Journal on Development of Intellectual Property and Research

International Journal of Intellectual Property Rights and Technology Law

Volume 1 Issue 1 2025

बौद्धिक संपदा एवं अनुसंधान विकास केंद्र

Centre for Development of Intellectual Property and Research

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CITE THIS ISSUE AS

(2025) 1(1) JDIPR <Page No.>.

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Journal on Development of Intellectual Property and Research

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Volume 1 Issue 1 2025

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LEGAL GAPS IN PATENTING PRACTICES PAVING THE WAY FOR EXPLOITATION OF INDIGENOUS MEDICINAL KNOWLEDGE: LESSONS FROM THE KANI TRIBE AND THE COMMERCIALIZATION OF THE JEEVANI HERB

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ABSTRACT

Despite the discovery of the Jeevani drug in 1993 by the Jawaharlal Nehru Tropical Botanical Garden and Research Institute (JNTBGRI) using the traditional knowledge shared by the Kani tribe of Kerala, remains inadequately protected due to the gaps in India's IP system. The exclusive rights to the Trichopus zeylanicus, scientifically referred to as the "Arogyapacha plant" (the source of Jeevani), are denied under the Indian Patent Act, 1970, which forbids product patents for plants. Despite the legality of process patents, Jeevani's expired in 2008 and even with decades passing, there existed no effective IP protection internationally. The benefit-sharing agreement for Jeevani, though internationally recognised by the UN for its novelty, had shortcomings. The patent application failed to include tribal informants as co-inventors, indicating the lack of integration of traditional knowledge holders into the formal IP frameworks. Furthermore, the novelty needed for IP protection was compromised by protracted delays in granting patents which allowed the unique information to spread into the public domain. As a result of which, the indigenous communities lost the benefits they could have reaped if the legal framework safeguarded their knowledge in a timely and secure manner. The impacts of inadequate IP protection also extended beyond border as companies like NutriScience Innovations trademarked Jeevani in the U.S. thereby showcasing its market potential. If India had obtained full IP protection under the Patent Cooperation Treaty by WIPO, such trademarks may have brought in more money for the Kani tribe. This paper examines gaps in India's IP framework

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regarding traditional knowledge, role of treaties like the Nagoya Protocol in protecting indigenous rights and the challenges in protecting indigenous rights. It proposes practical solutions based on lessons from the Jeevani case-study to address loopholes in India's IP laws, ensure equitable benefit-sharing, and prevent future exploitation of indigenous discoveries.

KEYWORDS: Jeevani, Indigenous communities, Traditional Knowledge, Benefit-Sharing.

INTRODUCTION

The huge store of traditional knowledge possessed by these indigenous communities are a testament to their intimate connection to nature as well as centuries worth of collected wisdom passed down from generation-generation. Through an understanding of local flora and fauna, these communities have devised remedies that meet health concerns in ways often ignored by modern medicine. The present times with globalization and increased bio-prospecting; indigenous medicinal knowledge remains an invaluable yet vulnerable resource; thus, it is regularly subject to exploitation. Moreover, such exploitation is often made easier due to loopholes in both the national and international legal framework and an inability to recognize the intellectual property rights of indigenous communities in such matters.

One such case study is that of the Kani tribe of Kerala, India, who possessed indigenous knowledge that resulted in the discovery and commercialization of Jeevani, an herbal product obtained from the plant Trichopus zeylanicus travancoricus commonly referred to as "Arogyapacha." It is from this plant that an herbal remedy was developed with rejuvenation properties that was commercially viable with institutions and pharmaceutical companies. However, although the Jeevani herb has generated a lot of money and gained international recognition, the entire process revealed serious moral and legal problems. These range from lack of inclusion of the tribe as co-inventors thereby depriving them of their rightful credit for the discovery to no international recognition to the discovery till date resulting in the erosion of the novelty of the discovery owing to exploitation of the drug by foreign companies fuelled by the dispersal of knowledge through the media.[1]

Consequently, the commercialization of Jeevani also speaks to a broader problem of patenting not meeting the unique requirements of indigenous knowledge. Modern concepts of uniqueness, innovative steps, and individual ownership have led to the development of patent

[1] Anuradha, 'Sharing with the Kanis: A Case Study from Kerala', (*Convention on Biological Diversity*) <https://www.cbd.int/financial/bensharing/india-kanis.pdf> accessed 21 December 2024

law, which is insufficient to safeguard oral, collective, and even unrecorded knowledge systems. This discrepancy has resulted in instances of biopiracy, in which businesses and research institutions use traditional knowledge without giving its original owners due credit or any form of monetary compensation.

This research paper aims to examine how patenting practices that create legal loopholes lead to the exploitation of indigenous medicinal knowledge through the case study of the Kani tribe and the Jeevani herb. It further explores how patent laws leave indigenous knowledge systems open to appropriation and questions whether the current benefit-sharing mechanisms are sufficient for equity with indigenous communities. Additionally, the study offers insights from the Jeevani case that could be used to develop a future judicial system that is more inclusive and equal to bridge the gap between conventional knowledge systems and contemporary intellectual property rules.[2]

EVOLUTIONARY HISTORY BEHIND THE DISCOVERY OF THE JEEVANI

Jeevani is an innovative herbal formulation discovered deeply interlinked with traditional knowledge of the Kani tribal community and scientific exploration led by Tropical Botanic Garden and Research Institute. A botanical expedition in 1987, a team of scientists from TBGRI accompanied members of the Kani tribe, who noticed the tribals eating fruits from a plant they called “Aarogyappacha" meaning "the green that gives strength." The Kanis ate these fruits to energize themselves on long, gruelling treks through the forest. Initially, the Kanis were reluctant to talk much about the plant; however, they eventually divulged that it came from Trichopus zeylanicus travancoricus, an endemic species found in the Western Ghats. Although the plant had been documented in botanical records, its medicinal properties had never been known outside of the Kani community.

TBGRI carried out profound research on the plant as it was adopting an ethno-pharmacological approach to traditional practices and sciences. Studies showed that its leaves contain bioactive substances such as glycolipids and non-steroidal compounds with anti-fatigue, anti-stress and immuno-enhancing principles. The results of which were taken as a challenge to create Jeevani- a polyherbal formulation where Trichopus zeylanicus and three other medicinal plants with a purpose of enhancing curative activity. The benefits were confirmed by rigorous clinical testing, and the formulation was prepared for commercialization.

[2] A.K. Gupta, ‘WIPO-UNEP Study on the Role of Intellectual Property Rights In The Sharing Of Benefits Arising From The Use Of Biological Resources And Associated Traditional Knowledge’ (2004) <https://www.wipo.int/edocs/pubdocs/en/tk/769/wipo_pub_769.pdf> accessed 21 December 2024

For its commercial launch, TBGRI granted the technology licence to AVP, which is one of the better-known manufacturers of Ayurvedic drugs. The agreement involves a one-time license fee of INR 10 lakh and a 2% royalty on future sales. However, it specifically mandates 50% share of license fee and royalty with the Kani community, as a first-ever benefit-sharing agreement in the country. This was to ensure that the Kani community was recognized in the contributions while at the same time benefiting from the commercialization of their traditional knowledge.

Despite its innovative nature, the benefit-sharing mechanism encountered many challenges. The majority of the Kani members were dissatisfied and cited inadequate consultation and representation in the decision-making process. The perception that only a select group of Kanis was involved in the negotiations further fuelled discontent. Although a trust, the Kerala Kani Samudaya Kshema Trust, was established for the administration of funds and for supervising the benefits-sharing process, it remained incapable of ensuring that proper distribution of resources occurred within all Kani settlements. These inadequacies emphasized the challenges in applying the principles of benefit-sharing in practice.

Commercialization of Jeevani also faced regulatory barriers and inter-agency conflicts. Although TBGRI had eased the licensing process, the Kerala Forest Department had opposed permission for large-scale cultivation of Trichopus zeylanicus on grounds of the ecological effects of over-exploitation. Raw material availability for the manufacture of Jeevani was thus curtailed. These were some challenges that highlighted the need to evolve responsible harvesting practices and to nurture coordination among various stakeholders with a view to finding an equilibrium between conservation and commercial objectives.[3]

Protection of intellectual property that relates to Jeevani adds one more dimension of complexity. It has been patented as a process rather than as a product, due to limitations of Indian patent laws prevailing during the times. This curtailed the scope of protection as a product itself and became vulnerable to being replicated in other parts of the world, which diminished its prospects for commercial viability across international borders. The tribal informants, who contributed their knowledge about Aarogyappacha, were not included as co-inventors in the patent application. Ethical issues of recognition of contributions arise in such

[3] 'Case for the Kani Tribe: Intellectual Property'(*Khurana and khurana*, 14 June 2023*)*, <https://www.khuranaandkhurana.com/2023/06/14/the-kani-tribe-case-study> accessed 21 December 2024

cases. The issues thus pointed to the need for more inclusive and robust IP frameworks that would account for the unique characteristics of traditional knowledge.[4]

INDIGENOUS MEDICINAL KNOWLEDGE: CULTURAL AND LEGAL DIMENSIONS

CULTURAL SIGNIFICANCE OF INDIGENOUS MEDICINAL KNOWLEDGE

Indigenous medicinal knowledge is closely associated with an indigenous society's identity, culture, and lifestyle. Such knowledge, obtained from millions of years of observation through experience living with nature, has medical importance but also constitutes cultural grounds as a core ingredient of the community's interrelation with the natural surroundings. In this way, the medicinal use of plants is joined with spiritual practices, as well as ecological stewardship and traditional rituals, with the result that its numerous aspects of relevance to indigenous society are further reinforced. Unlike the intellectual property systems that accord ownership to the individual, indigenous medicinal knowledge is collective and orally transmitted for generations. Oral traditions sustain this knowledge but simultaneously throw it open to misappropriation because it is not documented anywhere. For instance, in the case of Kani tribe's traditional use of the Arogyapacha plant; USA based company Nutriscience had already patented the Jeevani tribe in the United States thereby giving it supreme control over the production, sales and distribution over Jeevani within the USA. This could have however been prevented if Jeevani when discovered was patented internationally.[5]

Jeevani was not patented through a Patent Cooperation Treaty thereby not only giving the tribes credit for their indigenous knowledge but also giving the tribe worldwide recognition, wider sources of business collaborations, future revenue as well as upholding India’s reputation for having a very strong indigenous medicinal knowledge base. However, it is unfortunate that this collective wisdom, though priceless, remains unprotected under the existing frameworks, which sometimes causes the communities to lose ownership over their knowledge. The destruction of such traditions hurts not only the economic well-being of the communities but also upsets their cultural integrity.[6]

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[4] ‘Using Traditional Knowledge to Revive the Body and a Community’ (*IP-Advantage*) <https://www.wipo.int/web/ip-advantage/w/stories/using-traditional-knowledge-to-revive-the-body-and-a-community> accessed 21 December 2024

[5] Aditya & Associates ‘Tithi Jhariya, ‘Patents and Indigenous Knowledge- a Legal Tug of War across Generations’ (*Lexology*, 18 October 2024) <https://www.lexology.com/library/detail.aspx?g=88e00ba9-d3c8-43dc-a6af-f76d62bd0aed> accessed 21 December 2024

[6] ‘Patent Infringement of Jeevani by US Firm Known to Indian Authorities 4 Years Ago’ <http://test.pharmabiz.com/news/patent-infringement-of-jeevani-by-us-firm-known-to-indian-authorities-4-years-ago-27059> accessed 21 December 2024

GLOBAL LEGAL FRAMEWORKS GOVERNING INDIGENOUS KNOWLEDGE

The international framework has made efforts toward indigenous medicinal knowledge protection, yet its implementation remains grossly missing. The CBD deals with conserving biological diversity and fairly shares the benefits derived from genetic resources. Thus, the treaty acknowledges the role played by traditional knowledge in achieving its goals and also encourages and promotes indigenous participation in decision-making processes. It is observed, however, that most countries have encountered difficulties in executing these principles. The lack of practical mechanisms for enforcement often leaves indigenous communities excluded from meaningful participation, undermining the equitable benefit-sharing objectives of the convention.

The Nagoya Protocol, a derivative of the CBD, provides a precise framework for access and benefit-sharing in relation to genetic resources. However, such provisions are not enough; there are weak institutional support structures and poor legal infrastructure that hampers the implementation of the protocol in many jurisdictions. Indigenous communities are exploited because they lack the knowledge and tools needed to put these ideas into practice.[7]

Although the TRIPS Agreement emphasizes the protection of intellectual property rights, it has drawn criticism for prioritizing innovation and business interests over the conservation of traditional knowledge. Indigenous groups, whose knowledge systems would not fit into this pattern, face difficulties because of the emphasis on novelty and creative actions. Biopiracy, in which companies patent indigenous medicines without recognizing or paying their source, has been made possible by the lack of systems to acknowledge the community nature of traditional knowledge.

CURRENT INDIAN LEGAL FRAMEWORK

India has made several legal provisions to tackle the issue of protection of traditional knowledge especially in the backdrop of the rich biodiversity and heritage of India. The Biological Diversity Act 2002 aims to conserve biological resources along with due benefit-sharing between the parties involved. The act institutes the National Biodiversity Authority for regulating access to genetic resources and associated knowledge. It is a must for the importing entities to seek permission from the NBA before accessing the same and mandates the signing of a benefit-sharing agreement for safeguarding the interest of indigenous communities.

[7] Anil Gupta, 'Value Addition to Local Kani Tribal Knowledge: Patenting, Licensing and Benefit-Sharing' (*Indian Institute of Management Ahmedabad*, 2002) <https://ideas.repec.org/p/iim/iimawp/wp00027.html> accessed 21 December 2024

However, there have been cases where inconsistency is there in implementing the provisions of such enactments, and benefit-sharing arrangements in the delay created a huge outcry among the indigenous communities. The case of Kani tribe and commercialization of the herb Jeevani well indicates the inefficiency of such an Act's provisions when there was a significant delay before setting up benefit-sharing mechanisms. The Patent Act, 1970 (as amended) has provisions for the prevention of biopiracy and the protection of traditional knowledge. It prohibits patenting of traditional knowledge through Section 3(p). Additionally, The Traditional Knowledge Digital Library, TKDL, is also established. It is a repository of documented traditional knowledge shared with patent offices around the world to avoid unauthorised patenting. However, the Act does not recognize and protect communal ownership of traditional knowledge; thus, the communities are vulnerable to exploitation.[8]

CHALLENGES IN PROTECTING INDIGENOUS KNOWLEDGE

CLEAR DISTINCTION IN BENEFIT-SHARING MECHANISMS

One of the major issues that arose with the Kani community was the vagueness surrounding the rights of the informants and the greater community in the benefit-sharing arrangement. In the early days, informants were paid from the community trust, which gave the perception among the Kani tribals that the trust was only for a few privileged people. If funds kept for scientists and their institutions had been directly offered as compensation to informants, this unwarranted dissatisfying situation may not have arisen.[9] Although the community managed Trust Fund was established democratically and responsibly, proper awareness of the local dynamic might have been required for assured fair distribution of its benefit. It follows from this that the Nigerian BDCP example analysis gives rise to the importance of making frameworks adapt to certain institutional, cultural, and ecological settings, thereby indicating the requirement for experimental models to achieve successfully what varied communities demand.

INTELLECTUAL PROPERTY RIGHTS AND CONSERVATION CHALLENGES

The case study emphasizes the critical nature of intellectual property rights in the generation and distribution of benefits. With patents not yet granted, good revenue was realized through royalties from licensing technology that has been developed from arogyapaacha. Today it is becoming more and more apparent that concrete opportunities exist for sharing benefits

[8] Tarun Khurana, Tanya Saraswat, 'The Neem Patent Case' (*Mondaq*, 23 Februray 2023) <https://www.mondaq.com/india/patent/1286020/the-neem-patent-case> accessed 21 December 2024

[9] 'LEAD-Journal.Org - Access and Benefit Sharing from'(2021)17(1) LEAD <https://lead-journal.org/content/07001.pdf> accessed 21 December 2024

through intellectual property. Notwithstanding the absence of a product patent or any foreign patent applications, these factors were not considered within the jurisdiction of India. Furthermore, the absence of trademark registration to distinguish this product from its competitors restricted the range of available options.

The utilization of third-party trademark protection, as observed in the USA with NutriScience Innovations' Jeevani brand, showcases the need for a comprehensive IP strategy. Equally important is striking a balance between IP rights and environmental goals. Arya Vaidya Pharmacy's buy-back guarantees and cultivation activities helped to reduce unsustainable extraction hazards, which were seen in the Forest Department's early limits. This emphasizes the importance of achieving a harmonious equilibrium between benefit-sharing strategies and sustainability practices to guarantee the ongoing accessibility of resources.

INCLUSIVE STAKEHOLDER ENGAGEMENT AND COMMUNITY EMPOWERMENT

The exclusion of key stakeholders in the preliminary discussions on structures for benefit-sharing, which included the Forest Department, posed significant challenges. If they had been involved with the value chain earlier on, their subsequent resistance could possibly have been avoided. On the same note, at the local level, including the Plathis informal network of healers, were kept out of the benefit-sharing structure. Involvement and acceptance by the community are greatly enhanced if these traditional custodians of knowledge are recognized and included.[10] The situation also reveals untapped potential for non-material contributions, such as providing critical health evaluations for the marginalized tribal population. In addition, the proposed biodiversity register that seeks to document traditional knowledge raises important questions about access, permission, and implications with regard to intellectual property. Inclusive dialogue and policy instruments would help improve the model and make it more resilient and equitable in benefit-sharing while empowering and ensuring sustainable development in the community.

LACK OF FORMAL DOCUMENTATION

The problem remains that indigenous medicinal knowledge is not documented, so it's basically orally communicated. This complicates proof of existence in case companies claim patents on products inspired by indigenous remedies. Formal records are hard to maintain for indigenous communities as proof of prior use or ownership of their knowledge. This loophole allows corporations to file patents under the banner of novelty to bypass the very legal protection that

[10] Shamnad Basheer, 'Arogyapacha: A "Green" Approach to Pharmaceutical Innovation' (*SpicyIP*, 8 January 2008) <https://spicyip.com/2008/01/arogyapacha-green-approach-to.html> accessed 21 December 2024

exists for such things. Lack of documentation jeopardizes not just the intellectual rights of the indigenous community but also accentuates the need for elaborate frameworks for recording and authenticating this knowledge systematically.

INCONGRUENCE BETWEEN INDIGENOUS AND MODERN IP SYSTEMS

There also lies another more fundamental difficulty in that the indigenous systems of custom have fundamentally little in common with modern systems of intellectual property. Knowledge systems, whether indigenous or modern, vary between two different lines: communal ownership and spiritual values in one case and inventiveness leading to commercialization in another. It has made things difficult for the indigenous to assert their rights within this legal framework. The socio-cultural implications of the indigenous knowledge in most instances are often immersed in the way of life with which these people live. This is hence neglected through market-driven incentive schemes and further increases the vulnerability for exploitation of their knowledge, heritage. Strengthening their alignment must be critical, therefore, to ensure better recognition and protection of knowledge.[11]

WEAK ENFORCEMENT OF BENEFIT-SHARING AGREEMENTS

Another major challenge is weak enforcement of benefit-sharing agreements. Even though frameworks such as the Nagoya Protocol and the Biological Diversity Act contain provisions for equitable benefit sharing, poor implementation often sabotages these provisions. Lack of timely execution of the benefit-sharing arrangements erodes trust and fails to yield compensation to indigenous communities within the required time frame. For instance, the story of the Kani tribe illustrates how institutional weaknesses and lack of awareness among indigenous communities intensify their exploitation. The lack of strong enforcement mechanisms also brings forth unbalanced agreements. Consequently, indigenous communities receive very few avenues for redress, which means such frameworks would not be fruitful without a more robust institutional and advocacy framework for the rights of indigenous peoples and timely and fair benefit-sharing outcomes.

AUTHOR'S RECOMMENDATIONS TO ENHANCE IPR PROTECTION AMONG INDIGENOUS KNOWLEDGE

RECOGNIZING COLLECTIVE OWNERSHIP OF INDIGENOUS KNOWLEDGE

[11] Shamnad Basheer, 'Guest Post: Recent Developments in the "Arogyapacha: Kani" Case' (*SpicyIP*, 1 October 2008) <https://spicyip.com/2008/10/guest-post-recent-developments-in.html> accessed 21 December 2024

Traditional knowledge of the indigenous communities, including medicinal practices and botanical insights, constitutes a collective asset nurtured over generations. In contrast, modern IPRs are based on individual creativity and ownership, leaving the communal aspects inadequately addressed. The protection of indigenous knowledge systems would require establishment of legal frameworks that recognize and codify collective ownership. More than this, India should consider recognizing patents over plant products, especially if they emanate from indigenous knowledge. Unlike process patents, which protect the method of producing a product, plant product patents offer stronger protection for the tangible outcome of traditional wisdom. Such patents could be granted on a case-by-case basis, provided safeguards ensure indigenous communities are direct beneficiaries, and would thus empower these groups while keeping in line with global patent practices. This approach acknowledges the communal effort behind these discoveries and offers a mechanism for equitable benefit-sharing, fostering a stronger foundation for indigenous communities to protect and claim their intellectual assets.[12] Collective ownership requires strong mechanisms in the form of conferral of legal titles to the communities, which would allow them to bargain with a better hand and press their claims more effectively in judicial and commercial forums. Formal acknowledgment of the rights of the community over their traditional knowledge and associated biological resources will protect them from external exploitation. For example, communities holding legal titles would be empowered to actively dispute unauthorized uses of their knowledge in patent filings by ensuring that benefit-sharing arrangements are equitable. This system would need a national registry for claims of traditional knowledge, wherein indigenous groups could register their collective rights. The verification process would involve ethnobotanists, legal experts, and representatives from indigenous communities, thereby validating the claims.

The impacts of giving legal titles are multiple. First, it would enhance the bargaining power of communities, and they could negotiate fair terms with corporations and research institutions. Second, it establishes a legal framework that can deter biopiracy by mandating disclosure of origin in patent applications. India's Biological Diversity Act 2002 provides a suitable case law by mandating industries to obtain permission from the National Biodiversity Authority before using biological resources and it would strengthen that in the enforcement of the new provision. For example, "From the TKDL site itself, it is visible that TKDL has blocked over 250

[12] 'Patents Based on Traditional Knowledge Are Often "Biopiracy". A New International Treaty Will Finally Combat This' (*The Coversation*, 2 June, 2024) <https://theconversation.com/patents-based-on-traditional-knowledge-are-often-biopiracy-a-new-international-treaty-will-finally-combat-this-231272> accessed 21 December 2024

biopiracy attempts across more than a dozen jurisdictions internationally". This therefore represents the successful implementation of formal recognition systems to protect indigenous knowledge.

MANDATORY BENEFIT-SHARING WITH KNOWLEDGE HOLDERS

Often, the communities that are the legitimate sources of traditional knowledge are devalued by its commercialization. The Kani tribe made a significant yet unrecognized contribution to Jeevani. Mandatory benefit-sharing with traditional knowledge is necessary to avoid this disparity and to foster fair collaborations. The principles of PIC and MAT are very important as they ensure that indigenous peoples are informed and involved in decisions regarding the use of their knowledge. Such agreements must be negotiated transparently, with clearly defined terms regarding profit-sharing and royalties and supported by access to legal and technical expertise for the communities.[13]

Co-inventorship in patents that result from traditional knowledge is an important step toward the recognition of indigenous knowledge holders' contributions. Community trusts to manage funds from benefit-sharing agreements can ensure equitable distribution of benefits, if such trusts are transparent and inclusive. Periodic reviews and feedback mechanisms within agreements can adjust inequities or changing circumstances. Of course, there are also many challenges: identifying who exactly represents the community, who lacks the expertise to engage with legal frameworks, and how to respect cultural sensitivities. Institutionalizing compulsory benefit-sharing can empower indigenous communities as equal stakeholders in the innovation process.

SAFEGUARDING KNOWLEDGE THROUGH DOCUMENTATION

If traditional knowledge is not documented, it can be easily misappropriated; hence documentation and formal preservation and protection becomes the priority. Among them, digitization initiatives also include India's Traditional Knowledge Digital Library, which protects knowledge defensively, but that also preserves the knowledge and makes it easier to collaborate and work with the indigenous communities, as well as with a researcher, ethically. Documentation of traditional knowledge prevents unauthorized patenting as it provides prior art that has been proven by the success of TKDL in several patent applications around the world. Digital preservation of oral traditions saves them for posterity and opens up avenues for scientific and commercial collaborations.

[13] Roy Mathew, 'A Benefit-Sharing Model That Did Not Yield Desired Results '*The Hindu'* (India, 18 October 2016)

Community consent and control are antecedents to effective documentation, whereby indigenous communities must be in charge of how their knowledge is accessed and utilized. Customary laws-registered localized registries better enable communities to administer and protect their knowledge. The combination of these local repositories with global patent databases enhances the defensive protection against biopiracy. Delay in granting patents is, however, an issue that has to be addressed very promptly. In the case of the Kani tribe and Jeevani, for instance, it took them so long that novelty was eroded as that knowledge entered the public domain during the application process. Erosion of novelty of indigenous contributions undermines their values and prevents communities from extracting maximum benefits from their intellectual assets.[14]

This problem should be taken care of by establishing a specialised body in India, which would handle its job solely on the processing patent applications related to indigenous knowledge. This body can even function in a regional branch model that ensures proper coordination between the local communities and the scientific experts. Thus, such a model would even ensure proper and culturally relevant verification of traditional knowledge claims; it would prioritize indigenous voices in all decision-making processes. This body may prevent delays, preserve novelty, and create trust between communities and regulatory systems by streamlining the patenting process. Further, this specialized body could collaborate with the already existing institutions, such as the TKDL and the National Biodiversity Authority, in order to form a holistic support system for indigenous intellectual property protection. Such an initiative would strengthen the commitment of India to preserve its valuable cultural and ecological heritage while bringing about equitable development.

CONCLUSION

Therefore, the indigenous medicinal knowledge has numerous significant challenges, as identified by the case study of the Kani. The Kani were exploited when they were asked to share their knowledge of medicinal plants, which also reflects more general issues that relate to the lack of effective legal protections. International instruments, for instance, the CBD and the Nagoya Protocol recognize the importance of protecting traditional knowledge, but implementation of these instruments has been extremely limited. This is further worsened by the lack of adequate mechanisms for enforcement, lack of adequate involvement of indigenous

[14] 'Protecting Traditional Knowledge and Intellectual Property' (26 April 2024) <https://depenning.com/blog/ip-and-indigenous-communities-protecting-traditional-knowledge-and-cultural-heritage> accessed 21 December 2024

communities in decision-making processes, and still ongoing threat of biopiracy. In India, it is even the Biological Diversity Act 2002, important for acknowledging traditional knowledge; however, it has great gaps in its implementation; notably, these are relating to fair participation and avoiding exploitation.

Thus, it is required to establish a dedicated body for the fast-track processing of indigenous knowledge patent applications. This body would focus on proper documentation, recognition of co-ownership of knowledge between indigenous communities and external entities, and equitable benefit-sharing. It could provide a structured mechanism for the registration and protection of indigenous knowledge, thus preventing exploitation and facilitating fair compensation. By learning from what happened with the Kani tribe in these cases, a body so formed will thus strengthen the legal safeguards which will then ensure cultural respect and also guarantee that indigenous people do keep control over their intellectual properties. In this manner, these people will be empowered, protected, and they will be left to reap the fruits from the utility of their indigenous knowledge.

COMPARATIVE ANALYSIS OF FRAND COMMITMENTS AND STANDARD ESSENTIAL PATENT ENFORCEMENT IN INDIA AND THE EUROPEAN UNION

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ABSTRACT

Standard Essential Patents cover the fundamental technologies used with industry standards, whether telecommunication, data transfer, or any other such standards. Thus, owners of SEPs can license only on FRAND terms, leaving market access reasonably open. Yet, the rights of SEP holders will bring very complex compliance issues under the competition law because countries such as India and the European Union have adopted different approaches for enforcing SEPs and the respective FRAND obligations. The EU has a well-established framework for enforcing SEP through the support of competition law and precedents from court judgments such as the Huawei v. ZTE case, which encourages transparency in licensing arrangements. Through this framework, SEP holders cannot misuse their dominant positions by either collecting extreme royalties or pressuring by injunction without following the terms of FRAND. India, however, has an evolving SEP enforcement framework. Recent judicial decisions around the Delhi High Court indeed reflect a direction towards implementing FRAND commitments, but simultaneously, challenges continue to exist, such as those relating to the over-declaration of non-essential patents and the pre-litigation mechanisms being absent for determining essentiality. This paper analyses the enforcement of FRAND obligations and SEPs in India and the EU, focusing specifically on their roles within innovation, competition, and access to critical technologies. The EU's mature legal system contrasts with India's developing framework, which is influenced by competition law principles. The paper argues that India must refine its SEP enforcement mechanisms to ensure consistency and clarity in its judicial and regulatory practices. To conclude, the paper advocates for harmonising SEP enforcement across

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jurisdictions. A pre-litigation essentiality assessment in India, to start with, and clearer guidelines on SEP licensing based on observed practices in the EU are some of the key proposals in the paper. All these would remove uncertainties from the legalities, ensure fair access to such technology, and drive global innovation.

KEYWORDS: Standard Essential Patents, FRAND, Telecommunication, Licensing, Technology Access.

INTRODUCTION

Standard Essential Patents are of significant value in the implementation of technologies aligned to specific standards, as applied in mobile communication and Wi-Fi. They are termed "standard essential" because it is impractical to produce or market products so aligned with such standards without integrating the patented technology into the product. Thus, SEPs define boundaries across various sectors, which fosters technological advancement as well as access to global markets. Due to their ability to create monopolistic conditions, SEP owners have to fulfill FRAND obligations. These are aimed at obliging SEP owners to provide licenses under fair and reasonable terms that eliminate distortive exploitation of market power and ensure fair access to crucial technologies. FRAND remains a rather ambiguous term, however, and varied interpretations are witnessed depending on jurisdictions in terms of enforcement. The European Union has developed a broad legal framework that includes SEPs and FRAND obligations with clear standards and an established body of jurisprudence, giving the SEP licensing dispute a stable and predictable environment.

In contrast, India still continues to develop a comprehensive legal regime for SEPs and FRAND compliance. Recent judicial pronouncements have placed an important emphasis on holding onto FRAND terms; however, such interpretations are often found to be away from international norms, especially as they are prevalent in the EU. Such a situation will pose considerable hurdles for multinational corporations operating within India and in the EU with varying legal landscapes. This paper examines differences with respect to the FRAND commitments and the SEP enforcement in India and in the EU, such as differences in substantive law, case law and enforcement practice. The analysis will also evaluate the effects of these differences on innovative activity, competition, and access to technology around the world. In addition, the research aims to elaborate on the models of the law of both countries,

which could help to improve the enforcement of SEPs and compliance with the FRAND terms so that SEPs can be regulated effectively and efficiently worldwide.

SEP AND FRAND ENFORCEMENT IN THE EU

LEGAL FRAMEWORK FOR SEPS IN THE EU

The European Union has a governance of SEPs resting on a rather complex legal framework, which brings provisions under the EU treaties, regulations, directives, and jurisprudence. This is sure to be in equilibrium between promoting innovation, the rights of intellectual property, and competitive market dynamics.

It was founded upon fundamental treaties, directives and regulations as well as on the latest reforms that came and went in building the European SEP legal framework, appearing seemingly equitable and transparent to rivalry. It has opened some puzzles above the very question of FRAND, innovations, as well as various and contrasting interests of right owners as well as right user interests.

THE EPC 1973

The European Patent Convention was established as an integrated scheme to provide patent protection to all member countries. This marked the introduction of obtaining protection for patents under the jurisdiction of all these states using a harmonized process where one application could only be filed with the EPO, European Patent Office. Although the EPC does not include SEPs, the EPC has provided a legal basis for the protection of inventions when those inventions were subsequently found to be essential to technical standards. SEPs, being patents essential to the use of standardized technologies, base their principles on patent law as crystallized in the EPC. As all patents granted under the EPC were of exceptionally high quality concerning novelty, inventive step and industrial applicability, the framework serves as a starting point for innovation protection regarding EU standards.

IPRED 2004/48/EC ON ENFORCEMENT OF INTELLECTUAL PROPERTY RIGHTS

The IPRED directive is known otherwise as Directive 2004/48/EC. It is the directive that harmonizes intellectual property rights throughout the whole area of the EU through the structuring of provisions on civil measures and remedies for infringement of IP rights. Accordingly, it is essential for SEPs, for IPRED to be able to empower SEP holders to enforce their rights in the proper balance and, at the same time, achieve such balance between the protection of these rights and not overdoing them to the point of stifling competition or innovation. To crown it all, IPRED further demands the principle of proportionality so that

measures of enforcement must be proportionate to the nature of the infringement and the wider public interest. This factor is especially relevant for SEPs applied in standardized products.

REGULATION (EU) NO 1215/2012 (BRUSSELS I RECAST)

The Brussels I Recast regulation relates to issues of jurisdiction relating to cross-border patent disputes, which also encompasses disputes over SEPs. Since setting standards and using them all over the world is an international issue, the directive is an important tool of jurisdiction within the EU patent disputes. It enforces rules to be used to recognize judgments and enforce those judgments between member states for more transparency and predictability of litigation. This regulation ensures that the rights of the SEP holders can be enforced uniformly, while for the implementers, it gives a clear procedural framework through which to contest claims in the appropriate jurisdiction.

ARTICLES 101 AND 102 OF THE TFEU

Articles 101 and 102 of the TFEU form the basis of the EU competition law and are very important in the regulation of licensing and enforcement of SEPs.

Article 101 TFEU bans agreements that may affect competition so as to prevent, restrict, or distort it in the internal market. Therefore, such license agreements that would fall within the provision of not hindering competition would include SEPs such as exclusive arrangements or territorial restrictions.[15] It is very common that holders of SEPs often declare their patents and agree to license on FRAND terms within the standard setting process. These, too, must pass muster under Article 101, lest cartel-like behaviour is asserted against them.

Article 102 TFEU is an abuse of the dominant position. Usually, the holder of SEPs is in a dominant position as the patents are absolutely necessary for the use of the technical standards. This includes the rate of excessive royalties, not licensing SEPs under FRAND terms, and other licensing discriminations. This would be considered an abuse within Article 102. Article 102 prevents SEP owners from taking advantage of such a position to the detriment of both competition and consumers.

REGULATION (EU) NO 1025/2012 ON EUROPEAN STANDARDIZATION

It acts as the regulatory framework for development within Europe's scope under Regulation (EU) No 1025/2012, thus bringing organizations that set the standard into the picture, as they also need a process of producing these standards to be non-obligation, transparent, and

[15] Li, B. C., 'The global convergence of FRAND licensing practices: towards "interoperable" legal standards' (2006) 31 BTLJ, 429,466

unaligned. SEP proprietors should disclose any patented product during the development period for relevant patents and submit them to licensable terms on their patented FRAND basis. The technologies transfer at hand fall under this regulation, which is critical for safeguarding the realization benefits of standardization-on interoperability and low cost from being strangulated through restrictive and abusive licensing practices.

DRAFT REGULATION ON SEPS (2023)

The newly proposed regulation on SEPs includes drastic changes in the manner in which SEPs are licensed and enforced in a manner that would ensure more transparency and fairness.

a. **Mandatory Filing**: All the patents shall be owned by the owner of SEP and shall have a mandatory filing at EUIPO wherein they write patent numbers, country of registration, and which relevant standards of technology are applicable. It has actually increased transparency very significantly, and implementing parties can now spot and identify the SEPs much better than before.
b. **Annual Essentiality checks:** The status to the standard of relevance for patents on essentiality chosen each year shall be applied
c. **FRAND Determination Framework:** The notice clarifies a standardized process in the determination of FRAND terms involving cumulative royalty rates. SEP proprietors and implementers shall be guided on a non-binding level via conciliators.
d. **Pragmatic Licensing Practice:** The proposed rule shall correct an exploitative licensing practice depriving components manufacturers of the entry points into SEPs, leading them away from competing thereby leaving standard products out of a wide reach due to priciness.

The proposed regulation is comprised of these reforms, which would step in the right direction to have a just and transparent SEP ecosystem that favours all stakeholders. This further develops foundational legal principles that previous directives and regulations put in place and adapts to challenges that emerge in the fast-moving technological landscape.

JUDICIAL INTERPRETATIONS AND PRECEDENTS

The ***Samsung v Apple,***[16] is one of the most important decisions in relation to SEP enforcement and competition law in the European Union and highlights the confluence of IP rights, FRAND commitments, and Article 102 TFEU. As a matter of fact, Samsung had filed injunctions

[16] European Innovation Council and SMEs Executive Agency, Standard Essential Patent Landscape in India – Part 1 (European IP Helpdesk, 2024)

against Apple for infringement of SEPs related to UMTS technology even though it had committed to license those patents on FRAND terms. It referred to the background and potential damage to innovation, market access, and competition while considering whether such injunctions against a willing licensee would be abusive under competition law.

The Commission found that Samsung's conduct infringed Article 102 TFEU because threats of injunctions against a willing licensee impair fair access to standardized technology. In response to these concerns, Samsung has agreed not to seek an injunction in Europe against licensees negotiating in good faith, thereby establishing a 12-month negotiation and arbitration framework. This ruling promotes the principle of good faith in FRAND negotiations while also balancing SEP holders' and implementers' rights.

This case will have significant jurisprudential implications on SEP jurisprudence and will also ensure that enforcement is responsible for the preservation of competition. It fits into landmark decisions like *Huawei v. ZTE,* thus creating a precursor to the delicate balance between innovation and market equity and setting up the framework to guide future SEP licensing and enforcement.

The case of ***Huawei Technologies Co., Ltd. v. ZTE Corporation,***[17] is the first landmark judgment in SEP jurisprudence, where the balance between the rights of SEP holders and those of implementers is systematically structured under the commitments of FRAND. Huawei alleged that ZTE infringed its 4G-related SEPs without a license, the question being whether seeking an injunction would amount to abuse of dominance under Article 102 TFEU. The CJEU established a procedure for the parties, which outlined the obligation of the SEP holder to inform the alleged infringer about the infringement, make a FRAND-compliant offer, and negotiate in good faith. The alleged infringer must respond promptly. Counteroffers similarly have to be FRAND compliant. Non-compliance may justify injunctions without contravening the competition law.

Some of the aspects that this judgment will have achieved are balancing the rights of the holders of SEP without allowing anti-competitive practice against innovation and access to market predictability on SEP licensing in a manner deterring opportunism with a forcing feature of good faith negotiation, disregarding regional application within the EU because its influences are felt beyond its boundaries at a global perspective when issues pertaining to SEP or SEP-related jurisprudence come up in policy-forming matters.

[17] *Huawei Technologies Co. Ltd v ZTE Corp* (2015) ECR I-0000

According to this, judgment strengthens the idea that FRAND commitments are key to both competition and innovation, patent exclusivity, and public interests in accessing standardized technologies, together with fair practices in licensing.

The case ***Nokia v. Daimler AG***,[18] reflects the dynamics of the FRAND obligations of SEP disputes within the automotive sector's connected technologies. Nokia possessed SEPs that were important to wireless communication standards and, therefore, complained that Daimler used the patented technologies within its vehicles without a FRAND license. Daimler argued that the suppliers should license the patents instead. The Regional Court of Mannheim decreed in favour of Nokia to grant injunctive relief while confirming that the latter was still in compliance with FRAND obligations. It highlighted a lack of good faith on the part of Daimler in direct negotiation with Nokia due to the outright rejection of Nokia's counteroffer by the latter as unsatisfactory in settling the matters.

It only strengthens the proposition that SEP holders are under obligation to grant FRAND licenses, but at the same time, it insists that implementers cannot sidestep direct negotiations by outsourcing licensing to suppliers. It confirmed the right of SEP holders to enforce patents directly against final product manufacturers, not caring about agreements among suppliers, and hence provides much-needed guidance for complex supply chain industries. This case, therefore, sets a precedent for the resolution of SEP disputes in industries with rapid innovation and standardization.

In the case of ***VoiceAge EVS v. HMD Global,***[19] is one of the cases that reflects some of the intricacies involved in the enforcement of SEPs and FRAND commitments in the telecommunication industry. Several SEPs relating to Enhanced Voice Services have been alleged by VoiceAge against HMD, and suits have been filed in the Regional Courts of Munich and Mannheim. On grant of judgment from the Munich Court, the Plaintiff contended that HMD infringed the VoiceAge patents and dismissed the FRAND defense offered by the defendants for these reasons that at all times material, the defendant could demonstrate neither a timely good faith intent to bargain nor, as he focused as he did, on the basis his cryptic response to VoiceAge, in the course he necessitates delaying maneuvers to be made on its part and with the world.

In April 2024, the European Commission filed an Amicus Curiae, which again brought forth parties to be held in observance of principles espoused by *Huawei v. ZTE*, generally, as well as

[18] *Nokia v Daimler AG* (Case No 2 O 34/19)
[19] LG Munich, Case No 7 O 15350/19, *VoiceAge EVS LLC v HMD Global Oy* (Germany 2024)

of transparency and procedural fairness in the negotiation of FRANDs. It has set a precedent in SEP litigation since it has made it clear that both the implementers and SEP holders have an obligation proactively, thirdly, to be transparent while negotiating. It has forward-looking definitions of what will qualify as acceptable FRAND compliance and is going to determine in which manner mobile manufacturers and other market players are going to approach SEP licensing in a predictable and efficient manner.

Regulatory Oversight by the European Commission

Anti-competitive practices targeted by this was the use of SEP regulations that are enforced by the European Commission under competition law, including extra royalties.[20] Lately, the proposals of the Commission include developing a register of SEPs managed by the EU with essentiality checks conducted by the EU Intellectual Property Office to enhance further SEP licensing transparency, balance asymmetry of information, and ensure fair negotiation conditions for licensees.

Challenges for Stakeholders

This structure notwithstanding, challenges persist, especially for small companies rather than big technology providers. Licensing procedures are complex and cumbersome, and the application of enforcement standards varies within the EU member states; these factors create a fractured system. Problems of this nature affect access to SEP and create uneven results.

Impact on Innovation and Competition

This created legal certainty and the structured environment that this framework of the EU creates an incentive to innovate. Most recent regulatory proposals, therefore, intend to improve fair access to the technology in question through SEP licenses that become transparent and market-based. This approach, therefore, is beneficial to sectors such as telecommunications or IoTs that rely on standardized technologies.[21] For these fast-developing industries, the EU system, therefore, supports the balance between innovation and fair competition.

SEP and FRAND enforcement in India

Legal Framework for SEPs in India

[20] Borghetti, J. S., Nikolic, I., & Petit, N, 'FRAND licensing levels under EU law' (2021) European Competition Journal, 17(2), 205, 268

[21] Henkel, J., 'Licensing standard-essential patents in the IoT: A value chain perspective on the markets for technology' (2022) Research Policy 51(6), 104600

In India, the framework for SEPs is still in its foundational stage, as it is not explicitly covered under any of the legislation. However, certain provisions and concepts affect SEPs and FRAND. These are:

1. Under the ***Patents Act,1970:***

Section 2(1)(j): Declaring a "patentable invention" to be a new product or process involving an inventive step and capable of industrial application. SEPs, as patented technologies used within industry standards, have to fulfill the statutory requirements.
For example, SEPs in telecommunications, such as 4G or 5G standards, are included in this category of protection.

Section 84: This section provides for the compulsory licensing provision on specified conditions, which include the patented technology not being made available to the public at a reasonable price. As such, compulsory licensing is important to access SEPs, especially when unconscionable licensing terms are enforced by the SEP holder.

Section 140: Prevents patent licensing agreements from imposing restrictive conditions. These include clauses that restrain trade or discourage innovation, which are often the centre of disputes surrounding SEP licensing and FRAND compliance.

2. Under the ***The Competition Act, 2002:***

The Competition Act, 2002 is an Act concerning anti-competitive practices and issues related to abuse of dominance and restrictive trade agreements in the context of SEPs:

Section 4: Abuses a dominant position. SEP holders, by virtue of the essentiality of their patent, generally hold a dominant position in the market. This includes excessive royalties, refusal to license on FRAND terms or unfair terms and conditions. Example: The ***Ericsson v. Micromax***[22] case posed a significant question regarding the interplay between SEPs and claims of excessive royalty demand.

Section 3: Targets anti-competitive agreements. Agreements limiting competition through licensing only or imposing the obligation to make available SEPs without alternatives may be against this provision.

ROLE OF STANDARD SETTING ORGANIZATIONS (SSOS)

SSOs are not a part of the statute of India, but fundamentally hold a big place in the governance of SEPs:

SSOs set industry standards and ensure members commit to license SEPs under FRAND terms. Under standard settings in India, besides the Bureau of Indian Standards (BIS), global best

[22] *Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (Publ),* Case No. 50/2013

practices are adhered to at the same time promoting innovation and accessibility. The lack of a codified framework for enforcement of SSO commitments leads India to most instances of disputes, with the Indian courts putting some light on international precedents while interpreting FRAND obligations.

JUDICIAL INTERPRETATIONS AND PRECEDENTS

India's SEP framework is still in the development stages, though recent cases continue to clearly reflect the importance of FRAND compliance. In ***Ericsson v. Lava***[23], the Delhi High Court ruled that SEP holders must demonstrate a genuine attempt to license on FRAND terms before pursuing injunctions. This ruling aligns with the EU's ***Huawei v. ZTE***[24] principles, signalling progress in India's SEP jurisprudence. According to this, there is no seemingly well-defined process in existence in order to measure the importance of a patent in an assessment that would not exert significant pressure on the licensure of SEP and legal disputes.[25]

Indian courts have significantly defined the contours of FRAND obligations. Some of them include ***Ericsson v. Intex Technologies,***[26] wherein the Delhi High Court said that SEP holders must negotiate in good faith before injunctive relief is sought. The judgments held that a unilateral approach by SEP holders to dictate their terms of licensing without genuine negotiations on FRAND terms runs against the principles of fair treatment. This decision falls in line with international best practices, such as those in the European Union, where injunctions are only entertained if negotiations take place in good faith.

Another landmark judgment was delivered in ***Micromax v. Ericsson.***[27] In this case, royalty rate determinations were questioned. This judgment pronounced that royalty rates should be determined based on comparable licenses, which entail terms reflecting the market situation. The Implication of this judgment is that royalties should not stifle competition or discourage access to essential technologies. Thus, a balanced approach to patent monetization was welcomed.

CHALLENGES IN THE REGULATORY FRAMEWORK

India has an issue of persistent enforceability of SEP, which clouds the clarity and predictability of its legal landscapes:

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[23] *LAVA International Ltd. v Telefonaktiebolaget LM Ericsson*, [2024] SCC OnLine Del 2497
[24] *Supra* note 18
[25] Meena, H, 'Addressing the ambiguity of FRAND terms: An Indian perspective' [2022]
[26] *Telefonaktiebolaget L M Ericsson v Intex Technologies (India) Ltd.*[2023] 6 HCC (Del) 416
[27] *Supra* note 23

- **Over-Declaration of Patents:** SEP holders in India sometimes classify non-essential patents as essential, leading to exploitative licensing practices, inflated royalties, and market distortion, undermining standard-setting integrity.[28]
- **No Pre-Litigation Mechanisms:** In India, there are no institutional structures that can carry out an early assessment of SEP essentiality, which escalates disputes directly to litigation. This delays dispute resolution and increases litigation costs while more probably entangling legal uncertainty in the process.
- **Judicial Discretion over Injunctions:** With the trend in ***Ericsson v. Lava***[29], judicial attitudes are, at best, utterly inconsistent regarding providing an injunction in SEP dispute cases. Such inconsistency begets uncertain outcomes as regards enforcement and makes for unclear law precedents among stakeholders.

IMPLICATIONS FOR STAKEHOLDERS

The indistinct nature of standards and similar practices indirectly create a possibility for forum shopping, which effectively leaves the SEP dispute litigation ambiguous. Such uncertainty may discourage investment and delay innovation in the Indian market. Uncertainty over the enforcement of FRAND terms depresses new entry and even deters research and development. A clear framework of licensing and an essentiality test would make risks for potential licensees less likely. Pre-litigation options in India are few, and SEP disputes are thereby very long, expensive, and delay access to necessary technologies and increase consumer costs.

CURRENT DEVELOPMENTS AND FUTURE DIRECTIONS

Recent court judgments are gradually unwinding the duties of SEP holders under FRAND, thereby gradually submitting to increasingly uniform and predictable judicial interpretations. Despite these issues, there have been suggestions from the stakeholders to regulate specifically SEPs that incorporate over-declaration control and openness under FRAND licensing.[30] These reforms could make the landscape of the Indian SEP market fairer, principle-structured, and positive for its effective enforcement.

COMPARATIVE ANALYSIS OF SEP AND FRAND ENFORCEMENT: EU V. INDIA

[28] C. Tian, J. Zhang and D. Liu,*Knowledge Sources, Novelty, and Generality: Do Standard-Essential Patents Differ From Nonstandard-Essential Ones?* (IEEE Transactions on Engineering Management , 2024), vol. 71, pp. 6796-6811

[29] *Supra* note 24

[30] Devarhubli, G. D., 'Interface between FRAND licensing of standard essential patents (seps) and competition law: issues and challenges' (2020) 11(2) IJLJ,115-141

This comparative review of the enforcement frameworks regarding Standard Essential Patents in the European Union and India reveals very critical differences impacting the predictability, transparency, and consistency of SEP licensing and litigation processes around those issues. Differences in regulatory governance and institutional structure, compounded by judicial way, have a material impact on the ability of each region to execute its strategy on SEPs and FRAND obligations effectively.

ESTABLISHED FRAMEWORK V. FRAGMENTED APPROACH

The enforcement framework of SEP in the EU is very much grounded in competition law, stabilized through judicial precedent for the SEP holders and implementers. The case of *Huawei v. ZTE* is indeed a cornerstone in EU jurisprudence that provides very particular requirements for negotiations. It makes SEP holders negotiate in good faith on terms of FRAND before they are allowed to seek injunctions, thereby ensuring an approach that balances out not allowing abuse of SEPs by keeping competitive dynamics in place. However, India does not have an integrated framework, and thus, SEP enforcement takes a piecemeal shape. In ***Ericsson v. Lava***[31], the Delhi High Court gives a positive input toward the recognition in India of commitments under FRAND but establishes at its best the scope for erecting stricter guidelines on patent essentiality or consistent standards on injunctions. Such approaches, however, bring substantial legal uncertainty and make SEP licensing and litigation problematic.[32]

REGULATORY OVERSIGHT AND INSTITUTIONAL MECHANISMS

The EU will not benefit from the proactive oversight of the European Commission with respect to monitoring compliance with SEPs to avoid such abusive practices by SEP holders. It is upon such an enforcement power of investigation and penalties that abusive licensing, including excessive royalty demands or injunction sought without any FRAND negotiation, may be penalized by the commission. Regulatory involvement makes for fair SEP practices. By contrast, India does not have a comparable institutional structure for the regulation of SEPs, and specifically, there is no framework for pre-litigation checks on essentiality. Hence, filing such a lawsuit is extremely expensive, and its adjudication takes ages to wind up. The absence of oversight adds to legal uncertainty, thereby burdening both implementers and SEP holders financially.

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[31] *Supra* note 24

[32] Tripathi, Praveen, 'Standards, FRAND and Competition Law' (2002) International Journal of Law Management & Humanities, 5, 829, 854

PATENT ESSENTIALITY CHALLENGES

Recent EU proposals will make SEP transparency even more efficient through the creation of a competence centre at the EUIPO dedicated to essentiality assessments and guidance on FRAND terms.[33] This kind of initiative reduces information asymmetry and creates a more level playing field in the SEP ecosystem.

Lastly, for India, the problem is that some patents are declared as SEPs, which are not essential. Those allow SEP holders to exploit market power and enter anti-competitive practices.[34] The pattern of practice undermines the integrity of standard-setting processes, thereby affecting entry into markets and fair competition. However, standard-setting organisations in the European Union, like ETSI, take an active step to reduce over-declarations through a procedure for rigorous evaluation.

JUDICIAL DISCRETION AND INCONSISTENCY

While the EU legal framework promises much predictability, precedents established will guide the decision-making on SEP-related issues. Consistency in this regard supports efficient licensing negotiations with a balance of rights conferred to SEP holders and the imperatives of market competition.[35] Predictability in judicial outcomes attains an environment which is conducive to innovation while preventing unfair competition by ensuring appropriate compensation of patent holders.

Compared to this, Indian courts increasingly and convincingly recognize FRAND commitments; standard criteria of when an injunction should be granted is not drawn, and hence it is subject to judicial differing interpretations. For example, some do not agree with the right of a SEP holder to obtain an injunction for failing to offer a fair license.

IMPLICATIONS FOR STAKEHOLDERS

Such differences in SEP enforcement frameworks have very deep consequences for different stakeholders:

- **For Implementers:** It gives predictability by the EU framework, enabling implementers to proceed with SEP licensing with a high degree of risk reduction against legal surprises.

[33] Indian Cellular and Electronics Association, Response to TRAI consultation [2024] Q.20 on SEPs/FRAND licensing

[34] European Innovation Council and SMEs Executive Agency, *Standard Essential Patent Landscape in India – Part 1* (*European IP Helpdesk*, 2024)

[35] *Supra* note 15

- **For SEP Holders**: In the EU, well-defined jurisprudence provides a predictable and rule-based approach to the enforcement of SEP rights that cannot be abused.[36] Such guidelines have never been established in India, making litigation costly and uncertain for licensing.
- **For Multinational Corporations:** These uncertainties involving the enforcement by Indian corporations may add to the risk, which will be characterized by possibilities of forum shopping. Investment inflows or expansion within the Indian technology market may not happen with the unearthing of unsafeness of an unreliable framework of enforcement.

CONCLUSION

Therefore, in the Indian context, a prelitigation mechanism or regulatory authority for SEP declarations and FRAND obligations would significantly improve this existing enforcement landscape. This would effectively settle disputes over the patent involved in question before it spirals into costly litigation, thus providing a more transparent framework for negotiations between SEP holders and implementers. This would appear to provide much-needed clarity so that, instead of legal uncertainty on both sides, the juridical content and implications of the FRAND terms and obligations pertaining to SEPs can be better understood. Infusion of practices of the European Union with the principles enunciated in *Huawei v. ZTE* would strongly fortify India's framework for SEP enforcement. This would ensure that the patent owners cannot make undue use of their rights to garner exorbitant royalties or block market competition and hence make the licensing of SEPs in India more equitable and more effective.

[36] Basu, A., & Sahoo, A, 'Antitrust Routine in Delineating the Frontier of SEP and FRAND-Encumbered Patents: A Comparative Study' (2023) Competition Commission of India Journal on Competition Law and Policy, 4(1), 41; 76

PATENTING LIFE: GLOBAL PERSPECTIVES ON INTELLECTUAL PROPERTY IN GENETIC AND BIOTECHNOLOGICAL INNOVATION AMIDST ETHICAL AND LEGAL CHALLENGES

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ABSTRACT

The revolutionary capabilities of genetic engineering and biotechnology can revolutionize environmental conservation, agriculture and medicine. Because of this, intellectual property (IP) rights, particularly patents, are fundamental to their development, as they incentivize innovation by protecting investments in R&D. How IP works in these domains, however, raises significant questions regarding its broader implications for biodiversity, food security and public health. This research examines the correlation between intellectual property rights and innovation in biotechnology and genetic engineering, highlighting key technologies such as genetically modified organisms (GMOs), CRISPR and biopharmaceuticals. It examines the challenges of patenting these technologies, including the monopolization of genetic resources, the inability to access life-saving medicines, and the ethical dilemmas posed by the patenting of living things. Antubam, the paper highlights discrepancies on IP governance and its implications for equitable access of developing nations as opposed to developed nations. The US BRCA gene patent lawsuit and India's Section 3(d) pharmaceutical patent policy provide important insights into these difficulties. The findings of the study state that while IPR promotes innovation, it must be balanced with public interest, or it would ultimately compromise accessibility and sustainability. Because of this, it stresses the need for such IP frameworks to be transformed so that the creation of fair licensing policies to call for licensing of underpinned technology be established as well as the development of international treaties prioritizing sustainability and global health. To ensure that the genetic as well as the

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biotechnology engineering support the sustainable as well as the inclusive development, also maintaining its ethical standards, the study at the end makes a policy proposals which aligns with the IP law as well as the SDGs.

KEYWORDS: Biotechnology, Genetic engineering, SDGs, Biopharmaceutical Patents, TRIPS.

INTRODUCTION

Environmental science, agriculture, and medicine have all seen significant changes because of the revolutionary disciplines of biotechnology and genetic engineering. To create new goods and technology that enhance people's quality of life, these fields exploit biological systems and creatures. Biotechnology and genetic engineering have proven to be essential instruments in tackling some of the most urgent issues facing the world, including food insecurity, climate change, and public health crises. They range from the development of genetically-modified crops endowed with greater resilience to the making of life-saving medicines.[37]

The protection offered by intellectual property rights (IPRs), especially patents, is one of the main forces behind innovation in these domains. Another major driver of innovation in these fields is the protection provided by IPR-patents generally. Patents give exclusive rights to scientists and companies to use their ideas for a defined period of time and therefore stimulate research and development in time-intensive and resource-intensive research and development domains such as biopharma, GMOs, and genome-editing technologies like CRISPR. Their exclusivity would thereby enhance investment into risky and expensive R&D efforts and, indeed, foster inventions. [38]

The combination of biotechnology and intellectual property has sparked debates, on issues such as the control of resources and the cost of medicines as well as the ethical considerations of patenting living organisms. Patents can potentially restrict access to technology and life saving drugs in developed countries while also serving as a means for fostering innovation[39]. Moreover there are concerns about the adequacy of existing systems, in light of the risks posed by modified organisms to biodiversity and the environment.[40] he study aims to explore the

[37] Michael Wink, *An Introduction to Molecular Biotechnology: Fundamentals, Methods and Applications* (3rd edn, Wiley-VCH 2013)
[38] Jennifer Doudna & Samuel Sternberg, *A Crack in Creation: Gene Editing and the Unthinkable Power to Control Evolution* (Houghton Mifflin Harcourt 2017)
[39] David Castle, *The Role of Intellectual Property Rights in Biotechnology Innovation* 18 (Edward Elgar Publ'g 2009)
[40] Shamnad Basheer, 'India's Patent Law and Section 3(d): A Model for Balancing Innovation and Access', (2008) 26 *Nat. Biotechnology* 483, 485

balance, between encouraging innovation through intellectual property rights and tackling concerns such as equitable access to genetic technology and issues related to public health and biodiversity conservation is the primary focus of this research project The study seeks to evaluate if current intellectual property frameworks align with broader sustainability goals by analyzing the ethical and legal dimensions of patent rights, in genetic engineering and biotechnology sectors.

The research will analyze significant issues, like GMO patents, CRISPR, and biopharmaceuticals, in an effort to achieve the above objectives. It will discuss the challenges that these patents pose, such as possible ethical concerns, exorbitant costs of patented products, and trans-border jurisdictional issues. In addition, the study will provide a comparative analysis of legal systems and case laws across different jurisdictions, highlighting the differences between developed and developing countries in terms of intellectual property management in biotechnology. For example, the historical BRCA gene patent case in the US highlights the ethical issues of monopolizing genetic information, whereas Section 3(d) of act prevents patent from evergreening to ensure that the medicines are available at the price range[41]. The findings of this research will contribute to ongoing discussions regarding IPRs' role in genetic engineering and biotechnology. It aims to provide pragmatic policy recommendations reconciling sustainability, equitable access, and protection of innovations. Ultimately, the research stresses the importance of a high-minded strategy of intellectual property management that considers the different interests of governments, creators, and the public at large.

INTELLECTUAL PROPERTY IN BIOTECHNOLOGY

ROLE OF IP IN FOSTERING INNOVATION

Intellectual property, particularly patents, significantly facilitates innovation in the biotechnology sector. Patents facilitate R&D through the provision of exclusive rights, which makes it easier for businesses and organizations to raise funds to finance expensive and time-consuming biotechnological research. Through the limited monopoly they have over inventions, patents enable innovators to recover costs and earn money for a period, typically 20 years. Since they are insulated from direct rivalry, this unique monopoly stimulates researchers and companies to invest significant assets into developing fresh technology.[42]

[41] *Myriad Genetics Inc. v Ass'n for Molecular Pathology*, [2013] 569 U.S. [576], [594]

[42] Michael A. Heller & Rebecca S. Eisenberg, 'Can Patents Deter Innovation? The Anticommons in Biomedical Research, 280 Science' (1998).698, 701

Where the fields are biopharmaceuticals, CRISPR technology, and GMOs, patents play an essential role. Powerful patent rights, for example, enabled genetic crops to be developed, for example, Bt cotton with pest resistance. Companies that have patented their GMO technologies, including Monsanto (now part of Bayer), can retain the sole rights to these innovations. These companies could not otherwise have afforded the large costs of developing such technologies—testing, research, and approval by regulatory bodies—without intellectual property protection.[43]

Patents have played a crucial role in ensuring intellectual ownership of ground-breaking discoveries, such as CRISPR, a gene-editing tool that permits precise alterations to DNA. The importance of patents in deciding who profits from such innovations is demonstrated by the patent fight between the University of California and the Broad Institute over the rights to CRISPR technology. In addition to facilitating commercial growth, these patents have produced important breakthroughs in industries including gene therapy, agriculture, and personalized medicine. The expansion of biotechnology startups has been aided by the protection of rights, which have further accelerated innovation in the field.[44]

In addition, patents on vaccines and life-saving drugs have been a significant source of innovation in the biopharmaceuticals sector. It is often contended that patent protection provides a financial reward for the invention of new therapies for diseases that would not be developed otherwise, despite the inflated prices which are charged by the pharmaceutical industry for patented drugs. Drugs such as the cancer drug Gleevec and the breast cancer drug Herceptin were developed under patent protection so that their producers could recoup their R&D costs and profit from their innovation.

ETHICAL AND LEGAL CHALLENGES

Certainly, intellectual property protection in biotechnology has spurred advancements but has raised a number of ethical and legal concerns. Patenting living organisms is the most contentious among them. There has been a lot of discussion among scientists, ethicists, and legislators on patentability of transgenic animals, plants, and bacteria. Patenting of living organisms brings into question control over genetic resources and monopolization of life-essential technologies, which would have profound implications for biodiversity, food security, and public health.

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[43] Doudna, Jennifer A., & Sternberg, Samuel H., *A Crack in Creation: Gene Editing and the Unthinkable Power to Control Evolution* (Houghton Mifflin Harcourt 2017).

[44] Shamnad Basheer, 'Patents, Innovation, and the Role of Intellectual Property in Biotechnology: A Delicate Balance, 26 Nat. Biotechnology' (2008). 377, 378

The degree to which patenting can result in monopolies on life-essential genetic resources is one of the largest ethical issues. Companies holding patents on genetically engineered organisms (GMOs) or gene-editing technologies like CRISPR can charge astronomical fees for use of their inventions, making them inaccessible to poor populations or countries with little financial capability. This monopolization can sometimes result in stifling innovation and competition. Patenting of biopharmaceutical products, genetically modified seeds, etc., has been criticized as allowing the large agribusiness corporations to dominate the food supply and limiting the control of the food supply by individual farmers. They are being forced into further dependency on such firms. Even the access to lifesaving medications has been challenged through biopharmaceutical patenting.[45]

The high cost of patented drugs has been an issue for a long time, particularly in developing countries where access to essential drugs is limited. As an illustration, the Novartis AG v. Union of India case in India highlighted the issue of evergreening whereby drug manufacturers attempt to extend a drug's life on patent through small formulation updates. This practice has been criticized as keeping generic copies of the drugs out of reach and making them expensive for people in need. In addition, there are significant biodiversity-related issues with the patenting of genetic resources.

The ability to patent genes, such as those in microbes, plants, and animals, has been met with fears of biopiracy, or the act where companies appropriate genetic resources from nature without compensating the countries or people who provide them justly. For instance, in India, where the neem tree has been used for centuries because of its medicinal properties, commercialization of the tree's genetic material has become an issue. Ethical issues of ownership of genetic resources and fair compensation was raised by the foreign companies patenting neem's attributes without giving due credit to traditional knowledge. The ethical dilemmas presented by the patenting of human genes are a second issue. The multi-faceted legal and ethical dilemmas surrounding patenting of human genetic material are presented by the case of Myriad Genetics, which patented the BRCA1 and BRCA2 genes responsible for increased breast cancer risk. Because scientists may not be able to freely study the genes without licensing agreements, these patents are argued to hinder access to genetic testing and research by critics.

[45] Yash Pal, 'India's Biopiracy Dilemma: The Case of Neem and the Biotech Industry'(2017) 34 *Int'l. J. Law & Tech.* 453, 455

PATENTS ON GENETICALLY MODIFIED ORGANISMS (GMOS)

Genetically modified organism (GMO) patents make up a sizeable portion of the biotechnology sector. The Agreement TRIPS, a component WTO accords, largely shapes the legal framework for patenting genetically modified organisms. Although TRIPS permits exclusions for moral considerations, such as the patenting of human or animal life forms, it requires member nations to offer protection of patent for inventions, including those in biotechnology. Patents on genetically modified organisms (GMOs), including genetically modified crops, have been a major driver of agricultural innovation by providing businesses with protection and promoting investment in crop enhancement. For example, genetically engineered crops such as Roundup and Bt cotton Businesses like Monsanto (now Bayer) have patented ready soybeans, which have brought significant agricultural advancements.[46]

But the patenting of genetically modified organisms has generated controversy, particularly in relation to its effects on biodiversity and food security. Many contend that monopolization results from the concentration of GMO patents in the hands of a small number of multinational firms, which raises issues with access to reasonably priced seeds and food sovereignty[47]. For instance, smallholder farmers in underdeveloped nations frequently struggle to obtain patented seeds and might have to purchase new seeds every planting season rather than reusing them from a prior harvest. In areas where agriculture is the primary source of sustenance, this financial strain may jeopardize food security. Furthermore, the extensive usage of genetically modified crops has sparked worries about how they can affect biodiversity because GMOs and wild species might unintentionally spread of modified genes.

CRISPR TECHNOLOGY AND GENE EDITING

The specific editing of genes that CRISPR technology enables has revolutionized the biotechnology sector altogether. Scientists can change specific DNA sequences with the assistance of this technology, which may lead to breakthroughs in biological science, agriculture, and medicine. But the rapid evolution of CRISPR has initiated complex ethical and legal debates, notably regarding ownership and patenting. One of the most famous patent battles, for example, was between the Broad Institute and the University of California, both of which asserted ownership of the CRISPR gene-editing method. Because they determine who

[46] *Trade-Related Aspects of Intellectual Property Rights* (TRIPS), WTO, [1999] IP/C/W/161, art. 27(3)(b)
[47] Robert W. Beard, 'The Ethics of Patenting GMOs: A Global Perspective', (2015) 45 Biotechnology Law Review 154, 157

owns the commercialization of CRISPR and related products and who benefits from its progress, these patent disputes matter.

Ethical concerns regarding CRISPR are also increasingly common. The editing of human embryos is one of the most significant issues. While CRISPR technology can be used to cure genetic diseases, others fear that it can be misused for non-clinical purposes, like producing designer babies.[48] The modification of animal genomes is another ethical dilemma. The long-term effects of gene editing on animal well-being and environmental balance are yet to be determined, although genetically engineered animals can contribute to research and agriculture. Tight regulations and ethical guidelines for the use of CRISPR technology have been called for due to these concerns.[49]

BIOPHARMACEUTICALS AND LIFE-SAVING DRUGS

Patents play a critical role in the biopharmaceutical sector by promoting innovation as they protect new therapies and drugs. However, achieving a balance between innovation promotion and ensuring access to life-saving drugs is always a challenge. Patents provide pharmaceutical companies with the financial motivation they require to invest in developing new drugs, but they also provide such drugs with monopolies, which makes them expensive and often unavailable in poor countries.[50] For instance, prior to the availability of generic equivalents, facilitated by the lapse of patent protection, patented HIV/AIDS drugs were a principal disincentive to treatment in the developing world.

The struggle between medication availability and patent protection is best illustrated by the case of Novartis' oncology drug Gleevec. Novartis argued that its creation had saved lives and tried to renew its patent for the drug to prevent generic versions from being sold in India. The Supreme Court of India, however, ruled that the Gleevec patent could not be extended; this was hailed as a public health victory. This case highlights the need for achieving a balance between access to affordable drugs and protection of rights, especially in the situation of life-saving drugs.

COMPARATIVE JURISDICTIONAL ANALYSIS

Intellectual property laws vary extensively across jurisdictions, with industrialized nations generally having more robust IP protection systems compared to developing nations. Focusing

[48] Michael J. McCoy, 'The Monsanto Patent Wars: Biotechnology and the Law'[2012], 53 *Harvard Law Review* 200, 202-206

[49] Nita A. Farahany, 'The Ethical and Legal Implications of CRISPR Gene Editing',(2017) 38 Journal of Law and the Biosciences 225, 228

[50] *Gleevec Patent Decision, Novartis AG v Union of India,* [2013] SCC OnLine SC 2210.

on industrialized nations such as the United States and developing nations like India, this section explores the differences in handling intellectual property in biotechnology and genetic engineering. By considering key case studies, we can understand the different approaches and lessons for future legal regimes.

Intellectual property laws regulating biotechnology and genetic engineering are quite different in jurisdictions, particularly between industrialized nations and developing or poor nations. Industrialized nations, like the United States, often apply a robust IP system with exclusive emphasis on patent protection in a bid to foster innovation. The contentious question of gene patenting has been discussed, for example, in the well-known case of Association for Molecular Pathology v Myriad Genetics, in which the US Supreme Court held that natural occurring DNA sequences are not patentable.[51] This ruling demonstrated a harmonious balance between promoting innovation as well as protecting public access to genetic information.

Conversely, however, most developing nations such as India have implemented intellectual property legislations designed to ensure accessibility and affordability. Section 3(d) of India's Patents Act bars the "evergreening" of pharmaceutical patents, ensuring that minor alterations to existing drugs with little clinical benefit cannot be patented[52]. This policy has been lauded for providing access to low-cost generic pharmaceuticals while ensuring a fair competitive market. This reflects the problem in the biotech field about the governance of international property, wherein developed governments value incentives to innovate while poor countries place public health and equitable access first. In a flexible, integrated framework for TRIPS, provisions like compulsory licensing[53] may overcome such gaps in development in terms of equality among all.

DEVELOPED COUNTRY: MYRIAD GENETICS AND BRCA GENE PATENTS

One notable instance of IP in biotechnology in the US is the Myriad Genetics lawsuit. The BRCA1 and BRCA2 genes, which associates with the high risk of ovarian and breast malignancies, were patented by Myriad Genetics. The corporation was able to dominate genetic testing for these genes thanks to these patents, which gave them a monopoly on testing and raised questions about pricing and accessibility. The Association for Molecular Pathology v.

[51] *Association for Molecular Pathology v Myriad Genetics*, [2013] 569 U.S. 576

[52] The Patents Act 1970, s 3(d)

[53] *Trade-Related Aspects of Intellectual Property Rights* (TRIPS), WTO, [1999] IP/C/W/161, art 31, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C (15 April 1994)

Myriad Genetics case decided by the U.S. Supreme Court in 2013[54] prohibited the patenting of naturally occurring genes.

Because it allowed other laboratories to conduct genetic testing, this ruling was welcomed as a public health success because it opened up the field to greater competition and lower prices. This case states the tension between public access and rights and points to need for clearly defined legal limits to exclude monopolization in the biotechnology industry.

DEVELOPING COUNTRY: INDIA'S APPROACH TO BIOPHARMACEUTICAL PATENTS UNDER SECTION 3(D)

India, on the other hand, has adopted a more cautious stance regarding biopharmaceutical patents, especially in light of Section 3(d) of the Patents Act[55]. New versions of known substances cannot be patented under this provision unless they lead to improved efficacy. The Supreme Court of India rejected the patent for the cancer medication Glivec (Imatinib mesylate) in *Novartis AG v Union of India*,[56] a noteworthy case that illustrates India's strategy, on the grounds that it was only a novel formulation of an already-approved treatment with no appreciable increase in therapeutic efficacy. The Court's ruling upheld the nation's position against the practice of pharmaceutical companies extending their patent spans by making minor changes to already-approved medications, or "evergreening." This ruling guarantees that life-saving medications continue to be accessible and reasonably priced in India, emphasizing the importance of balancing IP protection with public health needs.

LESSONS FROM INTERNATIONAL TREATIES: TRIPS, UPOV AND NAGOYA PROTOCOL

Frameworks for IP protection in biotechnology are provided by international treaties such as the Nagoya Protocol, the International Convention for the Protection of New Varieties of Plants (UPOV), and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).[57] TRIPS ensures that patenting methods are standardized globally by establishing the minimal requirements for IP protection, including biotechnological innovations. However, as demonstrated by India's approach to biopharmaceutical patents, it enables nations to modify their intellectual property laws to meet their evolving needs. Fair benefit-sharing is crucial, particularly in developing nations that supply genetic resources, according to the UPOV and

[54] *Association for Molecular Pathology v Myriad Genetics*, [2013] 569 U.S. 576
[55] *Supra* note 53
[56] *Novartis AG v Union of India*, [2013] 6 SCC 1
[57] *Supra* note 47

Nagoya Protocols, which regulate plant variety protection and access to genetic resources, respectively.

RECOMMENDATIONS

The confluence of genetic engineering, biotechnology, and intellectual property law presents difficulties that need for creative and internationally inclusive policy solutions. These suggestions seek to close ethical and legal loopholes, guarantee the fair application of genetic technology, and align IP regulations with the demands of global development. Intellectual property legislation policy reform is needed for fair access to biotechnology and genetic engineering as it follows a set of values that uphold morality. This especially calls for establishing a balance between innovation and the greater good, where the constraints come in from monopoly and accessibility.

First, there are restrictions to ban "evergreening" wherein countries must make provisions such as Section 3(d) of India's Patents Act restrict patents on incremental developments lacking substantial efficacy.[58] This deters unjustified monopolies but encourages actual innovation. Compulsory licensing systems should be strengthened to make lifesaving medicines and biopharmaceuticals available at a lesser cost in the low-income regions.[59] Second, differential pricing mechanisms must then be used for fair access to critical biotechnological developments like GMOs and CRISPR-based medicines.[60] Such methods can keep the innovation wheel spinning for pharmaceutical corporations while keeping up with marginalized communities.

International agreements, like TRIPS, must provide more room for public health concerns, especially for developing countries.[61] This can be done by inserting clauses that obligate cheap licensing of critical technology and prohibit monopolistic practices by exploiting genetic resources. To ensure that biodiversity-rich countries are protected, the mechanisms of benefit sharing must be applied accordingly, with regard to the Nagoya Protocol.[62]

Global governance systems are complex enough to resolve ethical challenges, but open-access genetic research databases and CRISPR licensing arrangements could democratize access to scientific progress. Universal ethical principles for biotechnological research will also assure the sustainability and inclusivity of this scientific field. Lastly, IP laws need to be aligned with

[58] Patents Act 1970, s 3(d)
[59] Supra note 47
[60] Danzon, Patricia M., et al.: *The Economics of Biopharmaceutical Pricing and Reimbursement* (NBER Working Paper No. 16297. 2010)
[61] Doha Declaration on the TRIPS Agreement and Public Health, World Trade Organization, [2001]
[62] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits, Oct. 29, 2010, United Nations Treaty Series, vol. 30619

the goals that guide the UN's SDGs, such as: global health, food security, and innovation. Policymakers must focus on international cooperation in the way they align IP frameworks so that biotechnological inventions are for the betterment of society at large rather than individualistic groups.[63]

HARMONIZING IP LAWS WITH GLOBAL NEEDS

Aligning IP frameworks with the Sustainable Development Goals (SDGs) of the UN, especially those pertaining to innovation, food security, and health, is the first step. Legislators should create plans to promote biotechnology breakthroughs while guaranteeing that everyone has access to them. To unify IP laws and create exceptions for the public good, international cooperation is needed.

Countries can, for instance, enact clauses like Section 3(d) of the Patents Act of India, which prohibits patents from evergreening by prohibiting small adjustments to current technology that do not result in a discernible increase in efficacy[64]. Furthermore, establishing tiered pricing structures for patented biopharmaceuticals could guarantee affordability in low-income areas without stifling creativity. To further balance IP rights and community requirements, multilateral accords like the TRIPS Agreement should include clear protections for public health.[65]

ADDRESSING ETHICAL AND LEGAL GAPS

Patenting living forms and monopolizing genetic resources are two ethical conundrums brought on by biotechnology and genetic engineering. A worldwide regulatory system is required to monitor the use of genetic technology in order to allay these worries. Ethical guidelines for patenting biotechnological advancements, such as refraining from patents that impede research or worsen inequality, should be included in this framework. A worldwide licensing scheme, for instance, would safeguard patent holders' rights while facilitating open-access research.

Furthermore, protections are necessary to avoid genetic resource monopolization, particularly in emerging nations with abundant biodiversity. A paradigm for fair benefit-sharing between nations that supply genetic resources and those that use them is provided by the Nagoya Protocol on Access to Genetic Resources.[66] This guarantees that biotechnology advancements

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[63] United Nations, 'Transforming Our World: The 2030 Agenda for Sustainable Development', [2015] A/RES/70/1

[64] *Novartis AG v Union of India*, (2013) 6 SCC 1; Section 3(d), Patents Act, 1970 (India)

[65] Trade-Related Aspects of Intellectual Property Rights (TRIPS), WTO, [1999] IP/C/W/161, art 27

[66] Nagoya Protocol: Genetic *Resources and the Fair and Equitable Sharing of Benefits* (2010)

benefit all parties involved, especially indigenous groups whose traditional knowledge supports genetic research.

CONCLUSION

The front line of scientific progress is biotechnology and genetic engineering, which hold vast promise to address challenges such as environmental sustainability, public health, and food security. However, these technologies also pose significant ethical, legal, and societal concerns, particularly with respect to the role of Intellectual Property rights. The report highlights the need to balance stimulating innovation and ensuring equitable access and sustainable use.

The research highlights the way patents on biopharmaceuticals, CRISPR technology, and GMOs stimulate R&D. Intellectual property rights stimulate private investment, leading to revolutionary breakthroughs such as disease-resistant crops and life-saving drugs.[67] Yet due to their expense and monopolistic tendencies, these innovations often make them inaccessible, particularly in developing countries. For instance, the morality of privatizing public genetic resources is challenged by life form patenting.[68]

Comparative analysis of jurisdictions identifies industrialized nations such as the US as using sweeping patent statutes that encourage innovation but potentially close up access and competition.[69] Conversely, third-world countries such as India place restrictions, such as Section 3(d) of the Patents Act, to encourage innovation in the public good and prevent monopolies.[70] These differing perspectives underscore the need for global cooperation to harmonize intellectual property regulations. Models for finding a balance between innovation and the common good are established by multilateral agreements such as the TRIPS Agreement and the Nagoya Protocol.[71] The research also highlights how important it is to integrate ethical and sustainable considerations in IP governance. This balance is achievable with equitable benefit-sharing mechanisms, ethical patenting requirements for living organisms, and protection against monopolies. For the formulation of universally usable standards that advance the SDGs of the UN, policymakers need to prioritize international cooperation highly.[72]

[67] *Diamond v Chakrabarty*, [1980] 447 U.S. 303
[68] *Association for Molecular Pathology v Myriad Genetics, Inc.*, [2013] 569 U.S. 576
[69] *Supra* note 66
[70] *Novartis AG v Union of India*, [(2013] 6 SCC 1; The Patents Act 1970, s 3(d)
[71] *Ibid*
[72] United Nations, *Sustainable Development Goals*, Goal 9: Industry, Innovation and Infrastructure

THE CONCEPT OF "ORIGINALITY" IN STREET ART AND GRAFFITI: A COMPARATIVE ANALYSIS OF THE LEGAL SCENARIO OF UNITED STATES AND INDIA

Dr. Valarmathi R*
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ABSTRACT

This paper examines and looks at how the concept of "originality" is examined and understood in graffiti and street art and the paper highlights upon the importance of graffiti and street art in copyright law in the United States and India. Originality is one of the necessary component and ingredient of copyright protection, however, it is interpreted differently in these two countries based upon varied heritage and cultural backgrounds. In the U.S., the concept of originality focuses more on personal creativity having laws like the Visual Artists Rights Act (VARA) 1990, which protects street artists and graffiti creators. In India, the Copyright Act 1957, is more influenced by the country's rich cultural heritage, where the concept of originality includes both collective art as well as the traditional artworks. The paper discusses is how the laws can be adapted to protect the graffiti and street art while also balancing the various rights of individual artists and how their artwork is influenced from that of the cultural background the artist belongs from. By examining and comparing the approaches of the U.S. and India, the study done in this paper explores how the copyright laws can recognize these art works in a better form highlighting upon their legal, cultural and artistic importance.

KEYWORDS: Originality, Graffiti, Street Art, Creativity, Artistic.

INTRODUCTION

Graffiti and street art which was once considered to be an act of rebellion has come a long way in today's era. While in the past, the various forms of graffiti and street art were often considered as an expression of various illegal activities like for the instances drawing or writing upon walls in the form of graffiti by not taking prior authorization from the owner of such work

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was considered an act of vandalism meaning an act to deface public or private property. This act is often considered by many people an act of nuisance further creating a sign which causes urban degradation. However, with passing time and evolution of new generation the concept of graffiti and street art have gained huge popularity and is considered not as an illegal act but as a legitimate act considering graffiti and street art- a precious form of expression of art.

Graffiti is a form of an artwork which includes many different forms and styles, and it is not just one way of a creation of art but it is an amalgamation of various techniques, designs and expressions whereby each style that is present in the graffiti has its own unique and special appearance and message which makes the artwork a diverse and also a creative movement.[73] Graffiti can be created and made by using variety of tools like spray paint, brushes, stencils, rollers, posters, mosaics and even by installing lighting which widens the range of options for the creators or artists to create different styles and different designs.[74] Street art on the other hand is a type of graffiti which has different methods and uses different tools like that of stickers, posters, free hand drawing, images downloaded from the internet, etc., which unlike that of some graffiti, it completely focuses on being artistic and is further created to be visually artistic which is appreciated by the public.[75]

The Graffiti artists or the writers of graffiti demonstrates and expresses their thoughts and perception towards the society through art and the space where they portray such street art and graffiti also is a space which belonged to them.[76] Through graffiti and street art the graffiti artists or the graffiti writers provides a message to the society about their feelings and opinions on various socio-cultural issues which many times the society do not want to hear and in further ignore as such message is not important for them.[77] The word "graffiti" has indeed a very flexible as well as an unpredictable meaning to the term meaning that if the word "graffiti" is used and also understood in various ways by different people be it scholars or the curators or

[73] Britney Karim, "The Right to Create Art in a World Owned by Others- Protecting Street Art and Graffiti Under Intellectual Property Law", (2019) 23 Intell. Prop. & Tech. L.J. 53 <https://heinonline.org/HOL/NotSubscribed?collection=0&bad_coll=journals&send=1> accessed 15 February 2025

[74] Celia Lerman, "Protecting Artistic Vandalism: Graffiti and Copyright Law*"*, (2013) 2 N.Y.U.J. Intell. Prop. & Ent. L. 295, 298-99

[75] *Ibid*

[76] Bhawna Chauhan, "The Impact of Social-Culture on the Acceptance of Graffiti Art in Delhi" (22 June, 2018) 6 (6) IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL), 319-334

[77] *Ibid*

the media or by the policy makers, each of the group will interprets or reinterprets the terminology in their own way making the meaning of graffiti sometimes unclear.[78]

The question as "Where did the style of graffiti art come from?" might indeed seem quite straight forward however, this question represents ingredients of complex elements.[79] The term graffiti can be referred to various things like that of gang symbols or political images, and in further the word "style" also can be interpreted to have many meanings. But when it comes to graffiti art, the word "style" is considered to have a specific meaning, whereby graffiti art style represents the way graffiti is drawn. For example, through various forms of shapes, colors and techniques which developed a purpose and meaning of graffiti over the time and such unique artistic characteristics of graffiti developed out of the similar roots which has shaped graffiti as a form of expression.[80]

THE IDEA OF "ORIGINALITY": APPLICATION TO STREET ART AND GRAFFITI

Originality plays a vital role in understanding both art as well as intellectual property law. In art, it is the unique and creative expression of an idea in a new way by an artist and for aspect of law, originality plays an important role for copyright protection, determining if a work could be legally preserved under the copyright laws. Some forms of graffiti for example "stickers" generally do not rely upon being created in a specific location but they can be created or made anywhere and further can be placed in public spaces. The question whether the realms of copyright law protects these graffiti art, depends upon the "originality" of such work or artwork and to qualify for copyright protection the work done must be created must portray some level of creativity which if meets with the norms and criteria of "originality", then such work or artwork as graffiti can receive the copyright protection, no matter how or rather where from such work is eventually portrayed or displayed.[81] Graffiti art which is made using the spray paint on canvas or the "aerosol-on-canvas"[82] is very similar to the traditional art forms which clearly coincides with the standards for the copyright protection. However, on the other hand a very simple graffiti for example, any short phrases or short words, may not amount to be

[78] Ondřej Škrabal, Leah Mascia, Ann Lauren Osthof and Malena Ratzke, 'Towards a Cross-Cultural Understanding of Graffiti: Terminology, Context, Semiotics, Documentation' (2023) 35 Graffiti Scratched, Scrawled, Sprayed, De Gruyter

[79] Lisa Gottlieb, *Graffiti Art Styles- A Classification System and Theoretical Analysis* (McFarland & Company, Inc., Publishers 2008), 35

[80] *Ibid*

[81] Nicole Grant, 'Outlawed Art: Finding a Home for Graffiti in Copyright Law' (*SSRN*, 2 March 2012) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2030514> accessed 15 February 2025

[82] The works of "aerosol-on-canvas" are in better words called as "graffiti-style" because a graffiti is usually created in the public spaces and such graffiti works interacts directly with its ambience, while these graffiti artworks are created over a canvas in amuch controlled surroundings

protected under copyright law due to lack of creativity or not meeting the standards of "originality" to meet the legal requisites for copyright laws.[83]

Originality is a very important component for the graffiti artists or the graffiti writers when the artists think regarding the subject matter in what constitutes to make their artwork creative. This whole idea is important to understand the terminology creativity in general as it means that coming up with something new and fresh and unique that is exceptional and stands out from other people's work. So, for graffiti artists, being original is a way to portray their identity, artistic expression as well as their skill.[84] In order to get a work protection under copyright law, such work must be original.[85] Copyright Act 1957, defines Originality - This means that it should be a creation of a person who claims such work and is not copied from some other people. The work also needs to have a certain level of creativity, even if the percentage of such creativity in the work is less. A work cannot be qualified to get protection under copyright if such work does not meet with the standards of originality. To figure out what constitutes a work to be "original" for copyright protection is not always easy.[86] It implies that for a work that has been created by an author should portray some amount of creativity, however, exactly how much of creativity required is difficult to measure or to define, as the level of creativity varies based on different cases and may have varied ways of deciding whether the work of the author constitute original enough to which can be protected.

Graffiti writers give a lot of importance on their names attached to the artwork because it represents not just the creativity of the work but also their identity which is attached to their names. According to the German definition of originality, this concept fits well as it says that for a work to be original, such work must be created by the author[87] and display their exclusive personality which should not be something which is ordinary or generic that anyone could be able to make; portraying how the graffiti writers see their artwork as a personal and very distinct expression of themselves.[88] In further a question that arises as to how the planning and effort is made behind the creation of graffiti which might be helpful in determining the work if it is original.[89] This also includes the decision made by the author with respect to the designing of the artwork, choosing of colors, and deciding and selecting the location; which furthers displays

[83] *Supra* note 79
[84] Marta Iljadica, *Copyright Beyond Law: Regulating Creativity in the Graffiti Subculture* 142, (1st edn., Oxford and Portland, Oregon)
[85] 17 U.S. Code, s 102
[86] *Supra* note 82
[87] In case of graffiti, it is artist.
[88] A Rahmatian, 'Originality in UK Copyright Law: The Old 'Skill and Labour' Doctrine under Pressure' [2013] 44 (1) IIC International Review of Intellectual Property and Competition Law 4,17
[89] *Supra* note 82

the creativity of the artist and the personal input, which does help to prove that the work done by the graffiti artist is original and not just a copy of someone else's work or the work is something which is generic is nature.[90]

The courts have decided that the ingredient originality is very essential for someone who is to be considered as the creator of a work by explaining, "[one] who has slavishly or mechanically copied from others may not be able to claim the authorship"[91] This means that it is only the works which portrays or displays the creativity, and the personal effort can be thus considered to be original, while on the other hand copying something exactly does not count such work to be original. Art includes and involves multiple key elements which guide and show direction to an artist's work- which includes imagination, skill, creativity and originality.[92] Imagination means to come up with new and fresh ideas that have not been used or seen before. For skill, it is an ability to convert the ideas into a tangible medium by using the correct techniques or right tools. The term creativity defines something which permits the artists to combine various elements in an exclusive or through uncommon manner. The term originality defines that the work should be fresh and new and such work should not be copied from other people. All these elements- together contribute to a common aspect of what motivates and encourages people to create art.[93]

When it comes to originality in street art it highlights upon the creativity and expression of the artist and an amalgamation of the personal style of the artist with the social and cultural themes. Legally, the criterion of originality under the copyright law is required to attain protection which further requires a creation of artwork to be independent and not a copy of someone's work and such work should adhere to minimum standard of creativity.[94] However, the street art's unauthorized and collaborative nature often results in complicating this standard whereby works are often incorporated through existing motifs or are responded to their surroundings which raises questions regarding the originality of the work. Regardless of these challenges, street art's involvement with the public spaces and the distinctive visual language that it emphasizes upon has an innovative touch to it and has an original character to such work.[95]

Graffiti and street art works are extremely vibrant and dynamic, and it can also be considered as a visual art form with a constant changing form. The concept of "originality" with respect

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[90] *Ibid*

[91] *SherryMfg. Co. v Towel King of Fla., Inc.* 753 F.2d 1565, 1568, 11th Cir. [1985]

[92] Britney Karim, 'The Right to Create Art in a World Owned by Others- Protecting Street Art and Graffiti Under Intellectual Property Law', HEINONLINE, [2019] 23 Intell. Prop. & Tech. L.J. 53

[93] *Id*

[94] *Feist Publications, Inc. v Rural Tel. Serv. Co.* 499 U.S. 340 [1991]

[95] *Cohen v G&M Realty L.P.* Case No.13-CV-05612 [FB] [RLM] [E. D. N. Y. Jun. 13, 2018]

to graffiti art works is connected to international copyright laws. United States and India both have joined the crucial and important international agreements however, the interpretation, adoption and application made by U.S is different from that of India which is based upon varied cultures and heritage and legal traditions of these two countries.

AGREEMENTS PROTECTING THE ARTWORK OF GRAFFITI

BERNE CONVENTION FOR PROTECTION OF LITERARY AND ARTISTIC WORKS 1886

The Convention discusses the preservation of works and the rights of the authors to such works by providing means to the creators to have control of how the creator's works are used, by whom the work is used and on what term the work is used.[96] The convention is based upon three principles which includes a series of a minimum standard of protection for copyright and the convention also contains special rules for developing countries who are member parties to use them.[97] The United States and India both are signatory members of the convention who have applied and adopted the rules of the convention into their domestic copyright laws.

Under the U.S Copyright Law[98] emphasis upon personal creativity is adopted from the convention. Graffiti works are "original" when such work portrays an artistic effort made by the artist which even if done illegally on a public or private property. The idea of the convention also aligns with the moral rights prescribed under the Visual Artistic Rights Act (VARA).[99]

Under Indian Copyright Act 1957, it highlights upon the convention's requirements however, the adaptation is based upon the cultural and traditional expressions. The approach taken by India appreciates and acknowledges the component of "originality"[100] for works which are also heavily influenced by traditional as well as cultural heritage.

TRADE RELATED ASPECT OF INTELLECTUAL PROPERTY RIGHTS (TRIPS) AGREEMENT 1994

TRIPS Agreement forms a crucial part of the World Trade Organization (WTO) which is built upon the Berne Convention to protect to protect and conserve the intellectual property rights within all the member countries. The agreement also focuses upon making sure that the enforcement of copyright laws is done properly which also includes art works like graffiti and street art. For United States, TRIPS agreement emphasis on protecting original works done by individual creators under the17 U.S.C Section 102(a), which enables graffiti works to attain protection if such work meets the required standards.

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[96] Berne Convention for the Protection of Literary and Artistic Works 1886
[97] *Ibid*
[98] Copyright Act of 1976, 17 U.S.C
[99] Visual Artistic Rights Act 1990
[100] Copyright Act 2013, s 13

The alignment of Indian Copyright Act 1957 with respect to TRIPS agreement supports protection not only the modern expressions of creativity but also the traditional expressions which includes invariably includes graffiti and street art. However, these creativity graffiti work and street art remain as an underexplored areas in Indian jurisprudence.

LEGAL SCENARIO OF CONCEPT OF ORIGINALITY IN US AND INDIA

In New York, the concept and writing of the graffiti during the time of 1980s expanded but after the year 1989, most of the artists stopped graffiti painting on the subways and in further started creating the paintings on the walls and some other surfaces due the reason that the city of New York made it difficult and harder for the artists to have the accessibility of subway yards and also there was an increased penalty and punishments were imposed to keep the system of subway clear and free of graffiti work.[101] At 1980s, graffiti writing and painting and its culture was widely spread to other cities in the United States[102] and also to other countries around the globe, turning out to be a global movement.[103]

In U.S., originality which is one of the key components to get protection under copyright reflects upon the importance of a person's creativity and expression which displays the culture values and the ability of the author to create something new and fresh and which is not copied from someone else's work. An artistic work gets protection under copyright law when such work adheres to the basic legal rules of copyright law. Some of the rule's states that the person or the creator who creates the work is the only person who is to be considered as the author of such work. Further the work must be original which means that the work is created independently and is not a copy of someone else's work- the work reflecting minimum standard of creativity and finally the work must be fixed in a tangible medium which can be seen or shared.[104] The creative artwork must be created or made by the author, and such creation of work must be in existence which is stable enough to be either seen or be shared. It means that the artwork should not be present or should not exist for a short tenure, but such work should meet the minimum standard and be either in writing or painted whose existence for longer tenure which the public can experience in future.[105] If graffiti work and street art follow the basic rules to be protected by copyright like the artwork being original and such work is fixed

[101] Enrico Bonadio, *The Cambridge Handbook of Copyright in Street Art and Graffiti* (2019, Cambridge University Press) 105
[102] Roger Gatsman and Caleb Neelon, *A History of American Graffiti,* Collins Design (2011, Collins Design)
[103] *Supra* note 101
[104] 17 U.S.C 2013, s 102 (a)
[105] 17 U.S.C., s 101

in a tangible medium then just like any other work, graffiti work shall also be granted protection under copyright law.[106]

In India, the Copyright Act 1957, the concept of art and its essence is generally an amalgamation of the ideas related to traditional cultures and the creativity of artists. Many artists take motivation and inspiration from the country's rich heritage and history, however, apart from the references taken from India's history, it is also the blend of artists personal styles and creative ideas which they express in the form of their work. In case of graffiti and street art which are generally, a creation of artwork done on the premise of walls or surfaces of public spaces, usually without taking the owner's consent, the enforcement of law fails to provide a clear consistency and ways of handling and dealing with such situations. Arts which are displayed in public streets are generally linked to either religious beliefs or spiritual assumptions, especially where such traditions are norms are common like places associated with homes or neighborhoods.[107] Within these homes and neighborhoods, there are certain cultural and traditional practices which are followed, and the source of such practices is deeply embedded in the community's way of their lives. For example, muggu, or muggulu (in plural), is one of a traditional practice which is found in southern parts of India is a practice of creating beautiful floor designs with decorative patterns which are made temporarily, often by using materials like rice flour or chalk powder.[108] In some areas it is also called as "Kolam". Muggu can be more than just an art – it brings together local knowledge, cultural traditions and practices and a unique visual style which makes it an important part for the community's identity which is equally part of their daily life.[109] Street art or graffiti artwork might develop a motivation from such traditional and cultural values and practices incorporating similar themes, or styles which resonates with the local and traditional cultures. It is this connection which help to maintain a sense of belonging as well as continuity while simultaneously adding a personal touch to public spaces.

LEGAL DEFINITION AND ANALYSIS OF ORIGINALITY IN US

[106] Celia Lerman, 'Protecting Artistic Vandalism: Graffiti and Copyright Law' (22 April, 2013) 2 (2) NYU Journal of Intellectual Property and Entertainment Law <https://jipel.law.nyu.edu/vol-2-no-2-2-lerman/#_ftnref55> accessed 15 February 2025

[107] Nandita Saikia, 'The Cambridge Handbook of Copyright in Street Art and Graffiti' in E. Bonadio (ed) (2019) 272

[108] Kaustav Chatterjee, 'Performing muggu: Art where home and street meet' (*Garland Magazine,* 1 March 2024) <https://garlandmag.com/article/muggu/#:~:text=Muggu%20or%20muggulu%20(plural)%20is,local%20knowledge%20and%20visual%20vocabulary> accessed 15 February 2025

[109] *Ibid*

Various forms of street art like that of murals, stickers, posters and art made out from different or from abandoned objects, are artistic works which are protected under the U.S copyright law.[110] This means that the work must evolve from the creator's or artist's own efforts and hard work and should not be an outcome of copied work from someone else. Originality means that the work must portray a certain level of creativity and skill however, it does not mean that the work needs to be different or unique. The term originality under the copyright law, is one of the basic requirements which determines whether a work qualifies to get a protection under the copyright law. Graffiti indeed satisfies the description of "pictorial and graphical works"[111], however, it has less clarity whether all the types and forms of graffiti satisfies the standard of "original works of authorship,"[112] which is required by the U.S. Copyright Act.[113] However, the graffiti paintings with bright and popping colors, intricate designs and creative pictorial scenes satisfies the standard required the work to be original and hence are protected under the copyright law.[114] While most of the graffiti and street art are to be considered as original work because such work display the artist's creativity and personal style attached to the art work, however, works like tags[115] and throw-ups[116] in most circumstances lacks the creativity which is not considered to be truly an original work.[117]

The moment we look beyond the assumptions and stereotypes and in further learn and understand the subcultures, it becomes more clear to understand that the graffiti writers spend months and years to create their own lettering style which is creative and unique and such lettering styles require rigorous practices for hours to become master in such art work, even though the final work of graffiti might seem to be shabby to the public.[118]The display of graffiti artwork with respect to its style and pattern of letters, often makes it hard and difficult to read, especially for those people who are not familiar and accustomed with graffiti works or the cultural background of graffiti works.[119] The graffiti artwork is different from various other

[110] 17 U.S. Code, s 102(a)(5)
[111] *Ibid*
[112] *Id*
[113] *Supra* note 82
[114] *Ibid*
[115] Tags are fashionable formats of signatures.
[116] Throw-ups more simple graffiti pictures and designs which are made with an outline in Colour and Often a singe layer of colour is used to fill the graffiti. It is more of a simple and quick bubble-letter design.
[117] *Supra* note 101
[118] Mark Halsey and Alison Young, 'Our desires are ungovernable: Writing graffiti in urban space' (2006) 10 (3) Sage Journals, Theoretical Criminology, 275, 294
[119] Enrico Bonadio, *Copyright in the Street: An Oral History of Creative Processes in Street Art and Graffiti Subcultures* (2023) 30

forms of street art, like memorial murals, which portrays a very comprehensible and unambiguous words, making it easy for the public to read and understand.[120] Hendrick ECB, street artist, famously known for his style of creating large scale portraits and together with Indian artist Anpu, they created the tallest mural of Mahatma Gandhi in India at the Delhi Police Headquarters, which is over 150 ft tall and it is widely recognized as the tallest mural in India.[121] The mural represented and also displayed the progress in how art and the government can work and function in harmony together. A project of such massive scale and size proved that the Indian public institutions are willing to embrace and accept new and creative ideas.[122] This creation was not just a work of art but also the creation of mahatma Gandhi's mural was created to display honor and gratitude to someone who made their message communicated unambiguously for everyone in the society.

In *Reece v. Mark Ecko Unlimited,*[123] the artist named Reece contended and filed a complaint against a video game company for using a stylish version of the word "Dip" which was in use in their graffiti-themed game. Reece who had already created the work in 1972 and registered such work under U.S Copyright Office, proved that creative, stylish lettering indeed can be considered as an original work which is enough to be protected by the copyright law.[124] Judge Debra Freeman confirmed that the word "DIP" WAS Reece's "tag" as that of a graffiti artist, meaning that he has used the word "DIP" as his personal signature or an identifying mark. Although Judge Freeman did not find any type of copyright infringement because of the differences between that of Reece's tag and the image used in the video game, Judge Freeman listed some important points suggesting that styled tags and throw-ups can have originality enough to meet the requirements for copyright protection.[125] Judge Debra Freeman has confirmed through the findings from the Reece's case that creative lettering inclusive of stylish tags and also throw-ups, can be considered an original work and hence can be given protection under copyright law.[126]Graffiti tags can further be compared to typefaces, however when it comes to typefaces, they cannot be copyrighted under the copyright law in the United States of America.[127] In case of typefaces, it has been argued that a unique or creative form of typefaces

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[120] *Ibid*

[121] Akshat Nauriyal, 'India's Tallest Mural: Gandhi at the Police Headquarters', Start Foundation <https://artsandculture.google.com/story/india-s-tallest-mural-gandhi-at-the-police-headquarters-st-art-india/-AVxwQKPKx0A8A?hl=en> accessed 15 February 2025

[122] *Id*

[123] *Reece v Mark Ecko Unlimited* 10 Civ. 02901 (JSR) (DF) S.D.N.Y. [August 19, 2011]

[124] *Supra* note 101

[125] *Ibid*

[126] *Ibid*

[127] *In Eltra Corp. v Ringer* 579 F. 2d 294, 4th Cir. [1978]

which meet the standard of creativity and skills, deserves a copyright protection because of their artistic designs can be seen as entirely separate from that of their basic function as text styles.[128]

The conflict between graffiti and copyright law often raises the questions as to graffiti artists on their graffiti work holds the exclusive bundle of rights under copyright law?[129] Generally, the copyright law grants exclusive bundle of rights to the artists[130] for the works which are copyrightable in nature.[131] Since many of the graffiti artworks are created not just by one artist but by multiple artists, there are possibilities whereby it could create legal challenges if the copyright protection is given to such multiple artists. The main issue here would be how one graffiti artist could be able to use their rights to have control over the creative work when other artists have also contributed to the artwork.[132]

In the case of *Villa v. Pearson Education*,[133] the plaintiff, Hiram Villa who sued the defendants Pearson Education and Brady Publishing as they have used a copy of plaintiff's work in a book without seeking prior permission. The court held that if there was a copyright infringement it would depend upon facts which are specific and under what circumstances the mural was created.[134] The court in this case, acknowledges that this was an important and crucial factual question, a case though not directly dealt about the property rights of the owner, however the court was willing and agreed to recognize that a graffiti artist's rights under Section 106 of the U.S. Copyright Act.[135]

LEGAL DEFINITION AND ANALYSIS OF ORIGINALITY IN INDIA

The concept of culture and society when it comes in relation to literature and anthropology has always been a debatable topic of discussion among various theorists, sociologists, anthropologists and various literary critics.[136] Robert Lowie (1917) argued that culture is not something which can be inherited through the process of race or genes, but it can be learned through social communications and interactions as well as through differential social

[128] Jacqueline D Lipton, 'To © or Not to ©?, Copyright and Innovation in the Digital Typeface Industry' [2009] 43:143 University of California, Davis, 155-162 <https://lawreview.sf.ucdavis.edu/sites/g/files/dgvnsk15026/files/media/documents/43-1_Lipton.pdf> accessed 15 February 2025
[129] *Supra* note 82
[130] Copyright Act, 17 U.S.C., s 106
[131] 17 U.S. Code, s 102
[132] *Supra* note 82
[133] *Villa v Pearson Education* 03 C 3717 N.D. Ill. [December 8, 2003]
[134] *Ibid*
[135] *Supra* note 82
[136] *Supra* note 77

experiences.[137] As we travel through the cities by various modes of transport, be it bus, train, cars or on foot, graffiti can be seen and displayed almost in every corner. However, for many people the concept of graffiti is just a mere glimpse of colors or a sign of any anti-social behavior which is linked to that global subculture. Despite this mindset of certain group of people in the society, graffiti do play an important and crucial role in the urban landscape by adding a life and soul to the city and in further shaping how we can perceive that space by offering a new way of thought-provoking ideas about how we can engage with the cities and in the process reimagine the urban environment.[138]

Originality in India under the Act,[139] is the main law which protects and safeguards the creative works in the country. Copyright is given to "original" literary, dramatic, musical, and artistic works under Section 13(1)(a) of the Act.[140] But the Act does not mention a detailed definition as what "originality" means. It is the interpretation and decisions made by the courts which has stated as what qualifies to be "original" which is based upon case to case.

According to Copyright Act 1957,[141] the copyright protection is applicable to original literary and artistic works. However, when it comes to the definition of a "literary work" in the Act under section 2(o), it is vague because it only lists out the components like that of computer programs, tables, and compilations which includes compilation of computer databases. On the other hand, Section 2(c) of the Act, provides a clear list of "artistic works", where components like paintings, sculptures, photographs, works of architecture and various other forms of artistic craftsmanship are included. All these works are eligible to get protection under Act if these works are original.[142] Street art and graffiti it often includes the elements of both visual and text, and all these elements can be artistic or written in a stylish manner. Depending upon the content, a specific piece of graffiti or street art could be classified under the Copyright Act, 1957 as either a work of literary nature or in simple "literary work "or an "artistic work". As per section 13(1)(a) of the Act if the work fulfills the standard of originality and is new and original, then such work is eligible for copyright protection, however, section 13(3) specifies that protection under copyright is not applicable to films or sound recording that infringe upon the copyright of dramatic, literary or musical works.[143] The Copyright Board in New Delhi

[137] Venu Gopal and Dr. Mutyala Suresh, 'A Socio-Cultural Study Of Delhi By Khushwant Singh' [2022] 13 (9) Journal of Pharmaceutical Negative Results
[138] *Supra* note 77
[139] Copyright Act 1957
[140] Copyright Act 1957, s 13 (1)(a)
[141] *Supra* note 101
[142] *Supra* note 100
[143] *Ibid*

stated that the copyright law does not depend on how good or how high the quality of a work is but the copyright law is very clear that work should not be a "copy" of another person's work, which automatically qualifies a work to avail copyright protection.[144]

The Copyright Act of 1957 does not provide clear definition as to what makes a work "original". Indian courts through various decisions have created their own interpretations and suggested that a work must portray a "flavor of minimum requirement of creativity" to be eligible for copyright protection.[145] In most of the times, graffiti and street art could be qualified for protection under the copyright law but these artworks i.e., the graffiti and street art are often created without giving much attention and concern for the copyright rules.[146] The Act, has indeed been influenced by the Western cultures and ideologies which has been focused on individual creativity and originality.[147] But in reality keeping the traditions and culture of India, to simply, focus on individual's creativity does not fit with the rich Indian traditional art as reuses of certain common patterns and designs are often used whereby the "originality" under Indian art usually means to understand that it is a work which is created by the artist, whereby the ideas or the patterns are not completely new.[148] The Division Bench of the Delhi High Court held in the case of *Camlin Pvt Limited v. National Pencil Industries* that when it comes to "originality" it refers not only to the term 'Novelty' but also to the work in question which has originated with its author or authors.[149] Hence for the judicial authorities in India, to have a copyright over a work and to get protection of copyright under the copyright law, it is of no importance whether the work is common[150], provided that the work has not been a copied version of someone else's work or copied from another author.[151]

When it comes to the jurisprudence and legal ideologies about the creativity of the work, it suggests that a work does not get a guaranteed protection under the copyright just because such work was created by an author independently. The work that is created by an author needs to have something extra i.e., creative approach, portrayal of skill and the "originality". This means that the work whether a work of art, or writing or painting, must reflect originality which is beyond the basic creation. To simply declare that the work has evolved from the author is not just enough but the distinctiveness and the creative aspect that make the work stand out from

[144] *Enercon Systems Pvt. Ltd. v Registrar of Copyrights* MANU/CP/0012/2008 [4 July 2008]
[145] *Eastern Book Company and Ors v D B Modak & Anr.* MANU/SC/4476/2007 [2007]
[146] *Supra* note 100
[147] *Ibid*
[148] *Ibid*
[149] *Camlin Private Limited v National Pencil Industries* MANU/DE/1324/2001 [2001]
[150] *Mohd. Naseer v Iqbal Hussain, Copyright Board, Bangalore* MANU/CP/0006/2008 [2008]; *supra* note 27
[151] *Fateh Singh Mehta v O.P. Singhal & Ors* MANU/RH/0003/1990 [1989]

the rest of the existing works is the one that qualifies the standard of originality and avails protection under the copyright law. For graffiti and street art, the standards for getting protection under the copyright law, however, might not be the same. For graffiti although there can be the originality existing, however, for street art, it is different. Graffiti is often judged as more closely associated with individual identity and style whereby originality becomes the key to its meaning and value. For street art, based upon the views of the society it is more accepted under the Indian culture as it serves a broader and wider community purpose. Hence for graffiti a higher standard of creativity is expected as compared to that of street art.[152]

SUGGESTIONS

The legal reforms in India with respect to the copyright laws requires a change to protect and secure graffiti art work and street art. These modifications should include by providing with the protection under copyright laws once the work meet the minimum required standard of "originality". Once an official copyright protection is prescribed for graffiti works and street art, then such recognition develops enthusiasm and motivation for the artists who feel encouraged to create their work without the fear of their work being copied or misused by others. Such changes and reforms are required which provide unambiguous rules which solves confusions and disagreements about who is the owner of the rights of such work, which further makes the procedure fair for all the parties involved. It is extremely crucial and important to create an open communication between the artists, and policymakers to support and understand the cultural aspect of graffiti works and street art with open mind and forward thinking. These discussions ensure the interest of both the artist's as well as that of the policy makers that graffiti art should be recognised and acknowledged as a valuable and precious cultural contribution rather than an act of vandalism. There can be public spaces specifically assigned to display street art through which artists can freely express their ideologies through their creative work to share important messages to the society. By conducting public awareness campaigns, the cultural significance and the original creativity of the graffiti artists could be highlighted as a form of an artistic expression rather than being seen as an act of crime.

CONCLUSION

The analysis made in this paper, has multiple facets of the concept of originality in graffiti and street art, which has emphasized the artworks unique and dynamic dovetail with artistic and cultural frameworks. These artworks which is embedded in personal expression and

[152] *Supra* note 100

community narratives, portray a challenge on the conventional notions of authorship and creativity. The concept of ‘originality’ is often manifested through the innovative styles and techniques in correlation with the urban spaces which reflects both an individual’s vision and a collective cultural identity associated with such artwork.

Graffiti and street art are not just an illumination but, they are influential and powerful mediums of communication, storytelling and at times use this form of works as a medium of protest. The research in this paper accentuates that these artworks create an ambiguous dichotomy between the refined, mainstream art and the grassroot, community-driven creativity, emphasizing changing landscape of creativity and the progressive development of creativity in today’s contemporary culture.

An important conclusion from this study is the binary role of originality in graffiti and street art as a flag bearer of individual artistry and as a product of shared cultural environments. On one hand where the graffiti work prioritizes the creativity and personal identity, on the other hand street art often tends to the form of visual representation that resonates the cultural background of the community, which adds a unique contribution of both forms of artworks to urban spaces and intercultural expressions.

THE GHOST IN THE MACHINE: NAVIGATING AI INTELLECTUAL PROPERTY RIGHTS IN HONG KONG AND BEYOND

Pang Chau Sheung Rosa*
Pooja Shukla**

ABSTRACT

With the New Age of AI and technology, as much as new opportunities have emerged, so have the challenges, especially in the field of copyright law internationally. The paper examines the existing legal framework and concepts built around copyright law internationally by identifying the missing links and proposes the required areas where reforms have become crucial considering the advancement of AI generated content. The paper also discusses a series of case studies which highlights the impact of AI in copyright law as well as the recent legal updates in Hong Kong. These developments are at par with international standards and exhibit how the approach that Hong Kong uses aligns with those of the international jurisdictions. The paper also examines the need to bring more legal clarity so that ethical considerations like ensuring fair usage and preventing discriminatory outputs are also included. This can only be achieved by having a clear and comprehensive ethical code intertwined into a strong legislative framework which addresses all the issues pertaining to AI so that the intellectual property rights benefits can be maximised. Further, the paper also purports to provide insights to regulators, policymakers and legal professionals as a guide into the ever-evolving landscape of AI so it properly strikes the right argument to maintain a healthy balance between ethical standards, the legal requirements of copyright protection and economic interests at large.

KEYWORDS: AI, Hong Kong, Authorship, Ethical, Legal, Stakeholders.

INTRODUCTION

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AI is not only revamping businesses and trades; it's reworking the pace and spirit of innovation. No one will cast a doubt on the immense effectiveness and efficiencies AI has created in different sectors. With great opportunities come great challenges, especially in the intellectual property ownership and rights. Let say if AI systems create some works based on their self-learning, should the AI be regarded as the author and hence be given ownership rights.[153]

Hong Kong has been renowned in her innovation and technological advancements. The Innovation, Technology and Industry Bureau ("ITIB") listed new industrialization as a permanent policy function and focus in July 2022 for the promotion of further development of innovation and technology. The Hong Kong Innovation Development Plan Technology Development Blueprint (Innovation and Technology Blueprint) is released by ITIB in December 2022; establishing a clear development path and developing a systematic strategic plan for innovation and technology in Hong Kong. According to the said Blueprint, Hong Kong is under four major development directions, namely "strengthening the innovation and technology ecosystem and promoting Hong Kong's new industrialization"; "expanding innovation and technology talent pool to create strong growth momentum"; "promoting digitalization to develop the economy and build Hong Kong into a smart city"; and "proactively integrating into the overall urban development situation" so as to strengthen the city's function as a bridge between Mainland China and the rest of the world, thereby accelerating the formation of "high-quality new productive forces" for Hong Kong's advantages. In the process of implementing the Blueprint, the Hong Kong government SAR has to maintain the equilibrium between AI development and intellectual property right protection.[154]

In response to address these issues, the government of Hong Kong SAR initiated a progressive public consultation to revise the Copyright Ordinance (Chapter 528) to take into account the consequences of AI-generated content. The consultation examines pressing issues such identifying AI-generated content, copyright infringement liability, new text and material mining (TDM) exceptions and the wider implications for AI technology development. These deliberations echo with global discussions with countries facing similar challenges and opportunities involving the European Union, the United States and Mainland China.[155]

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[153]Alesia Zhuk, 'Navigating the Legal Landscape of AI Copyright: A Comparative Analysis of EU, US, and Chinese Approaches' (2024) 4 AI and Ethics 1299 <https://doi.org/10.1007/s43681-023-00299-0> accessed 20 December 2024

[154] HK Intellectual Property Department, 'Public Consultation on Copyright and Artificial Intelligence' (2024) <https://www.ipd.gov.hk/en/copyright/current-topics/public-consultation-on-copyright-and-artificial/index.html> accessed 20 December 2024

[155] UK Government, 'Copyright and Artificial Intelligence' (2024) <https://www.gov.uk/government/consultations/copyright-and-artificial-intelligence> accessed 20 December 2024

Adopting knowledge in the constantly evolving fields of artificial intelligence and intellectual property is both necessary and required for governments, attorneys, and entrepreneurs. This paper investigates into these intricacies to provide new perspectives and practical propositions for integrating AI innovation with IP protection, helping to build a resilient and forward-looking intellectual property regime and create an environment in Hong Kong and beyond so that innovation and ethics can co-exist harmoniously.

HISTORY OF AI AT A GLANCE

AI has been both a popular expression and an enchanting legend since the mid of the 20th century when idealists such as Alan Turing and John McCarthy laid a solid foundation for the technological revolution afterwards. In AI, the Turing test is an experimental technique used to assess a computer's capacity for human-like thought. The Turing test bears the name of Alan Turing, a British computer scientist, cryptanalyst, mathematician, and theoretical biologist. Then, in 1956, McCarthy devised the term "artificial intelligence" at the Dartmouth Conference, a pivotal moment that ignited the AI flame.[156]

In these early days, AI was about pioneering algorithms and creating the first programs that could play chess and solve mathematical puzzles.[157] However, the path wasn't always smooth. The 1970s and 1980s saw the "AI winters," periods marked by dwindling funding and interest due to unmet expectations. Yet, the dream never died. Researchers soldiered on, making strides in machine learning, neural networks, and expert systems.[158]

AI saw a renaissance in the 1990s and 2000s, driven by advancements in computing process and power, the accessibility of enormous datasets and more intelligent algorithms. Remember IBM's Deep Blue, a chess expert system running on a unique, purpose-built IBM supercomputer. It was the first machine to defeat the current world champion and the first to participate under regular time management. In 1996, it played its first six-game match against world champion Garry Kasparov, losing 4-2. In 1997, he was promoted to a six-game rematch and defeated Kasparov with two wins and three draws. The success of Deep Blue is regarded as a landmark in the AI history which has been widely reported in books and movies. In the

[156] John McCarthy, Marvin L. Minsky, Nathaniel Rochester, and Claude E. Shannon, 'A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence' (1956) 27(4) AI Magazine 12 <https://ojs.aaai.org/aimagazine/index.php/aimagazine/article/view/1904> accessed 20 December 2024

[157] Stuart Russell and Peter Norvig, Artificial Intelligence: A Modern Approach (3rd edn, Pearson 2016) <https://people.engr.tamu.edu/guni/csce421/files/AI_Russell_Norvig.pdf> accessed 20 December 2024

[158] Daniel Crevier, AI: The Tumultuous History of the Search for Artificial Intelligence (Basic Books 1993) <https://www.researchgate.net/publication/233820788_AI_The_Tumultuous_History_of_the_Search_for_Artificial_Intelligence> accessed 20 December 2024

2010s, there came the deep learning, neural networks, bringing forth or reforming realms such as image and speech recognition, self-driving automobiles, and so on.[159]

Nowadays, AI is everywhere and has become part of our living. For example, with the help of AI voice assistant, it is possible to control electronic appliances from anywhere in the home. The decision we have to make today is not whether we should use AI, but which AI is the best. People ask questions like "What's the best assistant, Google, Siri, or Alexa?" The agile development of AI has improved its quality but also thrown challenges, in particular, in the field of intellectual property.[160]

SYNOPSIS OF AUTHORSHIP RIGHTS AND COPYRIGHT LAW

Intellectual property rights are often considered champions in the legal sector because they serve to protect creations and innovations of human beings. Since people can use many forms of intellectual property rights, for future financial benefit and corporate expansion, innovations and creations are frequently associated with economic progress.[161]

Copyright law gives authors the exclusive rights to copy, distribute, exhibit, perform, and develop derivative works based on their works of art. Furthermore, copyright protection begins immediately at the time of creation and continues throughout the lifetime of the author plus an extra 70 years (U.S. Copyright Office, 2021).[162] The general norm is that copyright is valid for the author's lifetime plus an additional 50 years in most nations. This holds true for works of literature, theater, music, and art. On December 31 of the final calendar year of the protection period, copyright will specifically expire. The copyright of a book would thus expire on December 31, 2024, if it was written on May 1, 1927, and the author passed away on June 15, 1974.

The main purpose of copyright law is the balancing of interests. In addition to providing the public with access to creative content through mechanisms like fair use and the public domain, it guarantees that authors receive the credit and financial compensation they are due. Limited unrestricted use of copyrighted content for research, teaching, and critique is allowed under

[159] Yann LeCun, Yoshua Bengio, and Geoffrey Hinton, 'Deep Learning' (2015) 521(7553) Nature 436 <https://doi.org/10.1038/nature14539> accessed 20 December 2024

[160] Ian Goodfellow, Yoshua Bengio, and Aaron Courville, Deep Learning (MIT Press 2016) <http://alvarestech.com/temp/deep/Deep%20Learning%20by%20Ian%20Goodfellow,%20Yoshua%20Bengio,%20Aaron%20Courville%20(z-lib.org).pdf> accessed 20 December 2024

[161] WIPO, World Intellectual Property Report 2020: The Role of Intellectual Property in Sustainable Development (2020) <https://www.wipo.int/en/web/sdgs> accessed 20 December 2024

[162] US Copyright Office, Compendium of U.S. Copyright Office Practices, Third Edition (2021) <https://www.copyright.gov/comp3> accessed 20 December 2024

fair use.[163] But here's the twist—AI is shaking things up. AI systems can autonomously generate content, raising mind-bending questions about authorship and ownership. With a view to providing sufficient protection to both innovation and intellectual property rights, the legal mechanism must match with the AI advancement.[164]

RELATIONSHIP BETWEEN AI AND COPYRIGHT LAW

TRADITIONAL APPROACHES OF AUTHORSHIP AND OWNERSHIP

Copyright law has always been established on the idea that a copyrightable content is a creation of a person who, as an author, has the exclusive right to deal with the work such as copying, distributing, displaying, performing and even selling, mortgaging, licensing and so on. The crux is the authors are being recognized as the owners and as a result can derive financial gains from the works and, at the same time, the community at large can have fair use as prescribed by the law.

In this framework, authorship is deeply intertwined with human creativity and ingenuity. Creators invest time, skill, and energy to create a work, and copyright law protects these investments by granting them exclusive rights. Due to this traditional thinking, we have firmly believed that a work which can be given copyright must be created by a human being.[165] [166]An author gives up one's time, skill, and effort into creating a work, and copyright law serves to protect these investments by granting exclusive rights to the author.[167]

HOW AI GENERATED CONTENT CHALLENGES THESE APPROACHES

AI has now changed the rules of the game. AI generated content is throwing these traditional approaches of authorship and ownership into disarray. AI systems can autonomously generate text, images, music and other creative content. These creations often display complexity and originality that rival human-made works, leading to significant legal and ethical dilemmas.[168] Identifying the author is one of the most difficult tasks. AI cannot be regarded as a "author" in the conventional sense as it lacks consciousness and intention. This begs the crucial question:

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[163] Lawrence Lessig, Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity (Penguin Press 2004) <https://www.americansforthearts.org/by-program/reports-and-data/legislation-policy/naappd/free-culture-how-big-media-uses-technology-and-the-law-to-lock-down-culture-and-control-creativity> accessed 20 December 2024

[164] Alesia Zhuk (n 1).

[165] HK Intellectual Property Department, Copyright Ordinance (Cap 528) (2024) <https://www.ipd.gov.hk/en/copyright/index.html> accessed 20 December 2024

[166] HK Intellectual Property Department (n 2).

[167] European Parliament, 'Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on Copyright and Related Rights in the Digital Single Market' (2019) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0790> accessed 20 December 2024

[168] Alesia Zhuk (n 1).

who is the owner of the copyright to AI-generated works? Is it the people who create the AI, the people who enter data and control its actions, or the organizations that possess the AI systems?[169]

Moreover, AI-generated works challenge the very idea of originality. According to copyright law, a work must be unique in order to be protected. However, since AI systems often draw from vast datasets, there's a concern that AI-generated content might heavily rely on existing works, potentially leading to issues of copyright infringement.[170]

CASE STUDIES: "THE NEXT REMBRANDT" AND OTHER NOTABLE PROJECTS

Step into the world of "The Next Rembrandt"—a remarkable AI art project that blends technology and creativity. This collaboration between ING Bank, Microsoft, and a team of art historians and data scientists aimed to resurrect the style of the legendary Dutch master, Rembrandt. Using machine learning algorithms to analyze Rembrandt's body of work, the AI generated an original painting that closely mimics the artist's technique, composition, and style.[171]

This project ignited a firestorm of debate within the art and legal communities. Deeply troubling issues regarding authorship and the applicability of copyright laws to AI-generated art are brought up by the breathtaking fusion of technology and artistic expression. Who owns the copyright to such a creation? Should these works be protected by the existing intellectual property rights framework?[172]

Other groundbreaking projects include OpenAI's GPT-3, which generates eerily human-like text based on prompts, and Google's DeepDream, which creates surreal, dreamlike images by enhancing patterns in existing pictures. These initiatives demonstrate AI's enormous creative potential and the pressing need to update copyright legislation to take into account the realities of AI-generated work.[173]

To guarantee that creators' rights and AI's creative potential are completely safeguarded and balanced, the legal framework must be modified in accordance with the development of the technology in use.

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[169] US Copyright Office (n 10).
[170] UK Government (n 3).
[171] ING, 'The Next Rembrandt' (2016), accessed 20 December 2024, <https://www.nextrembrandt.com>.
[172] Sarah Stephens, 'Protecting "The Next Rembrandt": Copyright in AI-Generated Works' (IAMSTOBBS, 2021) <https://www.iamstobbs.com/opinion/protecting-the-next-rembrandt-copyright-in-ai-generated-works> accessed 20 December 2024
[173] Alexander Mordvintsev, Christopher Olah, and Mike Tyka, 'Inceptionism: Going Deeper into Neural Networks' (Google Research Blog, 2015) <https://research.googleblog.com/2015/06/inceptionism-going-deeper-into-neural.html> accessed 20 December 2024

LEGAL FRAMEWORK AND REFORM

REVIEW OF HONG KONG'S CURRENT LEGAL FRAMEWORK

The legal framework for intellectual property in Hong Kong is strong and extensive. The foundation of copyright protection is the Copyright Ordinance (Cap. 528), which protects a vast variety of works, including sound recordings, motion pictures, broadcasting, printing arrangements, and literary, artistic, musical, and dramatic works.[174]

Along with moral rights to safeguard one's reputation and personal assets, the law gives artists the exclusive authority to copy, distribute, perform, and exhibit their works.[175] Particularly, section 11(3), stipulates that the author is the one who made the required preparations for the creation of the work in the case of computer-generated works.

However, this framework has limitations, especially when it comes to authorship, ownership, and responsibility, as revealed by AI-generated content. Despite their coverage, current legal laws fall short in addressing the complexity of AI technology. To guarantee legal certainty and protection for all pertinent stakeholders, clearer advice is required.

RECENT LEGAL DEVELOPMENT AND PUBLIC CONSULTATION

To address these challenges, the Hong Kong government SAR issued a public consultation on 8 July 2024 to modernize and better adapt the Copyright Ordinance to AI-generated works. This consultation mainly revolves around four key issues:

- Protection of AI-generated works by copyright: Examine if additional legal measures are required to address the problem of defining authorship and ownership of works produced by AI.
- Liability for copyright infringement of works generated by AI: Examine liability issues and whether current infringement provisions are applicable to various scenarios involving works generated by AI.
- Potential introduction of specific copyright exemptions: To strike a balance between the interests of copyright owners and users and enable the use of copyright-protected resources in AI development, take into account Text and Material Mining (TDM) exceptions.
- Other issues related to generative AI: Exploring ethical implications, such as the creation of deepfakes, and the need for transparency in AI development.

COMPARISON WITH INTERNATIONAL STANDARDS

[174] HK Intellectual Property Department (n 2)
[175] *Ibid*

When compared to other major economies, several key points emerge:

- European Union (EU): AI-generated works that satisfy the requirements of originality and human authorship are recognized as copyrightable under the EU Copyright Directive (2019). In order to promote the development of AI, the EU additionally takes into account particular exceptions for text and data mining.
- United States (US): Certain uses of copyrighted content are permitted in the US due to its expansive fair use concept. A more conventional approach is highlighted by the US Copyright Office's declaration that works produced without human authorship are not copyrightable.[176] An image from a graphic novel called "Zarya of the Dawn" was partially assisted by a generative AI tool, but the author claimed she used "hundreds and thousands" of iterative prompts to create the final image. In a famous decision, the Office first approved and then later denied to register the copyright of the image.[177]
- Mainland China: AI-generated content is not specifically covered by their copyright law, but there are proposals to amend the legislation to promote innovation and copyright protection.[178] The Chinese court currently holds that AI is merely a tool of human ingenuity. The court has also underlined that each case is unique when determining whether AI-generated content qualifies as a "work" for copyright purposes. The outcome of upcoming lawsuits still remains to be seen.[179]
- United Kingdom (UK): The UK is consulting on updates to its copyright framework, aiming to reward human creativity, incentivize innovation, and provide legal certainty for the creative industries and AI sector.[180]

KEY COMPARISONS AND INSIGHTS

- Recognition of AI-Generated Works: While the US mandates human authorship, the EU and UK acknowledge AI-generated works that involve a substantial amount of human intervention. The government of the Hong Kong SAR will need to give this issue more thought and develop a more precise policy.
- Text and Data Mining as exceptions: The UK and EU are looking for TDM exceptions. These tendencies are in line with Hong Kong's consideration.

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[176] US Copyright Office (n 10)
[177] Pin-Ping Oh, Harry Qu, and Toby Bond, 'Copyright Protection for AI-Generated Works – Recent Developments' (Bird & Bird, 9 February 2024) <https://www.twobirds.com/en/insights/2024/china/copyright-protection-for-ai-generated-works-recent-developments> accessed 21 December 2024
[178] Alesia Zhuk (n 1)
[179] *Ibid*
[180] UK Government (n 3)

- Ethical Considerations and Transparency: Ethical considerations are common across jurisdictions. Hong Kong's focus on these issues reflects global concerns.
- Liability and Enforcement: The US and EU address liability and enforcement for AI-generated works. Hong Kong's broad provisions align with this adaptable approach.

RECOMMENDATIONS

With bringing local law into line with worldwide standards and accounting for the unique circumstances of Hong Kong's innovation ecosystem, Hong Kong's legal framework and planned amendments aim to address or lessen the difficulties caused by AI-generated material. Some important recommendations include:

- Distinguish authorship and ownership: Clearly define who should be the owner and author of works produced by AI.[181]
- Provide TDM exceptions: Introduce TDM exceptions to support AI advancement while copyright holders' rights can be protected.[182]
- Advocate transparency and ethical AI: Devise rules and regulations that support transparency and tackle ethical considerations.[183]
- Enhance international cooperation: Set up international cooperation, harmonize AI copyright laws and share best practices.[184]
- Encourage innovation: Ensure that the legal framework supports AI technology innovation and maintain Hong Kong's leading position in intellectual property rights.[185]

By adopting these recommendations, Hong Kong may promote a dynamic digital economy, support the advancement of AI and intellectual property rights, and provide a flexible structure for intellectual property rights.

ETHICAL CONSIDERATIONS IN AI DEVELOPMENT

With every new innovation come new challenges, particularly in the realm of AI, where machines require human training. This underscores the paramount importance of the ethical use of technology. Since most AI models rely on algorithms, it is crucial to ensure that these algorithm models are grounded in ethical considerations that reflect societal values, as they

[181] Alesia Zhuk (n 1)
[182] UK Government (n 3)
[183] HK Intellectual Property Department (n 2)
[184] Alesia Zhuk (n 1)
[185] HK Intellectual Property Department (n 2)

impact all stakeholders.[186] AI algorithms can produce discriminatory outputs that may lead to unfair practices. Therefore, senior management must establish clear accountability and take responsibility for both data inputs and outputs. This accountability is essential to mitigate the risks associated with bias in AI systems.[187]

BIASES IN AI

Algorithms based on raw data often contain inherent biases, which can stem from various stages of data handling, including collection and processing. Consequently, there is a significant risk that the data may reflect historical inequalities and societal prejudices. [188] The principle of "garbage in, garbage out" applies here; unreliable data can lead to unfair outcomes.[189] For example, discrimination against some individuals from certain racial or ethnic backgrounds may be due to biases present in historical data. Such biases may inadvertently be retained by algorithms, leading to ongoing discrimination. Conversely, certain groups might receive preferential treatment based on biased algorithmic conclusions derived from past data patterns.[190]

Biases can arise from several sources, including:

- **Data Selection**: The manner in which data is selected can introduce biases if it does not adequately represent the entire population.[191]
- **Data Labeling**: Errors in labeling can perpetuate inaccuracies that influence algorithmic outcomes.[192]

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[186] Luciano Floridi and others, 'AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations' (2018) 28(4) Minds and Machines 689 <https://doi.org/10.1007/s11023-018-9482-5> accessed 21 December 2024

[187] Reuben Binns, 'Fairness in Machine Learning: Lessons from Political Philosophy' (2018) Proceedings of the 2018 Conference on Fairness, Accountability, and Transparency 149 < https://arxiv.org/pdf/1712.03586 > accessed 20 December 2024

[188] Solon Barocas and Andrew D. Selbst, 'Big Data's Disparate Impact' (2016) 104(3) California Law Review 671 <https://doi.org/10.2139/ssrn.2477899> accessed 20 December 2024

[189] Jeffrey Dastin, 'Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women' (Reuters, 2018) <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G> accessed 20 December 2024

[190] Faith Gordon and Virginia Eubanks, Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor (St. Martin's Press 2018) <https://www.researchgate.net/publication/337578410_Virginia_Eubanks_2018_Automating_Inequality_How_High-Tech_Tools_Profile_Police_and_Punish_the_Poor_New_York_Picador_St_Martin's_Press> accessed 20 December 2024

[191] Harini Suresh and John Guttag, 'Understanding Potential Sources of Harm Throughout the Machine Learning Life Cycle' (2021) MIT Case Studies in Social and Ethical Responsibilities of Computing, Summer 2021 <https://doi.org/10.21428/2c646de5.c16a07bb> accessed 20 December 2024

[192] Margaret Mitchell and others, 'Model Cards for Model Reporting' (Proceedings of the Conference on Fairness, Accountability, and Transparency, 2019) <https://dl.acm.org/doi/10.1145/3287560.3287596> accessed 20 December 2024

- **Algorithm Design**: The design choices made during algorithm development may inadvertently embed biases.[193]

Human errors also play a significant role if the collected data represents only a fraction of the population rather than the whole. Therefore, it is imperative that data collection efforts encompass diverse demographic groups to avoid such biases and ensure that AI systems operate fairly.[194]

ADDRESSING ETHICAL CHALLENGES

To effectively manage these ethical challenges, organizations should adopt several key strategies:

1. **Diverse Dataset Selection**: Organizations must prioritize the usage of diverse datasets that reflect various demographic groups to minimize biases and ensure fairness in AI outputs.[195]
2. **Internal Audits for Bias Detection**: Similar to how organizations implement risk management practices, internal audits should be conducted to investigate potential biases within algorithms. This proactive approach enables organizations to identify and address biases at their root.[196]
3. **Diverse Development Teams**: By bringing a variety of viewpoints and experiences to the algorithm design process, encouraging diversity within development teams can aid in the mitigation of biases.[197]
4. **Transparency and Accountability**: Establishing clear communication about the decision-making procedures using AI systems is important for organizations. Building trust between stakeholders and facilitating educated conversations about the possible hazards and constraints of AI outputs promotes further transparency.[198]

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[193] Batya Friedman and Helen Nissenbaum, 'Bias in Computer Systems' (1996) 14(3) ACM Transactions on Information Systems (TOIS) 330 <https://doi.org/10.1145/230538.230561> accessed 20 December 2024
[194] Tolga Bolukbasi and others, 'Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings' (2016) Advances in Neural Information Processing Systems 4349 <https://arxiv.org/abs/1607.06520> accessed 20 December 2024
[195] Timnit Gebru and others, 'Datasheets for Datasets' (Proceedings of the 5th Workshop on Fairness, Accountability, and Transparency in Machine Learning, 2021) <https://www.thetalkingmachines.com/sites/default/files/2021-11/3458723.pdf> accessed 20 December 2024
[196] Wilberforce Murikah, Jeff Kimanga Nthenge, and Faith Mueni Musyoka, 'Bias and Ethics of AI Systems Applied in Auditing – A Systematic Review' <https://www.sciencedirect.com/science/article/pii/S2468227624002266> accessed 20 December 2024
[197] Reuben Binns (n 42)
[198] Mike Ananny and Kate Crawford, 'Seeing Without Knowing: Limitations of the Transparency Ideal and Its Application to Algorithmic Accountability' (2018) 20(3) New Media & Society 973 <https://doi.org/10.1177/1461444816676645> accessed 20 December 2024

5. **Training and Awareness**: Providing training on ethical considerations related to AI usage will empower employees to recognize potential biases and engage in responsible practices when working with AI technologies.[199]
6. **Ethical Guidelines**: Developing comprehensive ethical guidelines for AI development will help organizations navigate complex ethical dilemmas while ensuring compliance with societal values and legal standards.[200]

IMPROVING TRANSPARENCY

For an effective governance system to function, it is essential that stakeholders remain involved at all stages and that the system addresses their needs. Organizations must strive to enhance clarity and open-mindedness regarding the interoperability of their systems with data sources, as well as how outputs are generated. Simultaneously, the stakeholders should be able to understand these processes, contributing to greater transparency.[201]

Transparency is especially important when dealing with new innovations. Fostering a culture of transparent practices builds trust among stakeholders, as they should be able to easily comprehend how AI-generated content is created.[202] Another crucial step toward enhancing transparency is establishing clear communication about potential risks, limitations, and restrictions associated with the outputs generated by AI. This approach will help manage stakeholder expectations and create an additional layer of trust.[203]

Furthermore, mechanisms should be put in place to document all critical processes, including sample datasets and algorithms used. It is also important to maintain detailed minutes of decision-making processes whenever possible.[204]

ENSURING FAIR USE

Fair use of copyrighted material can only be achieved when organizations ensure that AI systems do not unfairly exploit or misrepresent the sources of data. Therefore, it is essential for

[199] Mike Ananny and Kate Crawford, 'Disability, Bias, and AI' (AI Now Institute, 2018) <https://ainowinstitute.org/whittakeretal2018.pdf> accessed 20 December 2024
[200] Luciano Floridi and others (n 41)
[201] Mike Ananny and Kate Crawford (n 53)
[202] Nicholas Diakopoulos, 'Accountability in Algorithmic Decision Making' (2016) 59(2) Communications of the ACM 56 <https://doi.org/10.1145/2844110> accessed 20 December 2024
[203] David Hoover and Heston Richard, 'Why Transparency is Crucial for Human-Centric AI' (2024) Harvard University <https://www.researchgate.net/publication/386246082_Why_Transparency_is_Crucial_for_Human-Centric_AI> accessed 20 December 2024
[204] Meredith Whittaker and others (n 54)

organizations to be vigilant in avoiding breaches of copyright laws while training AI models, particularly when utilizing publicly available content.[205]

Additionally, organizations need to make sure their AI models don't have any discriminatory inclinations and that the algorithms promote fairness and equity. As datasets continue to expand, regular evaluations are necessary to identify and implement corrective actions. It is also crucial to keep all relevant stakeholders informed about the impact of these changes at all times.[206]

ETHICAL GUIDELINES

Organizations need to be aware of the accountability that comes with the use of AI and take it seriously, remaining answerable for any unethical outputs or damages caused by biases in the system. To achieve this, organizations can establish a dedicated team with clearly defined roles and responsibilities for individuals overseeing various aspects of AI development and deployment.[207]

This can be accomplished by integrating ethical guidelines into the organization's policymaking processes, encompassing principles such as privacy, dignity, transparency, responsibility, and equality.[208] These frameworks can either be defined by relevant industry bodies or customized to meet the specific needs of the organization based on its business nature and AI usage.[209]

Furthermore, inculcating a spirit of ethics within the organization requires providing employees with proper training on ethical considerations and encouraging open discussions about potential misuse or ethical dilemmas. The commitment of senior management to uphold ethical practices sets a tone that ensures profit maximization does not overshadow value creation.[210]

PRACTICAL SIGNIFICANCE

CASE STUDIES AND ANALYSIS OF LEGAL CONSEQUENCES

AI technology is shaking up the intellectual property world. To see this in action, let's dive into some exciting case studies such as "The Next Rembrandt" and OpenAI's GPT-3.

"THE NEXT REMBRANDT" PROJECT

[205] Pamela Samuelson, 'AI Authorship?' (Communications of the ACM, 1 July 2020) <https://cacm.acm.org/opinion/ai-authorship> accessed 20 December 2024
[206] Solon Barocas and Andrew D. Selbst (n 43)
[207] Wilberforce Murikah, Jeff Kimanga Nthenge, and Faith Mueni Musyoka (n 51)
[208] Luciano Floridi and others (n 41)
[209] Reuben Binns (n 42)
[210] Meredith Whittaker and others (n 54)

Imagine AI infusing Rembrandt's spirit to create a brand-new masterpiece. This is exactly what the "Next Rembrandt" project aims to achieve. By using machine learning algorithms to analyze Rembrandt's work, AI produced an original painting that reflected the Dutch master's technique and style.[211] This groundbreaking project sparked fierce debate over authorship and ownership. Since the painting was created autonomously by AI, it doesn't quite fit in with traditional concepts of human creation. This disruption requires a reexamination of the legal framework that determines who gets copyright—AI developers, data scientists, or funding entities.

OpenAI's GPT-3

The next language model is OpenAI's GPT-3, which can generate writing that resembles that of a human being when given basic instructions.[212] Its ability to produce coherent and contextual text raises thorny questions about authorship and copyright. If a user prompts GPT-3 to write an paper, who owns the copyright? User, or OpenAI, the creator of the model? These incidents demonstrate how urgently precise legal rules for protection of AI-generated works are needed.

Practical advice for governments, legal practitioners and researchers

With a view to alleviating or resolving the problems and legal ramifications of AI-generated content, here are some forefront recommendations for governments, legal practitioners, and researchers:

- **Delineate authorship and ownership:** Establish precise rules about the ownership and authorship of content produced by AI. For instance, considering AI as a tool and granting authorship to the person or organization in charge of its development and use.[213]
- **Devise distinct rules and regulations on AI:** Revise the legal framework to give some recognition to AI-generated works. For example, formulating special rights for AI-generated content and providing a special legal status.[214] Just like it is a derivative work similar to a translation or a motion picture version of a novel.
- **Advocate the ethical development of AI:** Formulate ethical guidelines, rules or regulations as well as assimilate them into policy-making processes to align the

[211] ING (n 19)
[212] Tom B. Brown and others, 'Language Models are Few-Shot Learners' (Cornell University, 22 July 2020) <https://arxiv.org/abs/2005.14165> accessed 20 December 2024
[213] Pamela Samuelson (n 60)
[214] Alesia Zhuk (n 1)

development of AI with social values or norms such as fairness, transparency, accountability, and privacy.[215]

- **Strengthen transparency and accountability:** Adopt a transparent approach in using data to train AI models as well as in how the algorithms work because transparency can establish trust and secure accountability which is of paramount importance in situations where there are bias or unethical outcomes.[216]
- **Uphold collaboration among different jurisdictions:** Since AI technological development and advancement are borderless, it is very important to establish collaboration and cooperation among different countries and regions. Harmonization of AI copyright laws is imperative as it can help tackle cross-border challenges and create a united legal framework.[217]
- **Strengthen public awareness and education:** Raise awareness and educate the public about AI and its impact on intellectual property rights. Conduct workshops, seminars, and open discussions to disseminate knowledge and solve problems.[218]
- **Hybrid copyright model:** Implement a hybrid copyright model that identifies AI-generated content based on a combination of human input and AI creativity. The model will accommodate works that involve significant human supervision as well as those created primarily by AI.
- **Ethical AI Certification:** To ensure that AI systems follow moral guidelines, openness requirements, and responsible usage of protected content, implement an Ethical AI Certification Scheme.
- **AI Transparency Registry:** Establish an AI Transparency Registry where developers publicly disclose the origins of copyrighted materials used in training and the methods used to produce AI content. The registry will enhance accountability and trust.

By implementing these recommendations, governments, attorneys, and researchers may create a fair, progressive legal framework that promotes preserving intellectual property rights and the innovation of AI technologies. It is intended that by using this strategy, moral principles and active intellectual property rights protection will be preserved even while innovation thrives.

[215] Luciano Floridi and others (n 41)
[216] Mike Ananny and Kate Crawford (n 53)
[217] UK Government (n 3)
[218] Meredith Whittaker and others (n 54)

CONCLUSION

AI is recasting many businesses and trades. While AI has realized many important innovations, it has also brought forth complicated problems, especially in relation to intellectual property rights. Content produced by AI seriously upends old concepts of authorship and ownership, raising legal and ethical issues.[219] Hong Kong's recent public consultation on amending the Copyright Ordinance[220] reflects Hong Kong's efforts to balance the advancement of AI and the protection of rights of the creators.

Key recommendations include clarifying authorship and ownership, developing specific regulations on AI, promoting ethical AI development, encouraging transparency and accountability, promoting international cooperation, and raising public awareness.[221] These steps are critical to creating a balanced and forward-looking legal framework that supports both intellectual property protection and the continued growth of AI technologies.

Looking to the future, the continued progress of AI requires continuous dialogue and reform. Governments, legal practitioners and researchers must collaborate to adapt the legal framework to the dynamic landscape of AI, protecting intellectual property rights while encouraging creativity. This ongoing effort will help maintain a resilient and forward-looking intellectual property rights system in Hong Kong and beyond.[222]

[219] Alesia Zhuk (n 1)
[220] HK Intellectual Property Department (n 2)
[221] UK Government (n 3)
[222] Alesia Zhuk (n 1)

IP ENFORCEMENT AND COUNTERFEITING IN SOUTH AND SOUTHEAST ASIA: A WESTERN PERSPECTIVE BASED ON THE USTR 301 REPORT

Shivani Singh*
Khushi Kesari**

ABSTRACT

In the rapidly changing world backed with technological advancement, need for innovation, rising economic growth and international trade call for an informed intellectual property (IP) protection. Rich and developing nations implement and enforce these IP rights and rules in various manners which often results in disputes. The countries in global south, particularly in South and Southeast Asia, highlight the presence of challenges around IP, where counterfeit markets are accepted and widely spread which in turn attracts criticism from the western nations. Countries such as China, India, Indonesia and Vietnam are one of the major producers and distributors of counterfeited goods. They are often flagged, and these products undermine global IP framework and create hindrances for legitimate businesses and pose risk to consumer safety. The present study underscores how the IP practices of South and Southeast Asia are perceived by the western countries with a special focus on counterfeit market by using the United States Trade Representative [USTR] Special 301 Report as the basis for analysis. The Report recognizes nations with inadequate protection to their Intellectual Property or which have barriers to market access. The paper accesses the factors that sustain such markets inclusive of weak enforcement mechanisms, economic incentives, community stance and cultural determinants. While doing so, it also critics the USTR report as a tool for advancing western economic interest and imposing IP measures that surpasses the basic requirement of the TRIPS agreement. The research questions the ability of nations in South and Southeast Asia to balance domestic interests and global IP requirements. It presses for a more equitable and non-discriminatory approach to IP

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governance that takes into account the varying geo-specific socio-economic realities in every region as it addresses the new issue of counterfeiting.

KEYWORDS: Intellectual Property Governance, Counterfeit Markets, USTR Special 301 Report, South and Southeast Asia, Global Trade Practices.

INTRODUCTION

In today's world of innovation, increased economic growth and global trade is based on Intellectual property (IP) rights. These IP protections have facilitated global advancements by providing artists, creators and innovators with exclusive rights over their work. There are, however, wide discrepancies across nations in the enforcement and application of these IP laws, highlighting differences in governance framework, economic advancements and culture attitude. These variations tend to bring about disputes between developed and developing countries, as they compete and struggle to set priorities in the global IP landscape.

Prevalent in South and Southeast Asia these issues draw global attention for being hubs for major counterfeit markets, which are often seen as economic and geopolitical threats to the Western world's interest. These counterfeited goods which range from everyday items to luxury goods, not only decrease the value of genuine and legitimate businesses but also pose risks to the health and safety of the consumer. Frequently found at the centre of these debates are countries like China, India and Vietnam, as these are often labelled as primary producers and distributors of counterfeit goods.

The United States Trade Representative (USTR) Special 301 Report[223] acts as a mean to make ot break the global perception around a countries' IP enforcement policies. The annual report highlights nations with inadequate IP protections or market access barriers and acts as a central mechanism for the purpose of documenting and addressing these issues. However, the report has been criticized for being biased to favouring the Western economic interest, by upholding IP standards which are often above the minimum limits of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement[224]. This complicated dynamic reveals an inherent tension between the enforcement of global IP norms and the specific socio-economic conditions of the developing nations.

LEGAL AND GEOPOLITICAL ISSUES IN CROSS-BORDER IP PROTECTION

[223] United States Trade Representative, *2023 Special 301 Report* (USTR, 2023) <https://ustr.gov/issue-areas/intellectual-property/special-301> accessed 20 December 2024

[224] Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement 1994, WTO Agreement, Annex 1C

Cross-border IP protection raises several legal and geopolitical issues due to the non-uniformity in legislative frameworks across nations. Because of the geographical character of IP rights, degrees of protection and enforcement vary, resulting in discrepancies in the preservation of IPR. These disparities often lead to geopolitical tensions, particularly between developed and developing nations, as nations with strong IP protection systems exert pressure on others to improve their laws and enforcement mechanisms. One key issue lies in the differing interpretations of territoriality in cross-border IP disputes. For example, the disagreement between the U.S and Canadian courts in *Equustek Solutions Inc. v. Google Inc.*[225] case over the territorial extent of a remedy for infringement demonstrates the hardships arising from varying national perspectives on IP enforcement.[226] This issue is further worsened since there is a lack of a uniform international adjudicatory body that would provide legal clarity to the parties involved in trans-national IP disputes.[227]

On the other hand, the technology transfer issue between the two countries often gets connected with the theft of Intellectual Property as governments are wary of disclosing the technical advancements because they fear infringement in jurisdictions that lack adequate IP protection[228]. This limits international collaboration and stifles innovation. IP protection disparities result in trade imbalances, as developed nations claim that their innovations are exploited by others without providing them sufficient IP protection. As highlighted in the *Westerngeco LLC v. ION Geophysical Corp.,*[229] the Hon'ble Supreme Court allowed a patent owner to recover lost profit for foreign infringement, raising doubts on the extent of the US patent monopolies to the international market and challenging the territorial concept laid down in IP.[230]

Finally, IP protection has increasingly become an issue in cross-border caught up in the complexities of geopolitics. IP remains a vital part of the international trade setup, resulting in

[225] *Google Inc v Equustek Solutions Inc* [2017] SCC 34
[226] Jennifer Daskal, 'Google Inc v Equustek Solutions Inc [2017] 1 SCR 824' [2018] 112(4) American Journal of International Law 727, <https://www.jstor.org/stable/26568998> accessed 20 December 2024
[227] Marketa Trimble, 'The Territorial Discrepancy Between Intellectual Property Rights Infringement Claims and Remedies' [2019] <https://scholars.law.unlv.edu/cgi/viewcontent.cgi?article=2276&context=facpub> accessed 15 February, 2025
[228] Tongchang Ma, 'Intellectual Property Protection in Cross-Border E-Commerce' [2024] 68(1) *Advances in Economics Management and Political Sciences* 47, DOI: 10.54254/2754-1169/68/20241345
[229] *WesternGeco LLC v ION Geophysical Corp* 138 S Ct 2129 [2018]
[230] Graeme W Austin, 'A Conflicts of Law Approach to Intellectual Property Research' in Irene Calboli and Maria Lillà Montagnani (eds), *Handbook of Intellectual Property Research: Lenses, Methods, and Perspectives* (Oxford, 2021; online edn, Oxford Academic, 23 September 2021)

economic inequalities, which tend to bring commercial conflicts due to IP infringements, which in turn amplify geopolitical rivalries.

IP LAW AND PRACTICES AROUND COUNTERFEITING AND PIRACY IN SOUTH AND SOUTHEAST ASIA

A combination of local economic factors, international influences, and cultural factors provide a dynamic picture of legal landscape of IP in South and Southeast Asia. Countries such as Vietnam, Malaysia, Indonesia and India have been strengthening and implementing broad IP frameworks that are in line with international agreements like the TRIPS. In India for instance, the Copyright Act 1957 and the Trademark Act 1999 have laid down the foundation for strong copyright and trademark laws. These acts have tightened their enforcement mechanisms in the face of digitalisation over the year through amendments.

In like manner, Indonesia had recently passed the Law on Copyrights in 2014 to combat piracy especially from the entertainment and software industry.[231] The above measures notwithstanding, the implementation of this law remains unbalanced by factors such as a shortage of resources, legal loopholes, and the widespread social acceptance of counterfeited and pirated products. Counterfeiting pharmaceutical and luxury goods, for instance, and piracy of media and software, poses severe challenges to the protection laws meant to safeguard IP rights while making these available to the public.[232]

South and Southeast Asia, in enforcing its IP laws, reflects a kind of a fine balancing act between acceding to global economic standards and attending to local realities. Countries like Thailand have set up specialized IP courts for streamlined dispute resolution as evidence of their intent on tightening up IP regulations, as well as the Philippines.[233] Vietnam has strengthened its enforcement with amendments to the Law on Intellectual Property in 2022; it is also collaborating with various international agencies to strengthen such enforcement[234]. Real-world practicalities, however, include the fact that many people lack awareness of IP laws and informal economies often rely on counterfeit goods to survive. Advocacy groups have complained about the social cost of an overly strict approach, which hits mostly low-income

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[231] Peggy Chaudhry and Alan Zimmerman, The Economics of Counterfeit Trade: Governments, Consumers, Pirates and Intellectual Property Rights [Springer-Verlag Berlin Heidelberg 2009]

[232] Alexander S. Dent, 'Intellectual Property, Piracy, and Counterfeiting' [2016] 45 Annual Review of Anthropology 17 <https://doi.org/10.1146/annurev-anthro-102215-100127> accessed 15 February, 2025

[233] Susan Sell, 'The Global IP Upward Ratchet, Anti-Counterfeiting and Piracy Enforcement Efforts: The State of Play' [2010] Joint PIJIP/TLS Research Paper Series, American University Washington College of Law Digital Commons.

[234] Vivencio O. Ballano, Sociological Perspectives on Media Piracy in the Philippines and Vietnam [2017] <https://doi.org/10.1007/978-981-287-922-6_8> accessed 15 February, 2025

communities, given that they use more available and affordable options. Programmes such as the ASEAN Intellectual Property Rights Action Plan are also being conducted to enhance regional cooperation, but significant gaps exist between different nations. It will become challenging to address this to protect the rights of creators and guarantee access to innovation and inclusivity of culture and economy.

WESTERN VIEWS ON SOUTH AND SOUTHEAST ASIAN IP REGULATION IN COUNTERFEITING AND PIRACY MARKETS AS PER USTR REPORT 301

WHAT IS USTR?

The Office of the United States Trade Representative (USTR) prepares an annual report called the Special 301 Report, mandated by the Congress under Section 182 of the Trade Act of 1974, as modified by the Trade and Competitiveness Act, 1988. The report was the result of growing concerns over the adverse effect of weak IP protection abroad on U.S economic interests.

The US trading partners view the Special 301 Report as an instrumental tool for assessing the state of Intellectual Property (IP) and enforcement. The report identifies the countries limiting fair and equitable access to their markets to the US Citizens relying on protection over Intellectual Properties or failing to provide sufficient protection over their intellectual rights. Nations are categorized based on how serious their deficiencies in IP regimes are.

The USTR's Special 301 report lists down three divisions namely, "Priority Foreign Country" [PFC], "Priority Watch List," and "Watch List" and classifies countries on the criteria of IP protection, their enforcement practices, and barriers to market access. Through this practice, the US government focuses on addressing the problems associated with intellectual property, however, this action may result in extreme trade actions. These categories of classifications assist in shaping the reaction of US government to IP issues, which may include punitive trade sanctions. Section 182 of the Trade Act, 1974, draws the categorization procedure, defining PFC as a legislative category.

When the IP policies of a country obstruct protection or fair market access to US business, it is classified as a PFC which looks at "onerous or egregious" IP policies. This classification can occur when a government fails to engage in good-faith discussions about the problems associated with intellectual property or shows little advancement in those talks. Tariffs and import restrictions along with decreasing trade benefits come under the imposition of PFC. Additionally, the President can instruct the USTR to pursue further punitive measures in line with US international relations. The "Priority Watch List" is a non-statutory group of countries that have significant IP shortcomings, though not as severe as those in the PFC category.

These countries continue to encounter significant intellectual property challenges that need to be addressed, though they are not as critical at times. The "Watch List" includes nations with IP concerns that are less severe than those on the Priority Watch List. These nations are free to become more prestigious either by engaging in bilateral discussions or conducting significant reforms on their IP policies. Countries on the Watch List or Priority Watch List can change its status as they make progress. Hong Kong was deleted from the Watch List, for example, in 1999 when its copyright piracy matters were addressed. Conversely, one that does not make improvements shall be downgraded. India, for example, was downgraded from the Priority Watch List to PFC in 1991 for lacking proper measures in keeping patents protected. The process of classification by the USTR considers consultations from concerned stakeholders such as industry associations, the Department of Commerce, and the USPTO.

The most damaging is the Priority Foreign Country (PFC). More commercial and diplomatic pressure are applied to countries to modify policies by categorizing countries under the Watch List (WL) and the Priority Watch List (PWL) other than PFC.[235] However, the trouble of countries does not end with their removal from these lists, upon removal nations may still be subjected to Out-of-Cycle Reviews or Section 306 monitoring. These are more thorough examinations to address specific IP challenges and to ensure that the report remains responsive to emerging concerns.

This shows that the Special 301 Report is often used as a tool to push countries to develop stronger IP rights which goes beyond the minimum standards set by the World Trade Organization's TRIPS Agreement to protect American Companies Intellectual Property rights overseas, the Omnibus Trade and Competitiveness Act of 1988 was passed.[236]

The process involves the public since the USTR solicits submissions and holds hearings to gather input from foreign governments, industries, and NGOs. The USTR examines countries on individual basis, considering such factors as their level of development, observance of international commitments, and concerns expressed by rights holders. The process ensures a comprehensive, informed assessment of global IP issues, shaping U.S. trade policy.

The idea for the report sparked after the U.S. International Trade Commission estimated that overseas IP infringement cost American firms between $43 and $61 billion back in 1986. An ITC investigation from 1984 examined the effects of counterfeiting foreign products and found

[235] Poppy Winanti and Alasdair Young, 'Complying with Unwelcome Rules? Developing Countries and the TRIPs Agreement' [2009] 2 *Indian Journal of International Economic Law,* art 10

[236] Viviana Muñoz-Tellez, Nirmalya Syam and Thamara Romero, 'Time for a Collective Response to the United States Special 301 Report on Intellectual Property' [Policy Brief 65, July 2019]

that in 1982, it resulted in the loss of 131,000 employment in five of the US manufacturing sectors[237].

While the report reflects U.S government's dedication towards protecting IP of its citizens and businesses, the report is also criticized for championing the interests of American firms and has raised questions about fairness and sovereignty and seen as a tool for limiting ability to shape independent IP frameworks, raising questions about fairness and sovereignty.

HISTORY OF USTR

The Office of the United States Trade Representative is an institution which influences and drives forward the United States trade policy significantly. The institution traces its history to the Reciprocal Trade Agreements Act of 1934, wherein authority to negotiate reciprocal tariff reductions was authorized for the President. More authority under the Trade Expansion Act of 1962 expanded its powers in handling communist economic influence as well as in the improvement of exports from the country. Sections 201 and 252 of the Act vested the President with the authority to negotiate and enter into trade agreements, as well as to eliminate foreign import restrictions that were determined to impede the commerce of the United States. Section 301 of the Trade Act of 1974 further broadened those powers by allowing the President to take retaliatory action against countries that, in his opinion, were unreasonably raising trade barriers. These follow-up enactments improved the chapter and consisted of Omnibus Tariff and Trade Act 1984, and the Omnibus Trade and Competitiveness Act of 1988 that created "Super 301" with the authority and powers to possess the right of conducting investigations on unfair trade practice and retaliation by the USTR. As the level of complexity involved in conducting global trade continues to escalate so too, was the development of USTR's role.

As a response to inefficiencies in the U.S. governmental system, Congress established in 1962 the office of Special Representative for Trade Negotiations. The post, initially advisory, began to take on greater stature, and by the 1970s, had become a cabinet-level post. The office was officially known as the United States Trade Representative in 1980. In 1988, the Omnibus Trade and Competitiveness Act of 1988 further solidified the mandate of the USTR, in this respect, transforming it into the principal trade advisor to the President while centralizing the US's international trade negotiations. This increased accountability through periodic reports by the USTR to the President and the Congress. The Uruguay Roundtable Agreement Act 1994 also furthered the role of the USTR as a leader in international trade negotiations with the

[237] Gary M. Hoffman and George T. Marcou. (1989, November 5). Law and Society <https://www.washingtonpost.com/archive/opinions/1989/11/05/law-and-society/8309c6 4a-4349-418e-823e-8c3056a67a0b> accessed 20 December 2024

WTO. This made way for the expansion of the role of USTR in other crucial trade agreements such as NAFTA and the WTO. The Trade and Development Act 2000 further created new offices that including the Chief Agriculture Negotiator and Assistant U.S Trade Representative for African Affairs within USTR.

These offices facilitated negotiations of agricultural interests to be centred on trade with Africa. The USTR negotiates bilaterally as well as multilaterally and collaborates with all other agencies of the government involved in trade policy and international trade issues such as intellectual property and dispute resolution. As for now, Katherine Tai currently serves as the U.S. Trade Representative, where she continues to lead USTR to advance the Nation's Trade Interests.

UNDERSTANDING THE ISSUE OF COUNTERFEITED GOODS AND PIRACY IN SOUTH AND SOUTHEAST ASIA

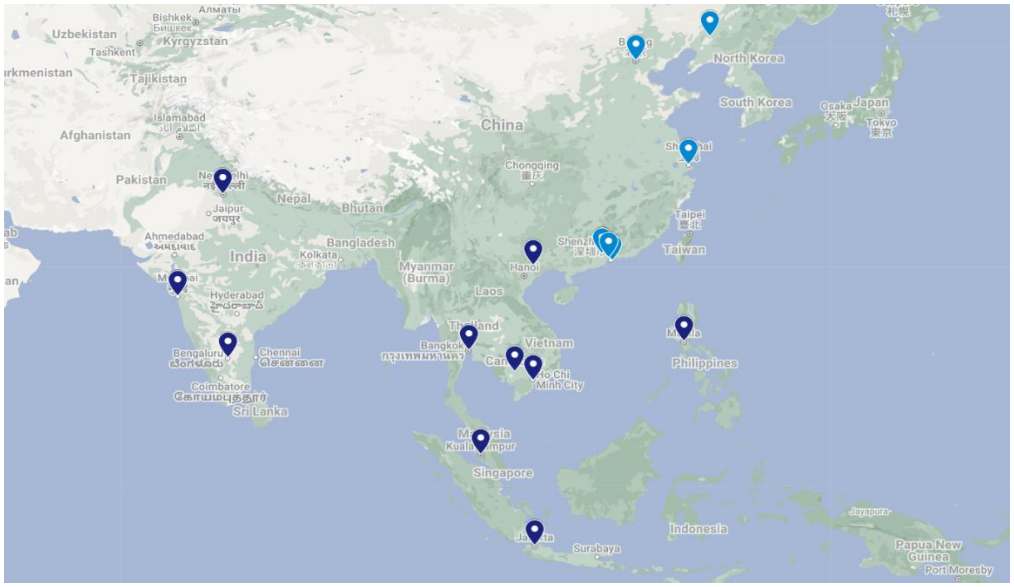
Counterfeit goods can pose serious risks to people, businesses, and the economy because they are often made without proper oversight or safety checks[238]. These products are usually of poor quality, may contain harmful materials, and can fail to work as required. For example, counterfeit medicines might not treat illnesses effectively, similarly car parts could malfunction, and fake electronics might overheat or cause electrical shocks[239]. These products not only endanger health and safety but also damage trust in brands, cause loss to honest businesses, and take money away from genuine industries. Tackling the problem requires stronger regulations, better public awareness, and cooperation between governments and companies to keep people safe.

Piracy and counterfeit products continue to be a significant concern in South and Southeast Asia, harming both local and global economy. These issues are highlighted year after year in the annual reports by the U.S. Trade Representative (USTR), underscoring their continuing nature. On January 30, 2024, the USTR published its 2023 Notorious Markets List, which lists 39 online and 33 physical marketplaces engaged in large-scale trademark counterfeiting and copyright piracy. Out of the total, 72 markets, 25 markets are situated in this region, the number goes even higher when other countries in Asia are counted as well[240]. These markets act as crucial hubs for the distribution of fake and pirated products, undermining the value of

[238] OECD/EUIPO, '*Global Trade in Fakes: A Worrying Threat'* [OECD Publishing 2021]
[239] US Immigration and Customs Enforcement, 'Counterfeit Goods: A Danger to Public Safety' [2024] <https://www.ice.gov/features/dangers-counterfeit-items > accessed 15 February, 2025
[240] Office of the United States Trade Representative, '2023 Review of Notorious Markets for Counterfeiting and Piracy' [2023]

legitimate trade and intellectual property rights. Among the listed nations, China stands out as the leading contributor, with the highest number of both virtual and physical markets being engaged in piracy and counterfeiting activities.

PHYSICAL MARKET



MAP 1: ***Locations of Counterfeit and Piracy Markets in South and Southeast Asia, with China***

The South Asia and Southeast Asian Physical markets form one of the largest hubs/marketplaces for the counterfeited goods. From car parts to medicines and everyday items, almost everything can be found in duplicate. Out of 33 Physical Markets enumerated in the 2023 Review of Notorious Markets for Counterfeiting and Piracy, 10 belong to this region. China dominates the market of Counterfeited goods, accounting for 60% of total share with 7 physical markets. This creates a matter of concern as Chinese counterfeit sellers have revamped by using their storefronts as key contact points, testing locations, and centres for fulfilling online sales. Notorious markets with reduced foot traffic remain vital hubs for counterfeit sales across South and Southeast Asia, with sellers employing strategies such as offsite inventory storage and transitioning to online platforms to evade law enforcement raids.

Counterfeit poses a major threat in countries like India, which includes a wide range of products such as pharmaceuticals, electronics, luxury goods, and food items. While only three markets are officially noted in reports, many more function such as where counterfeited products are sold. By 2020, the counterfeit market in India was valued at approximately 2.6 trillion rupees and has shown rapid growth in recent years. Commonly counterfeited items include electronics, watches, and fashion products. Similarly, Criminal networks play a significant role in the

production and distribution of counterfeit products, throughout the regions of Southeast Asia, driving a billion-dollar black market. The problem is fuelled by inadequate IP protection, corruption, and weak enforcement measures that exacerbate the issue with serious consequences, including loss of revenue to genuine businesses, decreased government tax revenue and compromised consumer safety. Several attempts have been made to curb counterfeiting in the region by strengthening IP laws, increasing public awareness, and expanding enforcement mechanisms, but the problem continues.

The following table lists the region's physical marketplaces.

COUNTRIES AND COUNTERFEIT PRODUCT MARKETS			
Sno	**Country**	**Market**	**Goods Sold**
1	Cambodia	Central Market, Phnom Penh	Apparel, shoes, handbags, watches, sunglasses, and other items, as well as pirated media
2	India	Heera Panna, Mumbai	Watches, footwear, accessories, and cosmetics
3		Sadar Patrappa Road Market, Bengaluru	Electronic products
4		Tank Road, Delhi	Apparel, footwear, watches, and beauty products
5	Indonesia	Mangga Dua Market, Jakarta	Handbags, wallets, toys, leather goods, and apparel
6	Malaysia	Petaling Street Market, Kuala Lumpur	Apparel, shoes, and accessories
7	Philippines	Greenhills Shopping Center, San Juan, Metro Manila	Electronics, perfumes, watches, shoes, accessories, and fashion items
8	Thailand	MBK Center, Bangkok	Handbags, clothing, watches, and shoes
9	Vietnam	Tan Thanh Market, with Viet Trung Trade Center, Lang Son Province	Apparel, shoes, luxury goods, and electronics

10		Saigon Square Shopping Mall, Ho Chi Minh City	Handbags, wallets, jewellery, and watches

Despite constant efforts from the past years, the data as per the latest reports show that counterfeiting remains a significant concern. It has been noted that Cambodia's Central Market in Phnom Penh remains a major hub for counterfeit clothes, accessories, and pirated media, despite intensified searches by the local officials and authorities. Similarly, in India, counterfeit products, including cosmetics, electronics, and clothes marketplaces can be found at locations like Heera Panna in Mumbai and Tank Road in Delhi, and they frequently serve as wholesale suppliers to other regions. Enforcement activities in these markets are still uneven, with penalties not being effective in deterring counterfeit sellers. Weak enforcement is a key problem in Indonesia, where raids are uncommon and warning letters are not very effective in markets such as Mangga Dua in Jakarta. Even with large numbers of raids by police at Malaysia's Petaling Street Market, counterfeit products remain openly available. These markets highlight the growing regional danger of counterfeit trade, with many products traced to Chinese sellers.

Counterfeiting in Southeast Asia is characterized by heterogeneity with some countries showing improvement through strengthened enforcement and cooperation. Philippines' Greenhills Shopping Mall in Metro Manila set stringent example by catching repeat offenders red-handed and joining regulators in reorganizing itself into a respectable marketplace. In neighboring Thailand, Thailand's MBK Center in the capital city, Bangkok, strengthened enforcement and established public educations programs in response, although the ubiquity of counterfeit products also warrants frequent raids and unbending stance such as prohibiting the renewal lease of erring vendors. Within Vietnam, frequent government raids were unable to stem even Tan Thanh market and Saigon Square, where much junk comes from mainland China. Insufficiently large fines and internal protectionism there still baffled progress. Among these, other examples in all corners of this region represent some of the complexity in dealing with counterfeiting, something which requires not only more meaningful laws but firm enforcement and cooperation between governments as well as between private actors.

ONLINE MARKET

The 2023 Notorious Markets List (NML) focusses on the growing complexity of online piracy and counterfeiting networks, with South and Southeast Asia emerging as the notable centres for these operations. The fast expansion of e-commerce and social commerce in these locations has provided fertile ground for illegal activities. Cyberlockers, which are widely used to host

and distribute stolen content, play an important role by providing revenue-sharing schemes that reward uploaders of popular copyrighted material. However, these sites frequently lack proactive monitoring, allowing copyrighted content to be published and re-shared even after removal requests. Furthermore, "bulletproof" ISPs in the region allow piracy sites to operate with minimal accountability, further complicating enforcement efforts. Social media influencers in these regions also contribute by promoting counterfeit goods, particularly luxury items, driving traffic to these illegal markets.

Asia remains the largest contributor to the global online piracy market, accounting for nearly half of its activity. Many piracy sites in South and Southeast Asia hide their locations using proxy servers or anonymous hosting services, making them difficult to trace. Reports suggest that a significant number of these operations are based within the region itself, with at least 15 specific online markets identified in the latest NML report. Although some platforms in these regions have started adopting AI tools and stricter anti-counterfeiting policies, the lack of consistent standards and insufficient collaboration with rights holders and authorities hinder progress.

The proliferation of websites and platforms facilitating copyright infringement highlights the challenges of combating digital piracy on a global scale. Sites such as **1337X** and **The Pirate Bay**, among the oldest and most well-known torrent indexing platforms, rely on reverse proxy services and a network of alternative domains to evade enforcement. These platforms, widely blocked across multiple countries, demonstrate resilience against takedown efforts, enabling continued access to pirated movies, television shows, and software. Similarly, **YTS.MX**, specializing in high-quality film torrents, highlights the advanced capabilities of piracy sites by integrating synchronized subtitles, further enhancing the user experience and perpetuating global content theft. These services undermine the creative industry and create significant obstacles in the legal enforcement due to their decentralised and adaptive nature.

Emerging forms of piracy are new ways that go beyond simple torrenting. Sites such as **2EMBED** and **WHMCS Smarters** depicts "piracy-as-a-service" ideas, enabling individuals to install and monetize illegal operations with minimal expertise. 2EMBED, for instance, has a content management system available to other pirate streaming sites that monetize by displaying adverts, while WHMCS Smarters offers solutions for illegal IPTV companies. Such services support the proliferation of piracy by lowering the barrier to entry for new players, leading to an interdependent network of unlawful platforms. In addition, platforms like **Aniwatch** and **Vegamovies,** which are focused on niche markets like anime or local content,

serve very specific audiences, and their popularity is retained despite enforcement actions against their URLs.

Finally, e-commerce sites like **Bukalapak** and **IndiaMART** exemplifies the ways in which online markets unintentionally promote counterfeiting. Despite improved takedown processes, many platforms continue to host counterfeit products due to inadequate deterrents for repeat offenders and a lack of proactive monitoring. The existence of services such as **SSYouTube**, which allows for stream-ripping of music and video downloads, demonstrates the scope of piracy activities across different sectors. These instances highlight the complexities of combating piracy in a digital context where adaptation and technological innovation can surpass enforcement methods.

ROLE OF CHINESE MARKETS IN THE EXPANSION OF THE COUNTERFEIT MARKET

China is a major driver behind the huge amount of counterfeit goods across South and Southeast Asia, holding the title of the world's largest exporter of fake products[241]. Over 75% of all counterfeit goods globally come from China, where a combination of low manufacturing costs, massive production capacity, and big logistics networks make it easy for counterfeiters to operate[242]. Although China has laws in place to tackle counterfeiting, weak enforcement and a vast, unregulated supplier ecosystem allow this economy to thrive. The growth of e-commerce platforms like AliExpress and DHGate has made the problem even harder, as these platforms enable small parcels of counterfeit items to be shipped directly to consumers or in bulk with little risk of detection. In Southeast Asia, countries like the Philippines, Indonesia, Thailand, Vietnam, and Singapore have become hotspots for counterfeit goods, with studies suggesting that as much as 40% of items sold in these markets may be fake[243]. These products are often shipped by sea from China's ports or smuggled across land borders, passing through cracks in customs systems weakened by corruption, underfunding, and unregulated Free Trade Zones. In markets like Malaysia and Myanmar, low-cost counterfeit items such as shoes and textiles dominate, making it tough for local producers to compete. Meanwhile, countries like

[241] 'Chinese Counterfeit Products Dominate the Worldwide Fakes Industry' (Daxue Consulting, 9 February 2023)

[242] OECD and European Union Intellectual Property Office, 'Global Trade in Fakes: A Worrying Threat' [22 June 2021]

[243] 'Counterfeit Goods in South-East Asia: Saving Money May Risk Your Health' (European Union Intellectual Property Helpdesk, 27 August 2021) <https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/counterfeit-goods> accessed 15 February, 2025

Singapore serve as major transshipment hubs for these fake goods, while only Thailand has shown some success in seizing counterfeits, though much more needs to be done.[244]

ANALYSING THE CULTURAL DYNAMICS AND UNDERLYING FACTORS DRIVING COUNTERFEITING

Understanding the dynamics of the counterfeit market demands a thorough examination of the factors driving demand for counterfeit goods. Several behavioral characteristics influence both the manufacture and consumption of counterfeit items. Income is a crucial motivator, since those with lower incomes are more likely to be open to buying counterfeit items. For instance, in Singapore and Chine, research reflects that people from low-income group are more inclined towards buying pirated media and software. Similarly, low-income households in impoverished nations are particularly vulnerable to counterfeit pharmaceutical products, owing to the subsidised prices they are available at. The World Health Organization has highlighted that counterfeit drugs constitute 10% of the global pharmaceutical market, with a disproportionate 25% being sold in low-income regions.[245]

Demographic factors also play a significant role in shaping counterfeit consumption patterns. According to research conducted in Hong Kong, women and younger visitors are more prone to purchase counterfeit things than males and older folks. Education level appears to impact these decisions, with more education associated with a decreased risk of purchasing counterfeit items. Other factors, such as travel habits and emotional states, further impact counterfeit buying behaviours. Tourists traveling in organized groups or those not on business trips are more likely to purchase counterfeit goods, while positive emotional experiences during travel can also increase the tendency to buy counterfeit items.

Counterfeit proneness (CP) is a distinct psychological trait that influences consumer attitudes and behaviours toward counterfeit products. Consumers with high CP exhibit a preference for counterfeit goods, often rationalizing their purchases by perceiving counterfeits as beneficial or comparable in quality to genuine products.[246] These people are less inclined to examine the legal or ethical ramifications of purchasing counterfeit goods. CP includes emotional,

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[244] Helen Sloan, 'Beyond China: The Counterfeiting Challenge in Southeast Asia' World Trademark Review [2012] https://www.worldtrademarkreview.com/article/63B324B0BC66116B4ABA256A534B75B439CA92F9/downloa accessed 15 February, 2025

[245] *Supra* note 17; World Health Organization, '1 in 10 Medical Products in Developing Countries is Substandard or Falsified' [28 November 2017] <https://www.who.int/news/item/28-11-2017-1-in-10-medical-products-in-developing-countries-is-substandard-or-falsified> accessed 15 February 2025

[246] P Sharma and RYK Chan, 'Counterfeit Proneness: Conceptualization and Scale Development' [2011] 27 (5 &6) Journal of Marketing Management

behavioral, cognitive, and socio-normative characteristics that represent a consumer's natural predisposition to choose counterfeit items over genuine ones. Such traits contribute to their disregard for public welfare concerns or legal risks associated with counterfeiting.[247]

Price sensitivity and brand sensitivity further shape consumer preferences for counterfeit goods. Price-sensitive consumers often perceive counterfeit products favourably due to their affordability[248], linking price sensitivity to factors such as income, perceived risk, and value consciousness[249]. Conversely, brand sensitivity can drive consumers toward counterfeits as they offer the semblance of prestige associated with luxury brands[250]. Many consumers purchase counterfeit luxury items to project social status while balancing authenticity and affordability.[251] These behaviours are influenced by subjective norms and personal attitudes, as outlined in the **theory of reasoned action**, which suggests that counterfeit proneness can significantly impact consumer decision-making norms and behaviors.[252] Together, these factors highlight the complex interplay of socio-economic and psychological influences driving the counterfeit market.

ANALYSING THE BIAS CREATED BY WESTERN PERSPECTIVES

The 2024 Special 301 Report, despite presenting itself as an in-depth review of the worldwide enforcement of intellectual property (IP), continues to show a historically Western-centric and politically charged stance of the U.S. Trade Representative. It often favors the interests of the United States over economic interests, while the sovereignty of developing countries in the setting of IP policies suitable for their specific socio-economic context is overlooked.[253] The strategy by focusing on issues like counterfeit goods and bad-faith trademark registrations bypasses the core responsibility of the right holders under the TRIPS Agreement and fails to build evidence or a critical study of the existing enforcement structures.[254] The approach of

[247] Amir Nia and Judith L Zaichkowsky, 'Do Counterfeits Devalue the Ownership of Luxury Brands?' [2000] 9 (7) *Journal of Product & Brand Management*
[248] *Ibid*
[249] Ludovica Cesareo, Alberto Pastore, and Fabrizio Cesaroni, 'Counterfeiting and Culture: Consumer Attitudes Towards Counterfeit Products' [2015] *Journal of Marketing Trends*
[250] *Supra* note 230
[251] *Supra* note 238
[252] M Fishbein and I Ajzen, 'Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research' (Addison-Wesley 1975)
[253] Stephen S Roach, 'America's Weak Case Against China' (Project Syndicate, 24 April 2018) https://www.project-syndicate.org/commentary/america-case-against-china-trade-deficit-by-stephen-s-roach-2018-04 accessed 15 February, 2025
[254] Viviana Muñoz-Tellez, Nirmalya Syam, and Thamara Romero, *Time for a Collective Response to the United States Special 301 Report on Intellectual Property* (Policy Brief No. 65, South Centre 2019)

copyright in the report also illustrates the narrow view, focusing a lot on enforcement without contributing to a more balanced regime for global IP.

It neglects the experience with fair use, which could serve as a model for developing flexible copyright frameworks elsewhere. Instead of encouraging multilateral discussions on exceptions and limitations that support public access and innovation, the report emphasizes alleged deficiencies without offering actionable solutions, further reinforcing its political motivations[255]. The report is also flawed because of its repetitious nature and inability to progress in its analysis. It does not appear relevant since it repeats information ffrom past years and simply delivers small changes, failing to present new viewpoints or inventive answers to the most pressing issues, such as online piracy. The OECD is another institution that offers more in-depth and useful knowledge. The report's analysis of indigenous innovation programs and technology transfer requirements demonstrates a bias toward US economic interests by neglecting developing nations' attempts to strengthen domestic innovation capacity and solve socioeconomic inequities. This promotes a limited, Western-centric narrative, undermining global attempts to promote inclusive and fair intellectual property governance.

SOLUTIONS

To address the issues raised by cross-border intellectual property protection, it is necessary for harmonization of legal regimes and de-escalation of geopolitical tensions. It can be achieved through bilaterally and multilateral agreements such as FTAs and IP treaties that make for common standards of protection of IP[256]. These acts may serve as instruments for aligning national legislation with international norms and decreasing disparities in intellectual property protection between jurisdictions. Efforts, such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), have already begun to unify worldwide IPs, but more effort will be required to satisfy evolving global requirements.

Furthermore, the establishment of international authorities or regulations for resolving cross-border intellectual property issues may minimize the uncertainty that plaintiffs face. For instance, an adjudicatory body could demand the setup of a united international organisation to establish transparency and clarity on issues pertaining to the territorial extent of IP rights and infringement remedies. This will result in resolution of disagreements like the one seen in

[255] *Supra* note 50

[256] Ashmika Agrawal and Paramita Choudhury, 'TRIPS-Plus Regulations in Bilateral and Statewide Trade Agreements: Their Bearing on Intellectual Property Rights and International Trade' [2023] *Alliance Journal of Intellectual Property Law*

Equustek Solutions Inc. v. Google Inc.[257] by setting up international standards concerning the scope of enforcement in the Cross-border IP disputes.

Diplomacy and dialogue between nations play a crucial role in establishing mutual confidence and trust which pave the path for technology transfer. Negotiations through diplomatic channels can help harmonise the IP law and enforcement system, leading to more international collaborations and innovative advancements. In the events of technology transfer, the government and corporate authorities can engage in public dialogues to eliminate threats concerning IP theft while making channel for knowledge exchange.

At last, countries such as the United States which possess strong IP protection systems should come forward and engage in diplomatic efforts to improve compliance within weaker nations. For example, while utilizing Special 301 sanctions, the United States might exert diplomatic and economic obligations on trade partners to advance their intellectual property laws and compliance system[258]. But such pressure tactics must be accompanied by equal levels of negotiations to avoid worsening international tension and balance trade distortions.

By standardizing legal norms, promoting diplomatic discourse, and establishing clear methods for enforcement, the international community may discover solutions to cope with the complications in cross-border IP protection and promote a more conducive climate for global innovation and collaboration.

CONCLUSION

In conclusion we observe that intellectual property (IP) enforcement presents difficult issues in South and Southeast Asia, where counterfeiting and piracy are still pervasive. These concerns originate from socioeconomic differences, cultural attitudes, and enforcement discrepancies, which are frequently criticized by Western nations. While the USTR Special 301 Report aims to address these issues, its approach is mainly based on Western goals, frequently going beyond international accords such as TRIPS. This causes tension because emerging nations must balance global IP aspirations with their local developmental and socioeconomic requirements. Addressing these difficulties requires a more inclusive and balanced approach to IP governance. Instead of focusing just on penalties, joint efforts should prioritise solutions that take into consideration each nation's specific circumstances. Strengthening international relationships, aligning legislative norms, and cultivating mutual

[257] *Google Inc v Equustek Solutions Inc* [2017] SCC 34

[258] Graeme W Austin, 'A Conflicts of Law Approach to Intellectual Property Research' in Irene Calboli and Maria Lillà Montagnani (eds), *Handbook of Intellectual Property Research: Lenses, Methods, and Perspectives* (Oxford, 2021; online edn, Oxford Academic, 23 September 2021)

understanding can help to build a framework that safeguards innovation while also promoting long-term growth. By overcoming these gaps, the global community may achieve more equitable and effective IP enforcement, benefiting artists, enterprises, and societies globally.