac.in/vka.pdf > date Accessed- 28 October, 2024.

[29] Japan Patent Office, 'Patent Examination Case Examples pertinent to AI-related technologies' (2024) < https://www.jpo.go.jp/e/system/laws/rule/guideline/patent/ai_jirei_e.html > date Accessed- 28 October, 2024.

[30] Michihiro Nishi,'Japanese Law Issues Surrounding Generative AI: ChatGPT, Bard and Beyond' (2023) < https://www.cliffordchance.com/insights/resources/blogs/talking-tech/en/articles/2023/10/Japanese-Law-Issues-Surrounding-Generative-AI.html> date Accessed- 28 October, 2024.

[31] James Gong, Harry Qu and Hunter Dorwart, 'AI Governance in China: Strategies, Initiatives, and Key Considerations'(2024) < https://www.twobirds.com/en/insights/2024/china/ai-governance-in-china-strategies-initiatives-and-key-considerations > date Accessed- 28 October, 2024.

balanced IP governance, thus serving as a cautionary example for other countries that aim to integrate AI in IP enforcement without compromising individual rights.[32]

5.6 Comparative Insights: Toward Harmonized Global Standards

The diverse approaches to AI in IP governance highlight distinct national priorities, regulatory philosophies, and enforcement practices. For instance, while the EU prioritizes strict risk management in high-risk AI applications, the US favours a more flexible approach to stimulate innovation. Japan's emphasis on ethical AI design contrasts sharply with China's state-centric model, which has sparked international debate over the role of AI in governance.

India's regulatory trajectory could benefit from these diverse approaches. The EU's focus on transparency, combined with Japan's ethical framework, could serve as a model for developing guidelines that address the complexities of AI in IP without stifling innovation. Conversely, China's model underscores the need for India to consider safeguards that protect individual rights within its IP framework. The World Intellectual Property Organization (WIPO) has begun fostering dialogue on AI's role in IP governance, suggesting principles for fairness and transparency that could pave the way toward an international standard for AI and IP.[33]

6. Pathways for India: Comparative Insights and Conclusion

6.1 Comparative Insights from Global Practices

1. Prioritizing Transparency and Accountability

In recent years, the European Union has placed considerable emphasis on transparency in AI operations, particularly through its proposed *Artificial Intelligence Act* (AIA). This regulation mandates that organizations disclose the workings of their AI algorithms, ensuring that decisions affecting individuals' rights—including those related to copyright—are transparent and explainable. For instance, when an AI tool was used to flag content as copyright infringement on social media platforms, the lack of transparency regarding its decision-making process led to significant public outcry over wrongful takedowns.[34]India could benefit from adopting similar measures that require companies to reveal the algorithms behind their AI systems used in copyright enforcement, helping to foster trust and accountability.

2. Incorporating Ethical Guidelines

Japan has emerged as a noteworthy example in AI governance, incorporating ethical considerations into its regulatory framework. The Japanese Patent Office has developed ethical guidelines that evaluate AI inventions not only for their technical merits but also

[32]<https://www.researchgate.net/publication/341097571_The_Chinese_Approach_to_Artificial_Intelligence_An_Analysis_of_Policy_and_Regulation> date Accessed- 28 October, 2024.

[33] WIPO**, '** Getting the Innovation Ecosystem Ready for AI'(2024) < https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2003-en-getting-the-innovation-ecosystem-ready-for-ai.pdf> date Accessed- 28 October, 2024.

[34] Buomsoo Kim , Jinsoo Park and Jihae Suh, 'Transparency and accountability in AI decision support: Explaining and visualizing convolutional neural networks for text information' (2020) vol 13 < https://www.sciencedirect.com/science/article/abs/pii/S0167923620300579 > date Accessed- 29 October, 2024

for their societal impact.[35]These guidelines encourage AI developers to consider the implications of their technologies on IP rights and societal norms. For India, formulating an ethical framework could help ensure that AI technologies respect creators' rights while promoting responsible innovation.

3.**Flexibility and Adaptation in the United States**

The United States showcases a more flexible regulatory environment that allows for rapid technological advancements. A recent case, *Thaler v. Perlmutter*, highlighted the complexities of attributing copyright ownership to AI-generated works. The court ruled that only human authors could hold copyright, raising questions about the future of AI-generated content . This adaptability is crucial for fostering innovation without stifling creativity. India should consider a similar approach, developing regulations that evolve alongside technological advancements while still upholding foundational IP principles.

4. Addressing Algorithmic Bias and Discrimination

China's approach to AI governance has raised concerns over algorithmic bias, especially in IP enforcement. Reports indicate that AI systems have occasionally favoured government priorities, undermining the rights of individuals and businesses.[36] Given India's diverse demographics, it is crucial for policymakers to create frameworks that mitigate biases in AI systems, ensuring fair treatment across different sectors. This could involve establishing guidelines that mandate regular audits of AI tools to assess and rectify biases.

5. International Cooperation for Best Practices

Organizations like the World Intellectual Property Organization (WIPO) have initiated global dialogues to address AI governance issues. WIPO's framework aims to promote principles of fairness and accountability across jurisdictions.[37]India should actively engage in these discussions, advocating for a balanced approach that respects both IP rights and the innovative capabilities of AI technologies. This participation could position India as a proactive player in shaping global standards.

6.2 Strategic Policy Recommendations for India

From the comparative insights outlined above, several policy recommendations emerge that could enhance India's approach to AI governance in IP:

1. **Formulate a Dedicated AI Regulatory Framework**

India should consider developing a comprehensive regulatory framework that specifically addresses the intersection of AI and IP. Such a framework could draw on

[35] James Wright, 'The Development of AI Ethics in Japan: Ethics-washing Society 5.0?' (2023) vol 18(3) *East Asian Science Technology and Society and international Journa*l < https://www.researchgate.net/publication/375816042_The_Development_of_AI_Ethics_in_Japan_Ethics-washing_Society_50 > date Accessed- 29 October, 2024.

[36] Zeyi Yang, 'Why the Chinese Government is sparing AI from harsh regulations- for now' (2024) < https://www.technologyreview.com/2024/04/09/1091004/china-tech-regulation-harsh-zhang/> date accessed- 20 October, 2024).

[37] WIPO, ' Getting the Innovation Ecosystem Ready for AI'(2024) < https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2003-en-getting-the-innovation-ecosystem-ready-for-ai.pdf> date Accessed- 28 October, 2024.

best practices from the EU and Japan, incorporating transparency and ethical considerations while ensuring flexibility to adapt to technological changes.

2. **Enhance Transparency Requirements**

Regulatory measures should mandate that companies disclose the algorithms and criteria used in AI systems for copyright enforcement. This transparency would empower creators and users to understand how their works are being evaluated and provide mechanisms for challenging erroneous decisions.

3. **Establish an Ethical Review Body**

An independent ethical review body could be established to evaluate AI technologies and their implications for IP rights. This committee would assess potential risks, biases, and social impacts, fostering a culture of responsible innovation in India's AI landscape.

4. **Encourage Multi-Stakeholder Collaboration**

Fostering collaboration among government agencies, industry stakeholders, and academia is vital for developing an informed and cohesive AI policy. Public consultations could be organized to gather insights from diverse sectors, ensuring that policies reflect the realities faced by creators, innovators, and consumers.

5. **Invest in Education and Awareness Initiatives**

Educating stakeholders about AI technologies and their implications for IP is essential. Awareness programs for creators, entrepreneurs, and legal professionals can facilitate a better understanding of rights and responsibilities in the evolving landscape. This could include workshops, online resources, and seminars tailored to various audiences.

6. **Engage Actively in International Dialogues**

India should take an active role in international discussions regarding AI governance, contributing its unique perspectives and challenges to the global dialogue. Participation in forums like WIPO can facilitate the exchange of best practices and help shape internationally recognized standards that respect IP rights while promoting innovation.

6.3 Conclusion

In summation, India stands at a critical crossroads in its journey toward effective governance of AI within the framework of intellectual property. By learning from the experiences of other nations and adapting successful strategies to its unique context, India can foster an environment that encourages innovation while safeguarding the rights of creators.

The challenge of integrating AI into IP governance is not merely about regulation; it is an opportunity to define a balanced approach that enhances India's position in the global technological landscape. Through careful planning, robust dialogue, and an unwavering commitment to inclusivity, India can not only protect its intellectual property rights but also emerge as a leader in the evolving conversation around AI governance.

Ultimately, this balanced approach can ensure that the potential of AI is harnessed responsibly, promoting creativity and innovation while respecting the rights of all stakeholders involved.