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TABLE OF CONTENTS

India at the crossroads: Charting a Hybrid Path for AI Copyright Between U.S. Formalism and Chinese Pragmatism

Author: Deepak Kumar[1]

Abstract

The rapid advancement of generative artificial intelligence (AI) fundamentally challenges copyright law's foundational human authorship requirement, creating legal uncertainty across global jurisdictions. This paper conducts comprehensive comparative analysis of how the United States, China, and India approach AI-generated content protection, with additional examination of developments in the European Union and United Kingdom. The comparative analysis reveals three distinct regulatory models. The United States exemplifies formalist doctrine, categorically denying copyright protection for works lacking substantial human creative control, grounded in constitutional text and economic incentive theory. China has developed pragmatist, technology-neutral frameworks through landmark judicial decisions that recognize AI-assisted works when humans demonstrate meaningful creative involvement. India occupies an ambiguous position, possessing explicit statutory provisions addressing "computer-generated works" under Section 2(d)(vi) of the Copyright Act, 1957, but lacking definitive judicial interpretation for modern generative AI contexts. Through detailed examination of landmark cases Thaler v. Perlmutter[2] (United States), Tencent v. Yingxun[3] and Li Yunkai v. Liu Yuanchun[4] (China), and India's unresolved RAGHAV[5] controversy, the paper reveals divergent philosophical foundations while identifying emerging consensus principles: no jurisdiction recognizes machines as authors, purely

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[1] Second year law student at Chanakya National Law University, Patna.
[2] Stephen Thaler v. Shira Perlmutter, Registrar [2023] Civ Action No. 22-1564 (BAH).
[3] Shenzhen Tencent Computer System Co. Ltd. v. Shanghai yingxun Technology Co. Ltd. 0305 Civil First Trial No. 14010.
[4] Li v. Liu, Beijing Internet Ct., Case No. (2023) Jing 0491 Min Chu No. 11279 (Nov. 27, 2023) (China).
[5] Ankit Sahni, Registration of "SURYAST," U.S. Copyright Office Review Board Decision (Dec. 11, 2023). Microsoft Word - 2023-12-11_SURYAST Review Board Decision Letter final.

autonomous outputs lack protection, and documentation requirements increasingly govern authorship claims. India's statutory language defining authors as "the person who causes the work to be created" requires urgent judicial clarification. This paper proposes hybrid policy recommendations combining Chinese-style contemporaneous documentation requirements with U.S. substantive creative control standards. This approach would create administrable rules balancing innovation incentives, human creativity protection, international harmonization, and doctrinal coherence, positioning India as leader in thoughtful AI copyright policy rather than passive follower of foreign developments.

Keywords: artificial intelligence (AI), copyright, authorship, policy recommendations.

I. INTRODUCTION

The rapid growth of the Artificial Intelligence has disrupted the traditional Creativity process in a way that allows AI tools to produce literary work, artistic and musical work without or with limited human input. While these technological advances hold out considerable promise, they also raise fundamental challenges to long-standing copyright principles historically grounded in human authorship and originality. Copyright law treats expression not just as a finished product but as an extension of human thought and existence. It is built on the philosophical assumption that authorship arises from conscious, intentional human creativity.[6] This onto-epistemological foundation, rooted in Enlightenment conceptions of individualist creativity, contributes to understanding why AI-created works challenge copyright doctrine at its most basic level.[7]

The more autonomous AI systems become in creating works, the more legal systems around the world face questions such as whether such works are entitled to copyright protection, who should be considered an author, and in whom the ownership rights should vest. While copyright law has successfully adapted to earlier technologies shift from printing press to digital reproduction, but this time AI presents a fundamentally different challenges, because it has a potential to replace,

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[6] Wenwei Guan, *The Origin of Copyright: Expression as Knowing in Being and Copyright Onto-Epistemology* 2-15 (Routledge 2021).
[7] *Id.* at 18-24.

rather than merely assist, human creativity. Past technologies changed how creative works were reproduced or distributed but AI tools threaten to fully automate the creative process itself.[8] This recent development creates legal uncertainty and undermines both the incentives to innovate and the proper operation of creative markets.

This paper presents a comparative study of how the concept of AI-generated content has been addressed within the realm of copyright law in the US, China, India, and EU/UK. The US represents a formalist approach, rigidly requiring the input of human authors. China is developing a pragmatist framework, as reflected in recent judicial decisions that recognize certain AI-created works under specific conditions. The law is ambiguous in India, whose statutory language could accommodate AI authorship but lacks definitive judicial interpretation.[9] These diverging approaches underscore the lack of international consensus on basic questions regarding the authorship of AI, standards for originality, and ownership.[10]

II. TRADITIONAL COPYRIGHT PRINCIPLES AND THE AI CHALLENGE

A. Human Authorship and Originality

Copyright protects only "original works of authorship" and requirement for getting copyright is originality which must come from human creative skill.[11] Although the originality requirement is fairly modest, it is the constitutional and philosophical foundation of the copyright. In the *Feist Publications, Inc. v. Rural Telephone Service Co.,* the U.S. Supreme Court stated that originality requires at least minimum degree of creativity and independent authorship. These elements observed by the court, answers the question that what matters most to claim copyright protection.[12] And it is also essential that work must be created by the author, not copied from someone else.[13]

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[8] James Huston, The Evolving Role of Copyright Law in the Age of AI-Generated Works, 2 J. Digital Techs. & L. 886, 895-98 (2024).

[9] Yiheng Lu, Reforming Copyright Law for AI-Generate CONTENT: Copyright Protection, Authorship and Ownership, TechReg 81, 88-90 (2025).

[10] *Id.* at 92-94.

[11] 17 U.S.C. § 102(a) (2018).

[12] Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

[13] *Id.* at 352-60.

This standard reflects a deeper belief that creativity is essentially a human trait. Since the eighteenth century, the law has treated originality as an expression of an author's intellectual creation and personality, basically an idea that has long formed the foundation of copyright.[14] The doctrine assumes that authorship is rooted in conscious human thought and intentional creativity, qualities that traditional copyright frameworks have never attributed to non- human entities.[15]

The requirement of human authorship is usually implicit, rather than explicit, in statutory language, but nonetheless pervasive in the jurisprudence on copyright in various jurisdictions. The Courts and copyright offices around the world have repeatedly emphasized that a work must come from a human mind to receive protection. But this principle has been questioned in cases involving animals, natural phenomena, and automated processes, but the outcome has been consistent that is copyright only applies when there is some involvement of human creativity and skill.[16]

B. How AI Challenges Traditional Principles.

Traditional copyright frameworks are fundamentally disrupted by generative AI systems in multiple ways. First, they can produce works that are as creative and unique as those written by humans, but without the deliberate intentionality that has traditionally been connected to authorship. While copyright law has adapted to technological shifts from printing presses to digital reproduction, AI introduces a qualitatively different disruption by automating creative decision-making itself rather than merely facilitating reproduction or distribution.[17]

Second, AI systems create content by running algorithms that analyses enormous amounts of training data, it detects patterns and then recombine those patterns to produce a new output. This method of creation is vastly different from how humans think, imagine, or express ideas. Because of this, an important question arises that can something produced through automated, pattern-based computation really be considered an "intellectual creation" in the way copyright law understands

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[14] Guan, *supra* note 1, at 25-32.
[15] *Id. at 33-38.*
[16] See Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018) (denying copyright to photographs taken by a macaque); *see also* U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16,190 (Mar. 16, 2023).
[17] Hutson, *supra* note 3, at 896-900.

it?[18] Many Scholars believe the answer is no. They argue that AI does not think, feel, or make choice in the way humans do, and therefore its outputs lack the human originality and creative intention that copyright protection is meant to reward.[19]

Third, AI-generated works are difficult to attribute because they are created through a collaborative and distributed process. Many people play a role in producing an AI's output: the engineers who design the model and how it functions, the individuals whose works form part of the training data, and the users who give prompts or instructions. When so many contributors are involved, it becomes hard to fit AI creation into copyright's traditional idea of a single author. This raises complicated questions about who should be recognized as the rights holder and how those rights should be shared fairly.[20]

C. The Spectrum of AI Involvement

AI's involvement in creative work falls along a spectrum, from situations where it plays only a small supporting role to cases where it operates almost entirely on its own. Recently scholars highlights that the resolving copyright issues in this area requires a tiered framework that adjusts according to how much human creativity is actually involved.[21] Instead of applying blanket rules that reject all AI-assisted creations, this approach focuses on whether there is a clear, meaningful human contribution to the final work.[22] Such a tiered model will recognizes that AI does not participate in every creative process in the same way, and therefore copyright protection should depend on the extent of human input rather than automatically excluding any work touched by AI.[23]

At one end of the spectrum, AI functions merely as a tool similar to a word processor or photo-editing software, while the human creator retains full control over all the meaningful creative choices. For example, a writer might use AI to check grammar or suggest synonyms while

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[18] Lu, *supra* note 4, at 86-87.

[19] Jane C. Ginsburg, *The Concept of Authorship in Comparative Copyright Law*, 52 DePaul L. Rev. 1063, 1075 (2003).

[20] Rachel So, *Authorship and Attribution of AI Generated Content* 3-6 (2025).

[21] WooJung Jon, Prompting Creativity: *Tiered Approach to Copyright Protection for AI-Generated Content in the Digital Age*, 13 Media & Comm'n, 2025, Article 9420, at 8-12.

[22] *Id.* at 12-15.

[23] *Id.* at 15-18; *see also* Lu, *supra* note 4, at 87-88 (discussing spectrum of AI involvement).

composing an original story through his own creative skill. So, in such cases, the work is clearly a human-authored creation, and copyright protection applies because the AI's role is purely mechanical and supportive.[24]

At the opposite extreme, AI systems can generate the content autonomously, based on minimal or basic prompts or sometimes without any real human direction. For instance, an AI may produce thousands of variations of abstract artwork or musical pieces without any specific human input beyond the initial programming and system design. Now these kinds of outputs raise the most difficult questions: should they receive copyright protection at all, and if so, who should be considered the author or rights holder?[25]

Between these two extremes lies a substantial middle ground where human and AI contributions become closely intertwined. In such situations, a user may provide detailed prompts, select and refine the AI's outputs, make repeated adjustments, and combine several AI-generated components into a larger creative work. The degree of human creativity involved in these processes can vary widely, which makes it difficult to establish strict, one-size-fits-all rules. As a result, courts and copyright authorities are increasingly faced with the challenge of deciding when a person's contributions are significant enough to qualify as copyrightable authorship in works created through human and AI collaboration.[26]

III. THE UNITED STATES: STRICT HUMAN-AUTHORSHIP FORMALISM

A. Judicial Foundations: Naruto and Thaler

U.S. courts have consistently refused to extend copyright protection beyond human creators. In *Naruto v. Slater* (9th Cir. 2018), a macaque monkey triggered a photographer's camera, producing widely circulated "monkey selfies."[27] PETA filed a lawsuit on behalf of the monkey's claiming that it should hold the copyright. The Ninth Circuit Clearly rejected this argument, and reasoned that animals do not have standing under the Copyright Act.[28] The court explained that

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[24] U.S. Copyright office, Copyright and Artificial Intelligence Part 2: Copyrightability 46-52 (Jan. 2025), https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf.
[25] *Id.* at 21-23.
[26] So, *supra* note 15, at 8-12.
[27] Naruto v. Slater, 888 F.3d 418, 420 (9th Cir. 2018).
[28] *Id.* at 426.

statutory references to authors' "children," "widows," and "widowers" inherently assume human authorship, as only humans marry, reproduce, and die in ways recognized by law.[29] This reasoning is often applied to AI as well, machines, like animals, lack legal personhood and cannot respond to the economic incentives that copyright is designed to provide.

In the case of *Thaler v. Perlmutter*, the courts directly addressed the question of AI authorship.[30] Dr. Stephen Thaler sought copyright registration for "*A Recent Entrance to Paradise*," a visual artwork created entirely by his AI system, the "Creativity Machine," without any human input. Both the district court and the D.C. Circuit rejected his claim, reasoning that the text, structure, and constitutional basis of the Copyright Act all assume human authorship.[31] The judges highlighted that copyright protection exists to incentivize human creativity, which is basically a purpose that makes no sense when applied to machines, which cannot respond to economic rewards.[32] And the Thaler's argument that he should own the copyright simply because he owned the AI was also rejected. The court made it clear that owning a tool does not grant authorship over the work it produces autonomously.[33]

B. The Copyright Office's Practical Framework: Zarya of the Dawn

While courts consistently deny copyright protection for works created entirely by AI, the U.S. Copyright Office has clarified when humans using AI tools can claim authorship. In *Zarya of the Dawn* (2023), artist Kristina Kashtanova used Midjourney to generate images for a graphic novel.[34] The Office granted copyright protection for her text, as well as her creative selection and arrangement of the images, but denied protection for the Midjourney-generated images themselves.[35] The decision introduced two important concepts. The first one is, the "distance test," assesses how much control a user has over an AI output, because prompts alone cannot fully predict

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[29] *Id.* at 425-26.
[30] Thaler v. Perlmutter, 2023 WL 5333236 (D.D.C. Aug. 18, 2023), aff'd, No. 23-5217, 2025 WL 678945 (D.C. Cir. Mar. 15, 2025).
[31] *Id.* at 4-6.
[32] *Id.* At 5.
[33] *Id.* at 7.
[34] U.S. Copyright Office, *Re: Second Request for Reconsideration for Refusal to Register Zarya of the Dawn* (Registration No. VAu001480196; Correspondence ID: 1-5T5320R) (Feb. 21, 2023), https://www.copyright.gov/docs/zarya-of-the-dawn.pdf.
[35] *Id.* at 6-10.

or determine what an AI produces, simply providing prompts does not constitute authorship.[36] The second thing is, the "hiring artist analogy," compares prompting an AI to hiring a human painter, giving instructions does not make you a co-author of the painter's work.[37]

The Copyright Office's January 2025 Report (Part 2) formalized these principles after reviewing over 10,000 public comments, 90% of which supported maintaining human authorship requirements.[38] The report identified three situations where human authorship exists: (1) when human-created inputs are still recognizable in AI outputs; (2) when users make meaningful creative decisions through editing, arranging, or selecting outputs, and (3) when AI functions purely as a tool to support human creative choices, rather than making expressive decisions independently.[39]

IV. CHINA: PRAGMATIC TECHNOLOGY-NEUTRALITY

A. From Scepticism to Flexibility: Feilin and Tencent

Chinese courts initially denied protection for AI-assisted works but quickly reversed course. In *Beijing Feilin Law Firm v. Beijing Baidu Netcom* (2019), the Beijing Internet Court held that a legal research report generated using AI analytics lacked sufficient human creative control to qualify for copyright.[40] The court emphasized that neither the software developer nor the user exercised enough creative influence over the final expressive form.[41]

Eight months later, the Shenzhen Nanshan District People's Court reached the opposite conclusion in *Tencent v. Yingxun* (2019).[42] Tencent's "Dreamwriter" AI had generated over 300,000 automated financial news articles. When a competitor copied one article, Tencent sued for infringement. The court granted protection, holding that while AI cannot be an author, Tencent's human team exercised creative control by selecting data sources, designing algorithmic triggers,

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[36] *Id.* at 8-9.
[37] *Id.* at 9.
[38] U.S. Copyright office, Copyright and Artificial Intelligence Part 2: Copyrightability, *supra* note 19, at 3.
[39] *Id.* at 46-52.
[40] Beijing Feilin Law Firm v. Beijing Baidu Netcom Sci. & Tech. Co., Beijing Internet Ct., Case No. (2018) Jing 0491 Min Chu No. 239 (Apr. 25, 2019) (China).
[41] *Id*.
[42] Tencent v. Shanghai Yingxun Tech. Co., Shenzhen Nanshan Dist. People's Ct., Case No. (2019) Yue 0305 Min Chu No. 14010 (Dec. 24, 2019) (China).

building linguistic templates, and choosing stylistic conventions.[43] The court recognized Tencent the corporate legal entity as the author under Article 11 of Copyright Law of the People's Republic of China, which permits organizations to claim authorship when a work is created under their direction and responsibility.[44]

The Tencent decision reflect an indispensable principle which state copyright protection does not depends on how much or how little AI is involved instead it depend on how much human actually exercised creative control.

B. Expanding Protection: Li Yunkai and Lin Chen

In the case of *Li Yunkai v. Liu Yuanchun (Beijing Internet Court 2023),* the court extended the copyright protection to AI-generated visual art.[45] Li used Stable Diffusion to create *Spring Breeze Brings Tenderness*, and refining the output through an extensive and iterative prompting process li provided 20 positive prompts, 75 negative prompts, and 10 refinement terms.[46] When the defendant copied and republished the image, Li filed suit. The court ruled in Li's favour, finding that Li's iterative prompting reflected a "personal intellectual achievement" involving aesthetic judgment about composition, style, colour, and emotional tone.[47] The decision explicitly rejected the U.S. Copyright Office's approach in *Zarya of the Dawn*, concluding that detailed and repeated prompting can constitute sufficient creative control even if users cannot predict the exact output of the AI system.[48]

In the case of *Lin Chen v. Hangzhou Gauss Air Film Technology Co., Ltd.,* the Changshu People's Court, reinforced this emerging trend.[49] Lin created a "Half-Heart" image using a hybrid workflow he prompted Midjourney, edited the result manually in Photoshop, and then fed the edited versions back into Midjourney for further refinement. Considering this effort court held that this mix of AI generation, manual editing, and repeated adjustments showed enough human creativity to qualify

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[43] *Id*.
[44] Copyright Law of the People's Republic of China, art. 11 (2020).
[45] Li v. Liu, supra note 3.
[46] *Id*.
[47] *Id*.
[48] *Id*.
[49] *Lin Chen v. Hangzhou Gauss Airfilm Technology Co.,* (2024) Su 0581 Min Chu No. 2361 (Changshu People's Ct. Apr. 22, 2024).

the work for copyright protection.[50] Increasingly, Chinese courts view generative AI as a powerful creative tool which is more advanced than Photoshop, but still just a tool that supports human expression when the user plays an active, meaningful creative role.

C. Evidentiary Standards and Policy Rationale

In September 2025, the Beijing Internet Court introduced strict documentation rules for anyone seeking copyright protection for AI-assisted works.[51] Claimants must now keep detailed, real-time records showing their creative contribution such as explanations of their artistic intent, logs of the prompts and parameters they used, evidence of how they selected one output over another, and records of each iterative adjustment they made.[52] So, these requirement helps to stop people from making false ownership claims later and encourage users to stay actively involved in the creative process.

China's practical approach serves several government objectives. It supports and encourages domestic AI innovation by ensuring that creators can commercialize AI-assisted works. It also prevents the economic problems that might arise if enormous amounts of AI-generated content automatically fell into the public domain. And it fits with China's broader national priorities of promoting technological progress while maintaining social and economic stability.[53]

V. INDIA: STATUTORY AMBIGUITY AND THE PATH FORWARD

A. Legislative Framework and Interpretive Challenge: Section 2(d)(vi):

India's Copyright Act, 1957, contains explicit provisions on "computer-generated works," something not found in U.S. or Chinese law. Section 2(d)(vi) states that the author means "in relation to any literary, dramatic, musical or artistic work which is computer-generated, the person

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[50] *Id.*

[51] Beijing Internet Court Requires Evidence of Creative Effort to Claim Copyright Protection Over AI-Generated Content, Nat'l L. Rev. (Sept. 2024, https://natlawreview.com/article/beijing-internet-court-requires-evidence-creative-effort-claim-copyright-protection.

[52] *Id.*

[53] State Council of the People's Republic of China, *New Generation Artificial Intelligence Development Plan* (July 20, 2017), http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm.

who causes the work to be created"[54] These provisions, introduced in 1994, predate modern generative AI and were designed for deterministic software, not probabilistic neural networks.

Section 2(d)(vi)'s language creates interpretive challenges. In today's evolving era of AI, it has become exceedingly difficult to identify who is behind the AI output. when AI produce output multiple actors are involved such as one crafting prompts, developers training the models, data providers supplying datasets, investors funding infrastructure, so it becomes very unclear who should count as "the person who causes the work to be created. Courts might apply three different theories of causation to answer this. first, "but-for Causation" this would treat anyone involved in the chain of events as a potential author, which could lead to unmanageable claims of co-authorship. Secondly, "Proximate causation" this would identify the most direct contributor usually the user who provides the prompts but this approach risks overlooking the creative and technical contributions of developers who design the system. Lastly, "Substantial creative causation" this would require proof if someone exercised real aesthetic control over the final expressive output. And causation aligns most closely with traditional authorship ideas, but it may exclude many AI-assisted works where human control is limited.[55]

Whatever approach the court adopts will significantly affect the development of the Indian copyright law. A but-for test could create administrative chaos and frequent disputes over joint authorship and Proximate causation may overly favour users and unsettle the expectations of developers and investors in the AI sector. But the substantial creative causation would best fit global norms, but it demands that courts craft new ways to assess the degree of human creative control in AI-generated works.

B. The RAGHAV Controversy: Institutional Uncertainty

The RAGHAV case highlights the India's uncertainty around regulating AI. In November 2020, the Copyright Office granted registration for an artwork called "*Suryast*," an AI-generated artwork, which is created using an AI system named RAGHAV (Robust Artificially Intelligent Graphics and Art Visualizer) while registration RAGHAV was allowed to listed as co-author along with its

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[54] The Copyright Act, 1957, No. 14 of 1957, § 2(d)(vi) (India).
[55] Astha Ojha, *AI & Copyright in India: Bridging the Digital Divide*, 3 World Intell. Prop. J. 145, 152-54 (2025).

developer, Ankit Sahni.[56] This registration seemed as Indian copyright office was treating AI as a legal author.

But just a year later, in November 2021, the Copyright Office suddenly issued a withdrawal notice, asking for clarification and questioning whether RAGHAV could legally be considered an author at all.[57] This abrupt change reflects how uncertain and inconsistent the system is. The office has still not made a final decision, leaving RAGHAV status unclear and also didn't provide any guidance for others who want to register AI-generated works.[58] Many Legal scholars have criticized the first decision, and pointed out that AI systems lack the legal personality required for authorship under Indian law hence cannot qualify as author.[59]

C. Judicial Silence and Its Implications

Indian courts have not clarified the interpretation Section 2(d) (vi) related to generative AI. This silence brings a lot of uncertainty to the creators, developers, and the users. Lacking judicial direction, the applicants do not know whether their AI-aided works will be granted protection. The risk of liability is impossible to evaluate when the users produce infringing materials. And the Copyright Office does not have authoritative criteria in assessing registration applications.

This judicial vacuum is directly opposite to what happened in other jurisdictions. Whereas the U.S. and Chinese courts have passed dozens of rulings defining the standards of an AI author, the Indian courts have yet to reflect their views. This reticence can be attributed to a number of factors. The relative novelty of the use of generative AI tools in India reduces the number of disputes that have been taken to court. Plaintiffs fear the excessive cost of court filing and the time-consuming backlog of cases. And the Indian legal system has always been conservative in addressing modern technologies and would rather use case-by-case development of doctrine than a grand proclamation.

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[56] *See* Ankit Sahni, Registration No. A-145750/2020, Copyright Office, Government of India (Nov. 2020).
[57] U.S. Copyright office, re: Second Request for Reconsideration for Refusal to Register SURYAST (SR 1-110016599571; Correspondence ID 1-5PR2XKJ) 1-3 (Dec.11, 2023).
[58] *Id.*
[59] Ojha, *supra* note 50, at 155-56.

D. Comparing Indian Patent and Copyright Approaches

India's approach to the AI and the intellectual property shows an interesting split between how patents and copyrights are tested in patent law, Indian courts have been clearer that algorithms on their own cannot be patented, but if they are used by the user in a technical way to solve a real, practical problem then they may qualify for the protection.[60] This focus on the real world functionality instead on abstract categories which offers a useful lens that could also help and guide how copyright should deal with AI-generated works.

Applied to AI authorship, a more Functional reading of section 2(d)(vi) would focus on what the human contributor actually did. It would ask questions like, Did the person's input lead to an expressive result that is not just random or generic? Did they make meaningful choices that shaped how the final work looks or feels? Can they explain and repeat the creative steps they took? These kinds of inquiries mirror patent law's focus on reproducibility and technical contribution, suggesting that similar reasoning could influence how copyright doctrine evolves in the AI context.

E. Policy Considerations for Indian Law

India has special policy issues in the development of AI copyright doctrine. Being a big software exporter and having increasingly advanced AI, India enjoys the advantage of transparent regulation that promotes local innovation. However, being a developing country and as a creative country with a thriving creative sector, India must strike a balance between technology and ensuring that human creators do not lose their jobs to automated systems.

Indian courts and legislators should be guided by a number of policy objectives. To start with, transparency and consistency, authors must have consistent criteria of copyrightability. Second, technological neutrality, regulations must be uniform in relation to changing AI structures. Third, incentive building, protection must encourage the real contribution to creativity as opposed to windfalls of purely mechanical action. Fourth, international harmonization, India enjoys the advantage of doctrinal consistency with most of trading partners, but blindly imitating would overlook local situations.

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[60] Ferid Allani v. Union of India, 2019 SCC OnLine Del 10832.

The pragmatic approach of China will present an attractive package to India. The documentation requirement offers objective demonstration of creative involvement, hence lessening subjective judicial discretion. Technology-neutral standards can support fast AI development, without necessarily having to update legislations every day. And commercialization by provisions of corporate authorship evades metaphysical argument on machine consciousness.

It is, however, not supportable that India should blindly follow Chinese doctrine. The greater state-driven innovation and weaker individual rights in China could be incompatible with the constitutional norms in India that focus on individual liberty and property rights in India. Indian law could take the hybrid way by incorporating Chinese-type documentation requirements, but through adopting American-style substantive standards of demonstrable creative control.

VI. The European Union and United Kingdom: Regulatory Intervention And Evolving Standards

A. The EU AI Act and Copyright Interface

Recently the European Union has introduced most comprehensive regulatory framework across its all-member state titled "Artificial Intelligence Act in June 2024."[61] This act mainly focuses on safety and protecting fundamental rights, but it also contains provision that directly affect copyright. Article 53(1)(c), requires general purpose AI (GPAI) providers to implement copyright policies using state-of-the-art technologies to identify and respect rightsholders creation choice under the Digital Single Market (DSM) Directive.[62] Additionally, despite protecting trade secrets, Article 53(1)(d) mandates public disclosure of sufficient detailed summaries of training data content, including copyrighted works.[63]

This transparency requirements position the EU somewhere between the U.S. formalism and Chinese pragmatism. Instead of strictly denying copyright protection or recognizing AI assisted authorship, they prominence the process. It requires the proper documentation subsequently respect for creation and mechanisms that allow rightsholders to trace possible infringement. The

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[61] Regulation 2024/1689 of the European Parliament and of the Council of 13 June 2024 on Artificial Intelligence, 2024 O.J. (L178) 1.
[62] *Id.* art. 53(1)(c).
[63] *Id.* art. 53(1)(d).

European commission's July 2025 Code of practice for GPAI goes further, requires developers to ensure lawful access to training materials and prevent outputs from reproducing protected works. [64]

When it comes to authorship, EU copyright law still maintains traditional requirements. The Court of Justice of the European Union (CJEU) has contentiously held that a works is protected only if it reflects the author's own intellectual creation.[65] This approach grounded in traditional believe regarding copyright that value author creative expression rather than economic incentive. Content which is fully generated by AI autonomously cannot satisfy this test, but AI-assisted works may qualify when humans exercise sufficient creative control, it is a standard that similar to U.S. doctrine justified through different theoretical frameworks.[66]

B. UK Computer-Generated Works Regime

The case of the United Kingdom is different. Section 178 of the Copyright, Designs and Patents Act 1988 explicitly recognizes "computer-generated works" which defined as works created "in circumstances such that there is no human author."[67] Copyright is given to the person by whom the arrangements necessary for the creation of the work are undertaken[68] This provision is similar to India's Section 2(d)(vi) which could potentially cover AI-generated works.

But in January 2025, the government of the UK suggested major changes to the copyright of AI-generated works.[69] The consultation document suggest along with making it clear that protection for computer-generated works should apply only when there is some human involvement in the arrangements, even if that involvement is not sufficient to qualify as traditional authorship. Copyright protection may be not granted for the fully autonomous AI outputs, and the government

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[64] European Commission, *Code of Practice on General Purpose AI Models* (Nov. 2024), https://digital-strategy.ec.europa.eu/en/policies/contents-code-gpai.

[65] *See* Case C-5/08, Infopaq Int'l A/S v. Danske Dagblades Forening, 2009 E.C.R. I-6569, ¶ 45.

[66] *See Eleonora Rosati, Copyright and the Court of Justice of the European Union 98-100 (Oxford Univ. Press 2019).*

[67] Copyright, Designs and Patents Act 1988, c. 48, § 178 (UK).

[68] *Id.* § 9(3).

[69] UK Intellectual Property Office, *Artificial Intelligence and Intellectual Property: Copyright and Patents* (Consultation Paper, Jan. 2025), https://www.gov.uk/government/consultations/artificial-intelligence-and-ip-copyright-and-patents.

is also proposing mandatory labelling for the AI generated content which is similar to the transparency requirements introduced in the EU.[70]

These proposals underscore UK's mixed stand on protecting computer-generated work. It is true that the wording of the CDPA, Act 1988 could theoretically, support the broad recognition of AI-generated authorship but the current lawmakers are re-evaluating whether such wide protection will truly benefit the public. In the post Brexit era where UK is no longer bound by EU rules but still wants to keep some alignment with EU regulation to facilitate trade and cooperation easier, this gives the government space to creates its own copyright approach that encourages technological innovation while also ensuring that human creator interest and rights remain protected.

VII. COMPARATIVE ANALYSIS: DIVERGENCE AND CONVERGENCE

A. Three Models of AI Authorship

The three models of AI authorship are identified as global approaches to AI authorship. First is the formalistic model, the United States is a formalist model that strictly rejects protection of media that do not have substantial human creators. This approach is based on the theory of constitutional text and economic motivations in order to view AI as something that never can be an author, despite the quality of output. Prompts are not protectable on their own but hey only gain protection when a human contributes creative editing, selection, or arrangement.

The pragmatist Model, a technology neutral approach. China has adopted this particle approach that looks for a real human involvement. Court focuses whether a human really made real creative decision that shaped the final result. This approach helps to protect genuine human creativity while staying flexible as technology.

Lastly, the ambiguity model, which is reflected in India. it has a provision that talk about the computer-generated work, but its meaning is not clear in the age of AI. Although it has a legal structure to deal with AI authorship, but there is lack of clear guidance on how to interpret this old

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[70] *Id.* at 18-22.

legal language for modern technologies. This uncertainty creates challenges, but it also keeps the door open for flexible future legal development.

B. Underlying Jurisprudential Divides

These different approaches to copyright arise from deeper philosophical views about what copyright is for. In the U.S. copyright is treated as an economic incentive with the clear constitutional limits. It is seen as way to encourage human creativity by giving creators limited monopiles over their work. Copyright exists to motivate human innovation, but machines need no such motivation.

The Chinese doctrine values Practical innovation and economic growth, which considers copyright. It is considered as one of the mechanisms among from the many things that aid in advancing the national technological capacity. Here protection helps to promote the commercialization, to avoid market disruption, and indicative of state support for developing sectors instead of just rewarding individual founders. Because of this perspective, China is more open to recognizing AI- assisted authorship when doing so advance development goals.

India and Europe approaches reflect mixed influences. India's traditional law heritages suggest that it has similarity with U.S. formalism, but its provision related to the computer-generated work indicate that lawmakers are open to moving beyond a purely human authorship requirement. The EU, on the other hand, its law on copyright reflects the personal creative expression, which makes AI authorship less acceptable. But its regulatory emphasis on detailed transparency requirement creates a pathway for safeguarding AI-supported works when creators can meet high documentation standard.

C. Emerging Consensus Principles

There is some similarity in all the countries even if there are gaps in doctrine. First, AI systems cannot be authors. No jurisdiction treats machines as legal entities who can obtain copyright. Even China's flexible system grants authorship only to human users and corporate bodies, not to the AI system itself.

Second, there is a total absence of protection for outputs that are purely autonomous. If there is no human creative input in the content produced by the AI, then there is no copyright protection in all jurisdictions. The only disagreement is around what is meant by "creative involvement." No principle is in contention. It is universally accepted that some involvement is necessary.

Third, authorship can be claimed by humans who are using AI mere as tools. Where the AI is on the same level as Photoshop or a camera which simply follow instructions from a human without making independent expressive decision. The only disputes are in the borderline case where the AI's involvement is more than execution, but the human control is significant.

Fourth, there is more emphasis on documentation. The evidential requirements of China, the transparency obligations of the EU, and the recommendations of the U.S. Copyright Office all converge in the focus on contemporaneous evidence of the creative process. This convergence is pragmatically driven by the understanding that claims of authorship over the content AI systems distinguish from human creative content should be supported by evidence.

VIII. POLICY RECOMMENDATIONS AND FUTURE DIRECTIONS

A. Recommendations for India

As the technology keeps changing, Indian courts and policymakers need to explain how AI authorship should work, while also still remaining flexible as circumstance to evolve.

Judicial interpretation of Section 2(d)(vi):

Courts such as the Supreme Court and High Courts should hear the cases that deal with the meaning of the phrase 'the person who causes the work to be created' when it comes to generative AI. Judges should use a standard that looks at whether a person had real creative control over the final output rather than merely relying on the AI. This step would ensure the balance between the traditional idea that authorship must involve human creativity with the law which allow protection for computer generated work.

Documentation requirements:

India should form evidentiary standard for the claim of AI authorship by blending China's documentary requirement approach. The copyright office should mandate the applicant to provide records such as a statement explaining their creative goals, history of prompt that reflect how they refined the AI inputs, and evidence which shows they made edits after generation and any document that prove their claim. These steps would help the court to decide the author effectively.

Legislative clarification:

The parliament should consider that there is need for amendment of section 2(d)(vi) of the Indian copyright act to clearly cover generative AI. Such amendment could make it clear that "causing a work to be created" requires demonstrable creativity control exercised through iterative engagement instead of mere an act of providing a prompt. Another option would be, adaptation of tiered protection framework which grant full copyright when human contribute real creativity, similarly limited protection when human involvement is minimal and no protection when AI creates the work itself.

Regulatory guidance:

Copyright office should provide a clear guideline that clearly address how they are going to review the AI assisted work for the registration. These guidelines should clarify what documents applicant need to submit, grounds which decide whether applicant had enough creative control, how the cases will be treated if humans and AI worked together, and importantly how applicant challenge registration. Clear rules like these would reduce and help the law to develop gradually over time.

B. Learning from U.S. Formalism

India can learn from the U.S. doctrine and can adopt part of it, but it should avoid applying these rules too rigidly. The "distant test" which means if a person does not control the specific details of what the work looks or sound like, if they do not, they probably should an author. So, Indian courts could use this test to evaluate AI related authorship but apply should apply it more flexible than U.S. authorities do.

The U.S. focus on constitutional purposes is also worthy of consideration. There are no clauses in the Constitution of India that are similar in meaning to Article I, Section 8 of the U.S. copyright law but the free speech provision of Article19(1) (a) and the cultural considerations in Directives Principles might guide copyright policy. Courts may consider that the purpose of copyright is to serve constitutional values and thus protect human creative expression and we should be careful about extending copyright protection to machine-created content that has no human author.

However, India should not follow the U.S. approach too strictly. The blanket rejection of all prompt-based content even when the prompts are incredibly detailed or created through multiple refinement, is not good. It would be beneficial if India incorporate flexible and nuanced approach that recognizes the content created through multiple refinements, thoughtful prompting, and editing of AI outputs as genuine human contribution.

C. Learning from Chinese Pragmatism

China's approach to AI and authorship offers extremely useful insight for India. Chinese court more focuses on question that, did a human make meaningful creative choice? Instead of worrying about how advanced the AI is or what AI did, this practical, technology neutral method suits best because it adapts modern technologies without needing frequent changes to the law.

India should adopt documentation-focused evidentiary standards system a China's recent perspective. This approach not only ensure genuine participation by the author in the creative process, rather than relying entirely on AI, but also facilities to judiciary with concrete evidence when resolving the authorship claims.

Furthermore, India needs to be cautious, it should adopt China's idea but must not copy them. China's preference for the corporate authorship stems from its state centric ownership model, might not align with India's mixed economy and stronger protection for individual property rights. The recognition to individuals as author along with allowing them to transfer their rights to employers through agreements will be more suitable for India it balance personal authorship with commercial needs.

D. Addressing Future Challenges

The issues that AI brings toward us is not uniform. This emerging issue will evaluate evolving AI framework. Multimodal AI tools that are capable of generating image, audio, text, and video create complex authorship scenario. For instance, when the users prompt to generate a video with original song which is already in public domain then it creates a confusion that who own which element. Considering this court will need clear rules to break down this different element and decide who is responsible for which part.

Using AI collaboratively raise a difficult question about who should count as joint author. If several users provide prompts that feed into one AI-generated work, should they all be treated as co-authors? Under traditional copyright rules, joint authorship requires both an intention to work together and meaningful, protectable contributions from each person. Uncovering how these principles apply when AI is involved will require looking closely at what each user actually did and whether they meant to collaborate.

Cross-border authorship disputes will increase as AI systems trained in one country generate content for users in another, and that content is then shared or distributed elsewhere. So, Courts will need to decide which country's authorship rules apply through conflict-of-law analysis. International agreements or model laws could help reduce this uncertainty, but reaching common ground will be difficult because different countries take different approaches to AI authorship.

The copyright status of training data is still unsettled. The U.S. Copyright Office's January 2025 Report stated that fair use applies to training data, but only through the case-by-case analysis. In contradiction, the EU requires developers to follow opt-out rules. India has not clarified its position at all, leaving AI developers uncertain about what is allowed. Clear guidelines that balance the interests of developers with the rights of creators might help India's AI industry grow along with protecting intellectual property right.

IX. CONCLUSION

Generative AI has compelled the copyright systems across the world to re-examine their basic assumptions about creativity, authorship, and the very purpose of intellectual property law. In the

United States, the legal framework remains firmly tied to the idea that only humans can be authors, and both the Constitution and copyright statutes are treated as clear barriers to granting protection for AI-generated works. But China, on the other hand, follows a more flexible and technology-neutral approach, allowing copyright protection as long as a human makes a meaningful creative contribution, even if AI is heavily involved in the process. India is in a more uncertain position, while its law explicitly mentions computer-generated works, the courts have yet to clarified how these provisions should apply to advanced AI systems. However, the European Union and the United Kingdom follow hybrid models that combine regulatory requirements for transparency with developing case law that continues to refine the standards for authorship.

With the growing size of generative artificial intelligence, jurisdictions must strike a balance between conflicting interests: they must encourage the creativity of humans, drive technological progress, avoid economic instabilities, and preserve the consistency of doctrines. No single approach would meet all stakeholders. The U.S. model safeguards human creative primacy but could kill innovation aided by AI, as it refuses to grant protection to the works that require significant amount of human labour together with AI implementation. The pragmatism promoted in China promotes innovation but can be extended to a level that is overprotective, and this can steal the benefits of copyright in its original purpose of rewarding true creativity. India's ambiguity creates flexibility for future development at the cost of unacceptable uncertainty for the contemporary creators and developers.

Currently India really needs a clear rule on how its copyright law specially section 2(d)(vi) applies to content created with generative AI. This clarity could come from judicial interpretation, legislative amendment, or administrative guidance, but some direction is necessary. Till now a balanced solution would be to combine China's idea of document requirement, with a rule that copyright applies only when a human shows real, meaningful creative involvement. So, this kind of system would support the technological growth, give businesses more confidence in planning, and this will also help to position India as leader in AI policymaker instead of waiting for other nation to set the standard. India stands at important turning point right now. It has a chance to learn from the other mistakes and what they have done well along with creating its own approach that fits India's unique social, legal, and constitutional values.

Closing the Remedies Gap: Implementing a Tiered Liability Matrix (AAILM) for Unintentional AI Patent Infringement in India

Author: Sneha Sharma[1]

ABSTRACT

Artificial Intelligence's (AI') recent times growth has proved to be extremely beneficial, starting from students and teachers to big and small industries. Micro Small and Medium Enterprises ('MSME') in India have developed prototypes, designs, and models, but it has its own shortcomings since the AI generated results bear similarity to components, processes already protected by patent law. Neither is there any distinction provided between intentional and unintentional infringement in the India's Patent framework, nor does it recognise AI as inventor. Subsequently, when MSMEs unintentionally copy patented works while using AI and incur penalties, it discourages innovation and technology. This paper aims to shed light on the urgency to acknowledge the peculiar character of AI infringement. Based on doctrinal analysis, global trends, and policy considerations, the paper has proposed a structured AI-Attribution and Liability Matrix ('AAILM'), a nuanced construct distributing responsibility between the human user, the AI developer, and the autonomous model based on their degree of contribution and control. It strikes a balance between maintaining patent rights and avoiding excessive penalization of MSMEs while strengthening India's innovation ecosystem in keeping intellectual property norms in step with emerging AI realities.

Keywords: AI-Generated Infringement, intentional v. unintentional infringement, MSME innovation, Patent Liability Matri

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INTRODUCTION

Artificial intelligence has rapidly become foundational to the Indian manufacturing and digital economy. MSMEs have increasingly adopted AI design tools, automated computer aided design (CAD') systems and optimisation algorithms since they have proved to be faster, efficient, and cost-friendly than conventional R&D method. However, since AI is developing at a fast pace, the output produced is neither controlled nor intended by the MSME.

In various reported cases worldwide, AI systems have designed mechanical parts, pharmaceutical molecules, circuit designs, and software code similar to already patented inventions. Unlike human engineers, AI does not have the ability to check its output against a patent database unless it is programmed to do so. This makes the likelihood of unintentional infringement much greater for MSMEs which lack legal departments, patent counsel, or due- diligence capabilities.

Currently, The Patents Act[2] does not recognize this technological context or the structural inequalities it generates. Infringement under Section 104A[3] is treated as homogenous regardless of intent, capability, or even mode of creation. The law assumes that all infringers whether a multination corporation with a dedicated intellectual property (IP') department or a small workshop relying on AI-generated designs are similarly positioned. In times of autonomous and semi- autonomous creation, this assumption is doctrinally and practically unsound.

The present paper tries to fill this gap. It places the problem at the juncture of AI design systems, MSME capacities, and the inflexible liability regime of Indian patent law. This is not done to dilute the rights of a patentee but to create a balanced regime wherein liability is proportionate to the control, foreseeability, and the extent of human intervention.

1. PROBLEM STATEMENT

The core doctrinal issue is that in patent infringements in India, the norm is a form of strict liability, i.e., the question of intention plays no role, nor does the source of creation. Section 48 of the Patents Act gives the patentee absolute exclusive rights, and Indian jurisprudence, right from *F.*

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[2] The Patents Act, 1970 (Act 39 of 1970).
[3] The Patents Act, 1970 (Act 39 of 1970), s. 104A.

Hoffmann-La Roche v. Cipla[4] to *Merck Sharp & Dohme v. Glenmark[5]* has followed with consistency that infringement is only a question of comparison, not a state of mind.

This creates three systemic problems in the context of AI-generated works:

First, it is unrealistic for MSMEs to audit all AI outputs. Most of them depend on third party software, such as Auto CAD-AI plugins, generative design software, or cloud-based optimization engines. They are incapable of performing extensive prior-art or patent checks before commercializing each design iteration. The control and predictability assumptions regarding AI outputs by MSMEs are both technically and economically wrong.

Whereas The Patent Act makes no provision to distinguish between those designs that are derived from AI training data and those independently created by human engineers, courts are increasingly confronted with questions of AI inventorship in various jurisdictions. For example, the Device for the Autonomous Bootstrapping of United Sentience (DABUS') cases (US Federal Circuit 2022[6]; UK Court of Appeal 2021[7]; EPO's 2020 rejection[8]) all held that AI cannot be an inventor because patents require a natural person.

DABUS application filed at the IPO office[9] in India for recognition of AI inventorship was rejected by interpreting section 6 of the Patents Act, 1970. This decision aligned with the ruling if Supreme court in case of *V.B. Mohammed Ibrahim v. Alfred Schafranek[10],* recognizing only natural persons possessing human skill and ingenuity as inventors. However, a very significant gap is still unattended- If AI cannot be an inventor, can it be made liable for infringement of a patent?

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[4] F. Hoffmann-La Roche Ltd. v. Cipla Ltd., 148 (2008) DLT 598

[5] Merck Sharp & Dohme Corp. v. Glenmark Pharmaceuticals Ltd., 221 (2015) DLT 563.

[6] Thaler v. Vidal, 43 F.4th 1207 (Fed. Cir. 2022).

[7] Thaler v. Comptroller-General of Patents, Designs and Trade Marks, [2021] EWCA Civ 1374.

[8] European Patent Office, Decision of the Receiving Section refusing EP 18 275 163 and EP 18 275 174 (Jan. 27, 2020).

[9] *In Re: Stephen L. Thaler*, Patent Application No. 202017019068 (Indian Patent Office, Aug. 10, 2021).

[10] *V.B. Mohammed Ibrahim v. Alfred Schafranek*, AIR 1960 SC 247.

Lastly, affixing a uniform liability on MSMEs would discourage AI use, undermining the growth of local industries intended under policies like Make in India[11], Vocal for Local[12], Digital MSME[13] and IndiaAI Mission[14]. These restrictive measures would altogether lead to small businesses avoiding using AI, curtailing innovation, and technology at the very stage where it is needed.

2. Doctrinal Incoherence: The Strict Liability Gap in the Age of AI

As it stands, the Indian system punishes technologically inevitable risks without corresponding remedies or defences. In this paper, arguments are advanced to establish that a differentiated liability framework is not only doctrinally coherent but economically indispensable.

2.1 The Doctrinal Structure of Patent Infringement within India - The Strict Liability Paradigm

Under Indian law, patent infringement is strict civil liability, and the right conferred under Section 48 of the Patents Act, 1970[15], is absolute: infringement is established solely by a technical comparison of the impugned product or process with the patent claims. The statutory scheme does not require any intention, knowledge, or willfulness for the finding of liability to arise.

Indian courts have repeatedly reiterated this position: In *F. Hoffmann-La Roche Ltd. v. Cipla Ltd.,* the Delhi High Court[16], ruled that when a comparison proves similarity and overlap, the intention of infringer is irrelevant in deciding culpability. Infringement of patent was described as "strict and technical comparison exercise," irrespective of the mental element behind the act as given in the case of *Merck Sharp & Dohme v. Glenmark[17]*. The logic traces back to *Raj Parkash v. Mangat Ram Chowdhary[18]*, where the court held that defendant infringed even though he acted honestly and that would not escape him from liability.

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[11] *See* Department for Promotion of Industry and Internal Trade, "Make in India" (Ministry of Commerce and Industry, Government of India, 2014), *available at:* https://www.makeinindia.com (last visited on Dec. 31, 2025).
[12] NITI Aayog, "Vocal for Local Initiative" (Aspirational Blocks Programme, Government of India, 2024).
[13] Ministry of Micro, Small and Medium Enterprises, "Digital MSME Scheme" (Government of India, 2017), *available at:* https://msme.gov.in (last visited on Dec. 31, 2025).
[14] Ministry of Electronics and Information Technology, "IndiaAI Mission" (Government of India, 2023) (detailing the national strategy for an inclusive AI ecosystem and sovereign AI capacity).
[15] The Patents Act, 1970 (Act 39 of 1970), s. 48.
[16] *Hoffmann-La Roche Ltd. v. Cipla Ltd.*, (2009) 40 PTC 125 (Del)
[17] *Merck Sharp & Dohme Corp. v. Glenmark Pharmaceuticals Ltd.*, (2015) 64 PTC 417 (Del), *cited in* n. 4.
[18] Raj Parkash v. Mangat Ram Choudhary, AIR 1978 Del 1.

Even though the MSME users had no idea of the patent, they are a direct infringer. The strict liability finding is undercut. However, by the principle of innocent infringement, limiting the patentee's financial remedies (damages or account of profits) for past acts committed before the infringer gained knowledge, as provided under Section 114[19] of the Patents Act. This creates the central remedies gap that the Liability Matrix is designed to close.

2.2 The Global DABUS Consensus and its Implications for Infringement

The global jurisprudence on AI and patent law is dominated by the results of the DABUS litigation from jurisdictions like Australia, United Kingdom, South Africa, among many others, which is exclusively concerned with inventorship but, in that sense, fundamentally frames the legal boundary of AI agency that in turn dictates where infringement liability needs to be placed.

Across major jurisdictions, courts reached a uniform conclusion: In the United States (*Thaler v. Vidal*)[20], United Kingdom (*Thaler v. Comptroller-General of Patents*)[21], and at the European Patent Office, the courts have clearly held that AI cannot be an inventor since it does not have legal personhood. A minority opinion of Lord Briss in UK[22] is significant as it acknowledged the legal gap existing due to strict statutory language and AI generated anonymity.

This has two main implications for AI in India:

1. AI Cannot be an Infringer: Since AI does not possess legal personhood, it neither enjoys the status of inventor, nor can it be attributed as infringer or subject to accountability. The AI cannot be sued, enjoined, or ordered to pay damages.

2. Liability is Forced onto Human Actors: All liability and responsibility is forcefully assigned to the human or corporate entity (user and deployer), since no alternative

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[19] The Patents Act, 1970 (Act 39 of 1970), s. 114.
[20] *Thaler v. Vidal*, 43 F. 4th 1207 (Fed. Cir. 2022), *cited in* n. 5.
[21] *Thaler v. Comptroller-General of Patents, Designs and Trade Marks*, [2023] UKSC 49, *cited in* n.6.
[22] *Thaler v. Comptroller-General of Patents, Designs and Trade Marks*, [2021] EWCA Civ 1374, para 98 (per Birss, LJ, dissenting): "There is no rule of law that a patent application must name a person as the inventor. Section 13(2)(a) requires the applicant to identify the person whom he believes to be the inventor... The Comptroller's stance is that even though the applicant has identified the entity he believes to be the inventor, because that entity is a machine, the application must be taken to be withdrawn. In my judgment that is wrong."

exists. This makes the MSME user the prime infringer in patent litigation, though economically limited.

2.3 Why the Indian Patent Act is Ill-Suited for AI-Generated Outputs

The Patent Act 1970[23] is structurally insufficient and ill- equipped to effectively cater to modern day challenges of AI infringement and liability fixation.

(1) Lack of Statutory Secondary Liability- The concept of contributory and induced infringement is not explicitly included in the Indian patents act. This gap leads to escape of the developer from paying compensation for the infringement it facilitated.

(2) The Failure of the Tool Equivalence Assumption- The patent law does not distinguish in the treatment of AI, which is a complex, opaque system, and simple tool such as CAD. However, it is no surprise that AI operate as a "black box"[24] often escaping human comprehension, and users therefore cannot rely on the design without proper checks.

(3) Increased MSME Vulnerability- Doctrinal coherence of strict liability means practical injustice to the MSMEs. These small players, pushed by policy to use AI for innovation, are threatened with injunctions and possible damages on the basis of designs they do not personally create; cannot conceivably review; or independently verify by professional prior searches due to their financial and technical limitations.

The consequence at the structural level of these deficiencies is that the law defaults to strict liability against the user, bereft of doctrinal tools to allocate responsibility to the party best positioned to prevent the infringement-the developer of the AI-so that full compensation to patentees and meaningful systemic deterrence is precluded.

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[23] *The Patents Act, 1970*, *cited in* n. 1.

[24] The "black box" phenomenon refers to the lack of transparency in AI decision-making processes where the internal workings of the system are hidden from the user. *See* W. Nicholson Price II, "The Black Box Innovation," 132 *Harv. L. Rev.* 423 (2018) (discussing how the opacity of black-box algorithms complicates traditional legal frameworks).

3.   **The Liability Problem for MSMEs Using AI: A Doctrinal and Economic Impasse**

The tension between India's strict liability patent law and the autonomous nature of generative AI creates a severe economic and doctrinal impasse, with MSMEs bearing disproportionate, uninsurable risk.

3.1 Structural Asymmetry: AI Violates the Assumption of Human Control

Indian patent law is based on a strict liability structure that presumes an underlying human capacity to foresee risks, control design choices, and perform reasonable due diligence. AI- generated outputs violate this core assumption:

 (1) Lack of Control: The MSME user does not decide upon the intermediate logic, latent representations, and optimization pathways of this AI model. The design is generated rather than being consciously constructed.

 (2) Non-determinism: AI systems are probabilistic and opaque. The law assumes deterministic tools and treats AI's unpredictable output no differently than a knowing human copy. The user becomes liable for the result of input they neither foresee, nor intended.

3.2 MSMEs Are Uniquely Vulnerable to Algorithmic Infringement

The government is encouraging the MSMEs to adopt AI tools, but its structure increases the patent infringement risk.

(1)   Financial and Cognitive Constraint: Unlike large firms, the majority of MSMEs lack the financial wherewithal to conduct extensive FTO (Freedom to Operate) searches or even professional IP counsel. They also routinely lack technical literacy required to understand, much less audit, how generative AI designs. Patent law, in assuming diligence, presumes a capacity that MSMEs generally do not have.

(2)   Infrastructure Constraint: MSMEs, reliant on cloud-based AI tools, have no visibility into the developer's infrastructure: the training datasets, embedded model functions, and lineage tracking. They are not able to audit the design provenance needed to prove innocence or non-infringement.

This asymmetry in the structure therefore results in pushing MSMEs to adopt high-risk technology for which the MSMEs must bear strict liability for outputs over which they have no control, thus creating a developmental contradiction to India's Industry 4.0 objectives.

3.3 The Current Remedial Framework Exacerbates Harm

Section 108 of the Patents Act, 1970[25], dealing with final remedies, does not mitigate disproportionate harm to an innocent MSME infringer:

(1)   Disproportionate Injunctions: Even where the MSME succeeds in limiting damages by establishing innocent infringement, the injunction remains the primary and often automatic remedy upon a finding of liability. For a small manufacturer relying on an AI- designed component-e.g., in automotive or in drone technology-an injunction stopping the assembly line is an economically devastating penalty, amounting to business closure.

(2)   Damages are Ineffective for Patentee: On the other hand, this innocent infringer defense deprives the patentee of recovering damages from MSME for its past commercial acts, thus limiting compensation, and undermining one of the deterrent functions of patent protection.

3.4 The Upstream Risk Problem: The Doctrinal Dead-End

This means that the developer, from a risk perspective, controls the input, or training data, the process, which are algorithmic safeguards, and the output filters. They are in the best position to prevent systemic infringement.

However, Indian patent law cannot attribute risk upstream because:

(1) Secondary Liability Void: Studies have confirmed that Indian law does not have any express statutory provision relating to contributory infringement[26] and that the threshold

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[25] The Patents Act, 1970 (Act 39 of 1970), s. 108.

[26] *See* Adarsh Ramanujan, *Patents Law and Practice* 485 (Thomson Reuters, Gurugram, 3rd edn., 2020) (observing that unlike the US or UK, the Indian Patents Act, 1970 does not contain express provisions for contributory or indirect infringement); *see also* Elizabeth Verkey, *Law of Patents* 312 (Eastern Book Company, Lucknow, 2nd edn., 2012).

of scienter for induced infringement is high[27] (knowledge of the particular patent), which AI developers can easily deny.

(2) Volition Assumption: Patent jurisprudence assumes volition. In other words, developers create general-purpose models, not specific infringing outputs. Thus, the knowledge or intent requirement for imposing secondary liability is hard to meet.[28]

Consequently, application of strict liability falls foul of all relevant policy axes inasmuch as it cannot fully compensate the patentee, nor does it deter systemic negligence by the developer. Moreover, it severely penalises the MSME user and chills AI adoption in critical sectors.[29]

4.   **The Proposed Solution: The AI-Attributed Infringement Liability Matrix AAILM**

The structural deficiencies identified in Parts I–III make clear that the Indian patent system which is founded on the assumption that human intention, human agency, and human interpretability underlie all inventive activity is misaligned with the realities of AI- assisted design. The purpose of this Part is therefore to articulate a coherent, legally workable model for allocating responsibility when AI produces outputs that overlap with patented claims.

The proposed solution is the AI-Attributed Infringement Liability Matrix (AAILM') - a three-tier liability apportionment mechanism based on control, knowledge, and the ability to prevent the infringing outcome. AAILM provides a principled foundation for the distribution of liability-

(1)   Between the user of the AI agent (Tier 1)

(2)   Its developer (Tier 2), and

(3)   Shared responsibility in the case of a genuinely autonomous system behaviour (Tier 3).

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[27] *FMC Corporation v. GSP Crop Science Pvt. Ltd.*, 2022 SCC OnLine Del 3784; *see also Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754 (2011) (discussing the "willful blindness" standard in induced infringement).

[28] Gyandeep Chaudhary, "Artificial Intelligence: The Liability Paradox" 10 *ILI Law Review* 147 (2020) (noting that the autonomous nature of AI decision-making creates a "transparency gap" where the human developer's volition is disconnected from the machine's infringing output).

[29] Anat Lior, "AI Strict Liability Vis-À-Vis AI Monopolization" 22 *Colum. Sci. & Tech. L. Rev.* 90 (2020) (arguing that a strict liability regime for AI could erect barriers to entry for small companies and MSMEs, ultimately stifling innovation and leading to market monopolization by well-financed entities).

Presented here is a normative proposition of legislative alteration, thereby implementing MeitY's principle of "graded responsibility" within the Patents Act.[30]

4.1 Tier 1- Direct User Liability

The liability of the human user needs to remain the main anchor for patent law, but this needs to be curtailed in situations where the user has meaningful control in the design process. Tier 1 applies when the MSME or designer: Instructs the AI system to reproduce, alter, or reverse-engineer any known product; Explicitly provides patented specifications; or Utilizes AI only as an assistive tool and retains substantive manual control over the final technical configuration.

In such situations, strict liability already under Section 48[31] is adequate. The user has deliberately initiated the creative act and thus can have no defence that the AI "cause" the infringement independently. Tier 1 thereby upholds the corrective and deterrent goals of patent law in situations of explicit user volition but does not extend to situations where the infringing configuration results from internal operations of the AI that the user did not intend and could not technically have comprehended.

4.2 Tier 2- AI-Induced Liability

Developers are the only actors with insight into and control over the system architecture, training data, and risk-mitigation protocols. They are in charge of the model's choice of learning datasets, postprocessing output filtration, and whether infringement-avoiding measures exist. Thus, when the AI produces infringing technical features because the developer failed to establish good enough governance, responsibility must shift upstream.

This tier introduces Systemic Induced Infringement, a normative standard based not on intent to infringe, but on the developer's superior capacity to foresee and prevent systemic risk. This standard operates by linking liability to a policy-informed scienter, drawing on the principle that liability should follow control and knowledge.

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[30] Ministry of Electronics and Information Technology, *IndiaAI 2023: Expert Group Report* (Government of India, New Delhi, 2023) (advocating for a "graded responsibility" framework where liability is commensurate with the level of control and ability to mitigate risks in the AI lifecycle).
[31] The Patents Act, 1970 (Act 39 of 1970), s. 48.

Evidentiary Hooks for Scienter. The knowledge requirement is satisfied by evidence of willful blindness to systemic risk on the part of the developer:

1. Failure to Disclose: failure to disclose publicly whether a training dataset includes patented material-something progressive legislation, like California's AB 2013[32], which encourages disclosure of IP status in materials used to train models.

2. Failure of Technical Standard of Care: failure to implement technologically feasible safeguards relevant to commercial design tools, such as patent similarity detection tools or duplication filters.

This approach ensures full compensatory damages are recovered from the corporate entity best equipped to absorb and mitigate systemic risk, with a view to addressing the remedies gap created by innocent MSME infringement.

4.3 Tier 3- Collective Liability

Tier 3 represents the most difficult category: those cases where neither user nor developer has direct control over the infringing output, because the infringement results from emergent, autonomous algorithmic behaviour-for example, in self-optimising EV motor design or complex chemical process discovery.

In such a case, a shared responsibility structure would be applied, by borrowing common law doctrine of Joint Tortfeasors. Under this principle, when two parties (user and developer) cause a single joint injury (patent infringement), then joint liability is established.[33] The basis of this division is reasonable, given the fact that both parties reaped substantial economic benefit resulting from the deployment of the high-risk, autonomous technology.

4.4 Safe Harbours and the Need for a Certification Regime

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[32] California Assembly Bill 2013, 2023–2024 Session, "Generative Artificial Intelligence: Training Data
[33] *See* Ratanlal & Dhirajlal, *The Law of Torts* 184 (Akshay Sapre ed., 28th edn., LexisNexis, Gurugram, 2019) (defining joint tortfeasors as persons who aid, counsel, or join in the commission of a wrongful act in the furtherance of a common design or where the law imposes a joint liability for the same damage).

Statutory safe harbours would be needed to make the AAILM workable and protect the vulnerable MSME sector. These would not absolve the MSME from the finding of infringement but protect them from disproportionate remedies (damages, penalties, costs) if the MSME demonstrates:

(1) No technical expertise or control over internal AI.

(2) Inability to anticipate the infringement; and

(3) Reliance on an AI tool certified under a government- mandated IP compliance scheme.

This demands a Patent-Safe AI Certification Framework, in which there will be pre- deployment assessment of training datasets, built-in patent similarity detection, and traceability logs. Models certified under the system become legally safer for MSMEs to use, reducing the chilling effect on innovation.

4.5. **Normative Justification: Why Liability Must Follow Control**

AAILM is compatible with the basic tenets of patent law because it shifts the remedial burden without affecting the finding of infringement. The core normative assertion is that the law needs to impose responsibility on that party who has the highest degree of control over system behaviour, knowledge of how AI works, capacity to prevent infringement, and capability to absorb the financial risk.

The law needs to reflect this asymmetry where developers have maximum control while MSMEs hold minimum capacity to bear risk. In Global South, this liability framework is of much importance due to strict adherence to IP laws and subsequent stifling of innovation and technology of MSME.[34]

5. **Codifying AAILM: Proposed Amendments to the Patents Act and Systemic Oversight**

The structural deficiencies and the AAILM framework necessitate a comprehensive package of statutory and regulatory reforms to modernise Indian patent law.

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[34] Arpan Banerjee, "AI and IP: A Narrative from the Global South" 14 *Indian Journal of Law and Technology* 1 (2018) (discussing the unique challenges developing economies like India face when applying Western IP standards).

5.1. Statutory Amendments to the Patents Act, 1970

The amendments necessary to form the AAILM are as follows:

(1) New Section 108A: Once the structure of AAILM is codified, this new section should demarcate remedies with respect to control and intent and thereby empower the court to give full damages against Tier 2/3 entities while capping or reducing damages for good-faith MSMEs, that is, Tier 1. It shall also order compulsory court licensing under Sections 84[35] and 92[36] rather than injunction, where the very existence of MSME gets threatened.

(2) New Definitional Clause: S. 2(1)(ab) - Introduce a legal definition of "AI Design System," recognising AI as a non-legal entity that generates technical outputs. The new liability provisions anchor, confirming that AI cannot be an inventor or patentee, putting all liability on human actors.

(3) Modify Section 140[37]: Restrictive Conditions: Prevent unfair contractual clauses in the licensing agreements of AI tools from taking undue advantage of MSME's weak bargaining position: for example, blanket "no-liability" clauses for developers or terms forcing MSMEs to indemnify developers for AI-caused infringement.

5.2 Regulatory and Institutional Reforms for Systemic Risk Mitigation

This calls for preventive measures to gradually shift the burden from ex post litigation to ex-ante compliance, meeting MeitY's policy objective concerning system safety and resilience:

(1) Patent-Safe AI Certification Regime-DPIIT/MeitY: Set up a Joint Certification System which would assess and accredit commercial AI design models for compliance with IP standards. Certification shall be awarded upon the developer proving the following: Provenance in training data, patent similarity filters (technical exclusion filters), and the maintenance of technical traceability logs.

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[35] The Patents Act, 1970 (Act 39 of 1970), s. 84.
[36] The Patents Act, 1970 (Act 39 of 1970), s. 92.
[37] The Patents Act, 1970 (Act 39 of 1970), s. 140.

(2)   Mandatory Disclosure: Require applicants and litigants in patent cases to disclose when an AI Design System has contributed to an invention or the challenged product, respectively. This would prevent evidentiary confusion and ensure that the AAILM is applied correctly.

(3)   IPO Oversight Cell: Set up an AI-Patent Oversight Cell at the Indian Patent Office comprising technical experts that would help advise courts, maintain the certification database, and help the examiners in dealing with complex AI-related applications.

MSME Policy Guidelines: Provide a national model guideline that guides MSMEs on how to document good-faith compliance and conduct basic IP checks, for example, using government tools such as Indian Patent Advanced Search System ('InPASS'). This will provide the much-needed benchmark for "reasonable conduct" in support of the innocent infringer defence.

5.3 Model Judicial Test

To operationalise the AAILM, courts must be guided to conduct a three-step test in line with MeitY's "graded responsibility" policy. Step 1 would include identifying Functional Control, i.e., who had the most control over the generation of the infringing feature: User or Developer? Then, Step 2 entails Proximity of Knowledge[38]- Who had actual or constructive knowledge of the possible patent overlap, and the last step includes determining Prevention capacity or least cost avoider[38], by whom could the infringement most easily have been prevented through reasonable technical or procedural precautions?

6.   Graded Responsibility Globally

AAILM is a unique liability affixation model, but some countries globally have adopted similar graded responsibility models such as:

6.1 European Union

The EU AI act and revised Product Liability Directive provide for a similar graded responsibility like AAILM. Tier I responsibility is affixed to the Developers of AI, who have highest burden.[39]

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[38] *See MySpace, Inc. v. SuperCassettes Industries Ltd.*, (2017) 236 DLT 478 (DB) (establishing the standard for "actual knowledge" versus "general awareness" in the context of digital intermediaries in India).

[39] Guido Calabresi, *The Costs of Accidents: A Legal and Economic Analysis* 135 (Yale University Press, New Haven, 1970) (pioneering the "least cost avoider" principle, which posits that liability should be assigned to the party who can most cheaply avoid the accident/infringement).

The developers are expected to conduct ex ante or preventive measures such as risk management and data quality checks.

Tier II responsibility is fixed on the user of AI. They are instructed to follow the instructions responsibly; otherwise, the liability shifts on the deployer (user).

Doctrine of Rebuttable Presumption of Causability[40] introduced by EU presumes that when AI infringes a patent, developer is at fault, unless the developer satisfactorily prove that their black box was designed perfectly, shifting the burden back to tier II (deployer).

6.2 China

China's model is centred around liability fixation of service provider. Their "Interim Measures for the Management of Generative AI Services"[41] states that the entity providing services is primarily responsible for content and output. The developers can use Traceability Logs, which allows developers to restrict users from using AI labeled content, or else they will be liable.

7. The AAILM in Practice: Remedial Allocation Through Case Studies

This Part applies the AAILM to apportion remedial liability when AI-generated technical designs inadvertently infringe upon existing patents in the real world. The strict liability imposed under Section 48 remains undisturbed, but the AAILM pro rata apportions Section 108 remedies based on control, foreseeable capacity, and preventive capacity operationalising MeitY's principle of "Accountability" in a patent context.

7.1 Structure of AAILM for Remedial Allocation

The doctrinal finding of infringement continues to follow strict liability. However, remedial responsibility (financial compensation) is distributed across three tiers:

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[40] *Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)*, [2024] OJ L 1689 (establishing a risk- based tiered approach that imposes heavy compliance and transparency duties on AI providers to prevent systemic failures).

[41] *Interim Measures for the Management of Generative Artificial Intelligence Services* (promulgated by the Cyberspace Administration of China, July 13, 2023, effective Aug. 15, 2023) (China) (mandating that AI service providers assume the responsibilities of a "producer" of content and implement technical measures to prevent the infringement of intellectual property rights).

(1)   Tier 1 End-User (MSME): The statutory infringer, though protected by the innocent infringer defence for the pre-notice period, remains the statutory infringer. Exposure is limited to post-notice damages and mandatory injunctions.

(2)   Tier 2 (AI Developer): Becomes the primary compensatory debtor where the infringement is the result of the developer's failure to implement ex ante safeguards (e.g., patent-aware filters or overlap warnings). This is systemic induced infringement, justifying shifting damages and accounts of profits to the developer.

(3)   Tier 3 (Platform/Intermediary): Bears conditional liability where it plays an active role-curation, modification, or commercial promotion and ignores foreseeable patent risks. Liability is proportionate and arises only when the intermediary has meaningful control or commercial benefit.

• Case Study 1: AI-Generated EV Motor Assembly (MSME)

An MSME employs a generative-design tool to optimize an EV motor assembly. The AI returns with a winding configuration that happens to read on a patent claim. The MSME fabricates the part for months until notice is received. Under the prevailing law, the MSME is a solo infringer, subjected to injunctions despite its ignorance, and the innocent-infringer defense deprives the patentee of damages for the pre-notice period. The AI developer, whose model did not take any patent-aware precautions, stays beyond the reach of liability.

Under the AAILM, the MSME is still the direct infringer but is exempted from the burden of heavy damages. The compensatory liability would primarily lie with the AI developer, as its failure to implement reasonable patent-filtering in a high-risk sector forms a case of systemic induced infringement. This restitutes the patentee's right to full compensation and incentivizes developers to incorporate ex ante compliance mechanisms.

• Case Study 2: Platform Republishes AI-Designed Drone Components

A cloud platform curates and distributes AI-generated drone arm designs, some of which replicate the geometry of a patented load-bearing joint. The domain is dense with patenting, but the AI developer and the platform do not undertake checks for patent overlaps before commercial

dissemination. Under the current law, it is the innocent end-users that become the infringers, the patentee receives little compensation, while both the developer and platform totally escape liability.

The AAILM shifts this burden. A developer is principally compensatorily liable for publishing a model without domain-specific safety features, while the platform bears conditional joint liability as its active curation and commercialisation of high-risk designs gives rise to an enhanced duty of care. Damages are apportioned accordingly, better reflecting actual control, foreseeability, and commercial benefit.

8.   **Conclusion**

Due to the inadequacy of Indian Patent laws in catering to AI generated infringement, the innocent MSME users are made liable for the infringement they neither intended nor forsee. This leads to a detrimental situation for all the stakeholders since the MSMEs face injunctions hurting their small businesses, patentees do not receive monetary relief due to innocent infringement doctrine and the developers of AI facilitating the entire process remain immune to all liability. Such an arrangement leads to undermining of main objectives of patent law ensuring compensation to the aggrieved and creating restrictions when it is necessary to do so.

The framework of AAILM presents a unique arrangement where strict liability is retained in favour of the patentee's exclusive rights, but financial burden is spread across the stakeholders with three parameters-control, foreseeability, and preventive capacity. The AAILM framework proposed for India aligns with the global benchmarks and rules, such as EU's risk-based approach and rebuttable presumption, and China's directive to service providers to function as gatekeepers against AI infringement. By adopting the graded framework, India can adhere to the global standards as well as provide for protection of the MSME ecosystem.

Drawing from exiting doctrines of innocent infringement and joint tortfeasor liability, among others, AAILM ensures that cost of systemic neglect would be internalized by developers and platforms while ensuring that MSMEs do not suffer disproportionately and patentees get complete remedial protection as per Section 108 of the Act. It is imperative to implement such a graded responsibility framework to drive innovation goals in harmony with equity, legal certainty, and the long-term economic growth of an increasingly AI- driven manufacturing ecosystem in India.

Wow Momo vs Wow Burger: The Idea and the Infringement

Author: Prakriti Ranjan[1]

Abstract

The case analysis examines the judgment of the Delhi High Court in the case of "Wow Momo Foods Private Limited vs Wow Burger & Anr." raised through an appeal. The case shows a significant development in the field of IP, especially in the area of trade mark jurisprudence. The court overturned the judgment given by a Single-Bench judge, refusing to grant an injunction and held that the respondent infringed the appellant's registered mark. The case shifted its approach from strict linguistic and technical interpretation to composite distinctiveness, marketplace perception and consumers' psychology. The judgment importantly introduces and legitimises the concept of "idea infringement" in trade mark law by protecting the concept of pairing any food items with other English exclamations. The case analysis also discusses about the concerns regarding the monopolisation of common ideas and its impact on fair competition, especially for small traders.

Keywords: *Trade mark, Idea Infringement, Composite Distinctiveness, and Consumers' Psychology.*

Court Name: High Court of Delhi

Citations: (2025) Delhi HC FAO(OS)(COMM) 143/2025

Coram: Hon'ble Mr. Justice C. Hari Shankar and Hon'ble Mr. Justice Om Prakash Shukla

Appellant: Wow Momo Foods Private Limited

Respondent: Wow Burger & Anr.

Statutes Involved: Trade Marks Act, 1999 ('the TM Act')

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[1] Third year law student at Chanakya National Law University, Patna.

Facts of the Case:

The Appellant, Wow Momo Foods Private Limited, has multiple registrations for words like WOW MOMO, WOW DIMSUMS, and WOW MOMO INSTANT under the TM Act. It also had registered device marks featuring Wow across Classes 29, 30, 35, 43, and others. The company has over 600 outlets across 30 cities that offer catering services, dine-in, delivery and takeaways under these marks. The company has a turnover of Rs. 453.932 crores in the financial year of 2023-24, while spending Rs. 10.37 crores on promotion in the same year.

Then, in December of the same year, the Appellant discovered that Respondent 1, "Wow Burger", was planning their entry to the market with the mark of "WOW BURGER" to sell protein-rich vegetarian burgers.

The respondent had previously sold burgers under the mark in Hong Kong. After becoming aware of the entry of the respondent in the Indian market (the geographical market relevant in the present case), the appellant raised a *quia timet suit* (CS Comm 116/2024) seeking an interlocutory injunction against the respondent in the Commercial Division of the Delhi High Court, restraining him from using the marks WOW BURGER, which was delivered by a Single-judge bench in September, 2025.

Judgment of the Single-Bench:

The Single-Bench judge, on September 12, 2025, in the absence of a response from the respondents, dismissed the appeal for the relief claimed, citing the reasons that:

a) The appellant had neither applied nor could have registered the specific words like WOW, WOW! Or WOW! BURGER;

b) The few registrations were granted with the condition that they cannot claim exclusivity over any of the specific words in the whole marks.

c) "WOW" is a commonly used word, as an "exclamatory remark" in the English language. Such words are so common and used ordinarily that they lack distinctiveness; therefore, they are "*not capable of being monopolised*" or claimed by a specific individual or entity.

d) Relying on the dictionary meaning of the word as "*a quality, property, or element that impresses, excites or delights*", the Hon'ble judge held that "*Under Section*

9(10)(b)(6) of the Act[2], a word which merely conveys praise or describes the quality or characteristic of the goods or services, is not entitled to protection as a trade mark or to monopoly."

The petitioner then appealed via FAO(OS) Comm 143/2025 to a division bench.

Issues Raised:

The main issue involved in the present case before the Division Bench was whether the mark of the Respondent, "WOW BURGER", infringe the appellant's registered "WOW!" marks under Section 29(2)(b) of the TM Act.

Legal Concepts mentioned in the present case:
   a) Anti-dissection Rule
   b) Dominant Feature Test
   c) Family of Marks
   d) Initial Interest Test
   e) Idea Infringement

Arguments:

In the appeal against the Single Bench's decision, the appellant (Wow Momo Food Private Limited) appeared before the Division Bench of the High Court, arguing for exclusivity over the mark. The Respondents, however, did not file the Written Statement.

Petitioner:

The petitioner argued about the exclusivity over the mark "WOW!" In response to the objections raised against it for registration, the appellant replied that "the marks include a combination of the English dictionary word 'WOW' with a suffix". Though the word "WOW"

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[2] The Trade Marks Act 1999, s 9(1)(b).

in itself was ordinary and did not contain any distinctiveness, the distinctiveness was achieved by modifying the word through the addition of a suffix.

Respondent:

The Respondents had filed no written statement, nor did they appear anywhere. They did not advance any arguments either. Therefore, the bench proceeded *ex parte*.

Judgment in this case:

The Division Bench, consisting of Hon'ble Mr. Justice C. Hari Shankar and Hon'ble Mr. Justice Om Prakash Shukla, allowed the appeal, overturning the Single-Bench Judge's dismissal.

It was held that WOW BURGER infringes the word marks of WOW MOMO, WOW DIMSUMS under Section 29(2)(b)[3] where the Single-Bench judge overemphasised standalone WOW's commonality. He ignored the composite distinctiveness that was made by adding the 'exclamation' to 'food'. The court overturned the refusal of the injunction by citing various reasons and precedents.

Analysis:

Though the court tried to clarify several issues, at the heart of the decision lies the recognition of "idea infringement." Until now, the prevailing idea has been that ideas themselves cannot be protected; only the expression of the idea can be. However, by granting the injunction in favour of the appellant, the court accepted the view that the other party did not merely copy the word, but the entire underlying concept behind using the word. By doing this, the court effectively opened the way for "owning the idea behind a style of branding."

In the earlier cases, as well as in the Single-Bench judgment, it was consistently reiterated that there can be no monopoly over common and ordinary words such as "WOW." The focus was placed on examining the minor differences in design, font, packaging, and other similar elements to avoid confusion among consumers. However, in the instant case, the court took an unprecedented decision by shifting its focus from dissecting the word in isolation to examining the act of pairing the expression with a food item.

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[3] Trade Marks Act 1998, s 29(2)(b).

The court held that distinctiveness does not arise from the literal meaning of a word itself, but from the creative use of it. Therefore, the distinctiveness lay not in the word "WOW" per se, but in the creative association of "WOW" with food items. Such an expression can be protected from infringement.

Another focus is on the new concept of "idea infringement"[4], which is a new concept of its kind. It was held that the idea of combining an exclamation mark with a food item was copied by the respondent. There is a rising likelihood of confusion due to the "*replication of the idea of the mark*", and therefore, infringement occurs. Treating idea infringement as a legal ground will lead to the monopolisation of ideas.

This is not just an interesting and new case, but a very bold and risky step taken by the court. This may lead to clarity among the consumers regarding a particular brand, like "WOW MOMO" in the present case, to identify the brand due to its name and constant use. Allowing WOW BURGER to sell similarly is going to create confusion among the consumers who had relied on "WOW MOMO" for a long time. Consumers may trust the "WOW BURGER" in the same manner, and this may divert the profits and split the hard-earned brand value to the respondent.

Even after some time, even if the consumers gain awareness of the fact, the initial confusion that once prevailed would have yielded some economic benefits to the respondent. Therefore, the idea leads to a shift from "strict linguistic analysis" to "marketplace perception." Now, instead of focusing on "the meaning of the word", the analysis will depend on focusing on "the impact of the mark on the consumer's mind." In a few cases, too, the courts have focused on the consumer's psychology rather than terminology, such as the Blenders Pride[5] case and Mankind Pharma[6].

Still, the question persists whether relying heavily on the consumer's psychology is going to yield any real benefits to the owner of the mark and other users or merely increase the burden of the court to check whether "Crispy Fries" infringes the mark of "Crispy Dosa".

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[4] Para 41 of the judgment.
[5] *Pernod Ricard India (P) Ltd. v. Karanveer Singh Chhabra* ("Blenders Pride" v "London Pride"), *2025 SCC OnLine SC 1701.*
[6] *Mankind Pharma Ltd. v. Novakind Bio Sciences Pvt. Ltd.*, 2023:DHC:5653).

The step by the Hon'ble court is good for protecting the trade mark's owners; however, by over-focusing on this, the court has put at stake three things in particular:

- The balance between the public's freedom to create and compete will be lost.
- Ideas are considered a source, and restraining the source in the name of protection will leave no space for creativity.
- Various small vendors who sell not for branding but for livelihood do not possess much creativity, and it is quite common for them to use words like "wow", "yummy" or "crispy", etc., to sell their items or name their carts. Labelling them as infringers will not be a good thing for them, which seems like attacking a small seller's identity in a local area, while protecting the bigger enterprises for their "creativity" of using colloquial words with a food item.

In this way, the focus of the court here seems less like promoting creativity and leans more towards protecting brands' identity. The further journey of "idea infringement" will now depend on further rulings on such issues and the Supreme Court's way of dealing with it.

Conclusion:

The case "*Wow Momo Foods Private Limited vs Wow Burger & Anr*" is a novel move in the field of IP, where a new theory is being considered, i.e., "idea infringement", where a certain idea can be protected for trade mark infringement and may be in future, even for infringement of other types of IP. The decision marks a significant shift in the trade mark jurisprudence of India from strict technical comparison to market perception and consumers' psychology.

On one side, the decision strengthens brand protection by recognising composite distinctiveness and addressing the risk of consumers' confusion, but, on the other side, by extending protection to branding concepts rather than merely expressions, the judgement risks monopolisation of common ideas and restraining free and fair competition, especially for small traders. Therefore, the judgment itself is a bold yet precarious development. Future judicial cases and interpretations by the courts will now determine the long-term impact of the judgment.

AI-Generated Works in IP laws: Contemporary Authorship and Ownership Challenges Amidst Evolving Legal Frameworks

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Abstract

The escalating growth of Artificial Intelligence ('AI') in realm of literature, music, design, images and visual art has enabled automated production with minimal human interference. This paradigm shift exposes fundamental tensions in traditional Intellectual Property (IP) doctrines of originality, authorship, and fixation, which struggle to accommodate AI generated creativity. This research paper focuses on the doctrinal challenges, drawing on key international judicial decisions and the statutory frameworks through the 2025 lens. The critical analysis of the Thaler[2] case in the US serves as a pivotal case in clarifying questions surrounding the grant of copyright to AI-generated works. Furthermore, it analyses the diverse viewpoints from the USA's strict human authorship recognition to China's pragmatic recognition of human-directed AI outputs to the UK's statutory fiction in attributing computer-generated works to India's traditional approach of human authorship yet evolving status. The article concludes with the viewpoint of an urgent requirement for legislative reforms and international harmonisation by World Intellectual Property Organisation ('WIPO'), including differentiating AI-assisted works from fully autonomous AI-generated works in the era of 2025.

Keywords: Artificial Intelligence ('AI')**,** Copyright, Authorship, Ownership, Originality, fixation doctrine

I. INTRODUCTION

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[2] Thaler v. Comptroller General of Patents, Design and Trademarks, UKSC49(UKSC Dec. 20, 2023).

In recent years, the proliferation of generative AI tools such as DALL E or GPT models has dramatically expanded the boundaries of the creative expression, as AI can now produce images, literature, music, designs and other expressive works without direct human authorship or with only minimal human oversight.

The term "Artificial Intelligence" was coined by John McCarthy in 1956.[3] The evolution of AI from 1956 to 2025 has undergone tremendous changes, and now its usage in every domain is undeniable. By 2025 the global AI market is projected to exceed $500 billion, with generative AI comprising a significant share driven by applications in entertainment, design and R&D.[4] This has triggered legal questions that required urgent attention around authorship and ownership: who should be recognised as the author of an AI-generated work? Who owns the resulting rights? Can automated works attract copyright protection?

The traditional framework is built around the creation of human creators that have been stretched out of line in today's era. Policy debates in 2025 intensified globally and in India, exemplified by the Department for Promotion of Industry and Internal Trade ('DPIIT') committee's formation on April 28, 2025, which exposed the inadequacy of existing fair dealing provisions under Section 52(1)(a) for commercial AI inputs. The DPIIT's December 2025 working paper (Part 1) underscores this urgency, rejecting broad tax and data mining exceptions erupt-outs as insufficient for protecting small creators and India's cultural heritage, while proposing a mandatory "Hybrid Model" blanket license via a Copyright Royalties Collective for AI training to endure statutory remuneration from AI revenues.[5] Thus, the governments and copyright offices worldwide are considering the evolution and the inadequacy of the existing regime in considering the stature of AI works.

 For example, the United States Copyright Office (USCO)'s Part 2 and pre-publication of Part 3 of its AI and Copyright report[6] highlight evolving thinking on AI authorship, human contribution thresholds and the legality of training datasets. Along with the judicial developments such as

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[3] McCarthy, John et al., A proposal for the Dartmouth Summer Research Project on Artificial Intelligence (1955).
[4] Precedence Research, Artificial Intelligence(AI) Market size to Hit USD 3680.47 billion by 2034 (28 Sept. 2025), https://www.precedenceresearch.com/artificial-intelligence-market.
[5] Department for Promotion of Industry and Internal Trade, Working Paper on Generative AI and Copyright (Part 1) (December 2025).
[6] United States Copyright Office, "Copyright and Artificial Intelligence: Part 2- Copyrightability" para 25 (2025).

Thaler v Comptroller General of Patents, Design and Trademark[7] that held that an inventor must be a natural person and not a machine or an AI system such as DABUS.

Given the global and cross-border nature of generative-AI and its creative outputs, the need for a clear, globally harmonised legal framework is needed to provide certainty for both the creators and investments to AI innovators.

II. CONCEPTUAL FRAMEWORK OF AI GENERATED WORKS

An Artificial Intelligence-generated work refers to the creative and expressive output produced wholly or substantially by an AI system, i.e., a generative machine learning model with minimal or no human intervention.[8] AI can do tremendous work generating logos, poems, music and even mimic artists. The recent Ghibli trend of 2025 is one such example.[9] The basis of the Copyright Act, 1957[10] is the theory of human authorship and responsibility, which covers the creative works such as literary, musical, and artistic works. In other words, the person who willfully and knowingly infringes upon another's copyright bears the responsibility for any infringement.

However, the pressing question that remains is whether an output will meet the originality requirements outlined in Section 13 of the Copyright Act, 1957[11] if copying is done by the algorithm to produce it? It has been stated in a number of places that the intellectual work that humans provide, where the inventive process must be taken into account, is what makes the content original. The U.S. Copyright Office's reports differentiate outputs based on AI-generated works into 3 types: - i) Fully Autonomous AI works, ii) Human-Aided AI works, iii) AI-assisted works.[12] These distinctions matter because copyright laws protect only human authorship.

In India, Protection vests only in works of human origin under Section 13 of the Copyright Act, 1957 and AI tools works as mere instruments that may qualify as human users for authorship in

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[7] Thaler v. Comptroller General of Patents, Design and Trademarks, UKSC49 (UK SC Dec. 20, 2023).
[8] Patrick Zurth, Artificial Creativity? A case against Copyright Protection for AI-Generated Works, 25 UCLA Journal of Law and Technology(Spring 2021).
[9] Sayak Bnaerjee, " Ghibli AI Art and Copyright," The IP Press, Mar. 31, 2025.
[10] Copyright Act, 1957.
[11] Protection of AI Created Works under IPR Regime, Its Impact and Challenges: An Analysis, 10.1 IJLS (2024) 8.
[12] U.S. Copyright Office, Copyright and Artificial Intelligence, Part 2: Copyrightability(2025), available at: https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf,(Last Visited on Nov. 17, 2025).

AI-assisted creations if sufficient creativity is shown. Similarly, DPIIT committee prioritises input licensing (Hybrid Model) while flagging output issues for future deliberations.[13]

III. DOCTRINAL CHALLENGES: ORIGINALITY, AUTHORSHIP AND FIXATION

The doctrinal principles of copyright law, i.e., originality, authorship, and fixation, have traditionally depended on the premise of traditional human creativity and involvement and they form the foundation for the grant of copyright protection by recognising and rewarding human intellectual effort and creative expression. However, the question of originality and authorship is raised with the growing use of AI works, specifically those created autonomously as well as those works with little human intervention. Thus, we need to understand the legal questions to ensure both the development of innovation and adequate protection for human creators in the AI era.

A. Originality: The threshold of Creativity

'Originality' requirement is one of the driving forces for copyright protection globally, as it determines whether a work qualifies for copyright protection or not. Three major schools of thought have emerged relating to the doctrine of originality, each differing in the amount of effort, creativity, and the requirement of intellectual input needed.

The Sweat of the Brow Doctrine is a traditional copyright principle that grants protection based on the effort, skill, and labor an author invests in creating a work, rather than requiring significant creativity or originality. This doctrine emerges from the case of *Walter vs Lane[14]*, emphasising the doctrine of authorial diligence by protecting works like compilations, databases, or directories where the value lies in the compilation or organisation and not in creative expression. An author is granted copyright protection simply for the substantial labor that he put forth to gather, verify, or arrange the material and for his industrious effort.

The Creativity Doctrine (Modicum of creativity standard) is a modern standard, affirmed in the U.S. Supreme Court decision in *Feist Publications Inc. vs Rural Telephone Service Co.[15]*, requires that a work possess at least a minimal degree of creativity or intellectual effort beyond

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[13] DPIIT, Working Paper on Generative AI and Copyright (Part 1) (Dec. 2025); U.S. Copyright Office, Copyright and Artificial Intelligence Part 2: Copyrightability Report(2025).
[14] Walter V. Lane, A.C. 539 (HL).
[15] Feist Publications Inc. v. Rural Telephone Service Co., 499 U.S. 340(1991).

mere labor. The Court clarified that originality means independent creation with some modicum of creativity. Facts cannot be copyrighted, and only labor can justify copyright protection.

The Skill and Judgment Doctrine doctrine requires that a work must involve more than mere mechanical labor; it must embody skill and judgment, to qualify for protection. This principle is articulated in Supreme Court of Canada case of *CCH Canadian Ltd. v. Law Society of Upper Canada*[16]. *In this,* Chief Justice McLachlin explained that "skill" refers to the use of one's knowledge, developed aptitude or practiced ability in producing the work, while "judgment" means the author's capacity for discernment or ability to form opinions by evaluating different options in producing the work. Importantly, the court emphasised that the required exercise of skill and judgment must not be rival or purely mechanical and creative while beneficial is not a necessary condition for originality. In India, the modicum of skill and judgment doctrine was portrayed through the case of *Eastern Book Company v. D.B. Modak*[17]. This case reinforced the principle that compilations involving substantial skill and judgment deserve copyright protection, resonating with the doctrine from CCH Canadian.

Each doctrine differs in how much effort, creativity, or intellectual input is required for a work to be considered original. The point of incidence of the originality is the owner. Originality is not always about the origin of the idea but about the way in which it is presented or expressed. Section 13 of the Copyright Act, 1957, outlines the types of works that are eligible for copyright protection. The significance of originality is highlighted in the case of *Aggrawal Publishing House vs Board of High School Intermediate Education*[18], the court held that the paper setters will have the copyright who possess skill and judgment, and neither the Board nor the publishers. Thus, this case underscores originality vesting in the human author at the point of intellectual input.

This raises a crucial question: Can works created without meaningful human input meet the originality test? Legal approaches generally require some degree of meaningful human involvement for originality. The U.S. Copyright Office's Compendium clarifies that "works generated by a machine or mere mechanical process operating automatically without creative

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[16] CCH Canadian Ltd. v. Law Society of Upper Canada, 1 SCR 339, 2004 SCC 13.
[17] Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1.
[18] Aggrawal Publishing House v. Board of High School Intermediate Education, AIR 1971 SC 155.

input from a human author" are not copyrightable.[19] Similarly, in *Bridgeman Art Library vs Corel Corporation*[20], the U.S. District Court for the Southern District of New York found that slavish reproductions by Bridgeman Art Library of public domain artworks which were the exact photographic copies, lacked originality required for copyright protection.

The Supreme Court of India in Eastern Book Company[21] has applied the "skill and judgment" test to assess originality in copyright law. The court held that mere labor and capital investment alone are insufficient for copyright protection; rather, the work must display independent intellectual effort involving skill and judgment. The work, including the programming of AI can affect whether a work meets the originality standard. Thus, purely AI works fail to satisfy this threshold because they lack human intellect.

In the European Union, Directive 2001/29/EC require that a work be an "author's own intellectual creation"[22], presupposing human creativity as a fundamental aspect. This means that protected work must reflect the author's personality and creative decisions. Courts and scholars thus continue to grapple with drawing the line between human-driven originality and algorithmic generation of AI, creating uncertainty for AI-generated works lacking explicit human creative control.

B. Authorship: The legal personhood constraint

Authorship traditionally refers to the creator's ownership of their work. It also consists of a bundle of rights and responsibilities enshrined by the author. Further, the concept of "Machine Authorship" refers to the human designers and developers behind the AI algorithms, i.e., the creators who program and control these systems.[23] AI-generated works challenge this human-centric principle with greater accuracy.

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[19] U.S. Copyright Office, Compendium of U.S. Copyright Office Practices § 306 (3rd ed. 2021).
[20] Bridgeman Art Library v. Corel Corporation,36 F. Supp. 2d 191(S.S.N.Y. 1999).
[21] Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1.
[22] Directive 2001/29/EC of the European Parliament and of the Council on the harmonization of certain aspects of copyright and related rights in the information society, Art. 2.
[23] Oren Bracha, Generating Derivatives: AI and Copyrights' Most Troublesome Right, 25 N.C. J.L. & TECH. 345(April 2024).

The turning point came in for the legal treatment of AI authorship with the UK SC's ruling in *Thaler vs Controller General of Patents Designs and Trademarks[24]*, where Dr. Stephen Thaler sought to patent inventions autonomously created by his AI system, DABUS. The UK Supreme Court held that UK Patents Act 1977 requires an inventor to be a natural person. The court reasoned that, under the Patents Act 1977, non-human inventors cannot be recognised, as legal parenthood and the capacity to assign rights are pre-requisites.

This judgement aligns with global jurisprudential trends. The U.S. Patent and Trademark Office have similarly rejected patent applications listing AI as investors, reinforcing the necessity of human authorship.[25] Australian and German Courts have also dismissed AI inventorship claims.[26]

In copyright law, a parallel consensus has emerged. The U.S. courts reaffirm human authorship as a statutory condition for copyrightability. For example, in the case of *Thaler vs Perlmutter*, the court denied copyright protection where the author was an AI system, reiterating that the copyright Act's text and history limit authorship to natural persons.[27] Similarly, in *Naruto vs Slater*, a prominent animal authorship case, established that non-human entities, even animals, cannot claim copyright.[28]

C. Fixation: Tangibility and Intentionality

Fixation demands that a work be embodied in a tangible medium or otherwise be perceivable for sufficient time to allow reproduction. It serves to ensure that works are not merely fleeting expressions but fixed for public dissemination and economic exploitation. While digital AI-generated works exist in tangible digital formats, the fixation doctrine implicitly assumes human intent and a volitional act of fixation encompassing artistic expression. AI-generated outputs typically result from autonomous processing without explicit human intent directed at fixing the work.

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[24] Supra 1.
[25] U.S. Patent and Trademark Office, Inventorship Guidance (2021).
[26] Commissioner of Patents vs. Thaler, No. NSD 1902/2019 (fed. Ct. Aus. 2021); Federal Patent Court Germany, 2021.
[27] Thaler V. Perlmutter, No. 21-1617 (D.C. Cir. 2018).
[28] Naruto V. Slater, 888 F.3d 418(9th Cir. 2018).

This challenges traditional fixation concepts, which were framed in eras where fixation was a deliberate act by human creators, such as writing, recording or capturing images. The absence of intentional expression in AI-generated fixation complicates the doctrinal foundation of copyright protection. Jurisdictions have yet to fully resolve whether AI-generated works fulfill fixation requirements in the absence of human intentional fixation. The U.S. Copyright Office acknowledges fixation met in a mechanical sense but emphasises human creative purpose.[29] Similarly, Indian copyright doctrine requires fixation with human creative expression.[30] This fixation suggests potential reforms are necessary to either adopt fixation doctrine or clarify the role of human intervention in AI contexts.

The Munich Regional Court I (Landgericht Munchen I) ruled in *GEMA vs OpenAI[31]*, ruled that OpenAI's ChatGPT models infringed German copyrights by memorising and reproducing protected song lyrics from GEMA-represented authors without licenses. GEMA, Germany's music rights society, sued over lyrics like those from "Atemlos" being output via simple prompts establishing that such memorisation constitutes fixation and reproduction under Section 2 of the German Copyright Act.[32]

The doctrinal challenges presented by AI-generated works are not merely academic; they have profound implications for rights allocation, innovation incentives and the future of creativity. Originality Authorship and fixation assumptions are intertwined and doctrinally inseparable from human agency.

IV. GLOBAL DEVELOPMENTS AND COMPARATIVE ANALYSIS

The rapid advancement of AI technologies challenges traditional IP concepts, particularly regarding authorship and ownership in copyright law. A crucial distinction between AI created works and AI assisted works i.e. human assisted works must be carved out. Jurisdictions worldwide grapple with these issues differently reflecting variations in legal traditions and policy priorities.

A. USA

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[29] U.S. Copyright Office, Compendium Reg. 1202 (2021).
[30] Copyright Act, 1957, India, S. 2(o).
[31] GEMA vs OpenAI, NO. 42 O 14139/24(Reg. Ct. Munich Nov. 12, 2025).
[32] Act on Copyright and Related Rights (Urheberrechtsgesetz – UrhG), s.2, Germany, 1965.

In the United States copyright protection fundamentally requires human intellectual creativity. The landmark case *Burrow- Giles Lithographic Co. vs Sarony*[33], established that photography could achieve copyright protection only if the photographer (human editor) exercised originality and creativity. This human- centric approach remains persists denying protection to purely-AL generated works due to lack of human authorship, as reinforced in *Naruto V. Slater*, where a monkey's "selfie" did not qualify as an "author" under copyright law reinforcing the human authorship prerequisite.

Similarly in *Thaler V. Perlmutter*[34], the District Court of Columbia held that copyright law "protects only works of human creation" and rejected the claim that an AI system itself could be an author affirming that works generated solely by AI are ineligible for copyright protection. The U.S. Copyright Office has reinforced this view in cases such as the registration attempts for AI generated images like *Theathre Dopera Spatial*[35] and the comic book *Zarya of the Dawn*[36], where it was held that creativity solely derived from AI prompting does not confer authorship, and only the human-authored elements(such as texts or creative selection/arrangement) are protectable.

These decisions thus underscore the legal and commercial incentives for creators to conceal AI's involvement in their works to secure copyright protection and avoid immediate public domain status. Courts have also recognised the "copyright protection" doctrine as a potential tool to penalise right holders who overreach by asserting copyright over AI-generated content lacking human authorship, thus, disincentivising obfuscation of AI provenance. Thus, the U.S copyright law does not recognise AI machines as legal author of AI-generated works[37] nor the artists' applications who use AI as authors because they lack "predictability and control over the outputs".[38]

B. CHINA

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[33] Burrow- Giles Lithographic Co. V. Sarony, 111 U.S. 53(1884).
[34] Thaler V. Perlmutter, 687 F. Supp. 3d 140,146(D.D.C. 2023).
[35] U.S. Copyright Office, Letter on Theathre Dopera Spatial (Sept.5 2023).
[36] U.S. Copyright Office, Letter on Zarya of the Dawn (Sept. 15, 2022).
[37] U.S. Copyright Office, Compendium of U.S.Copyright Office Practices s. 101 (3d ed. 2021).
[38] Lauren LaPorta, Authorless AI: Navigating Copyright Challenges of Generative AI Works, 11 PENN UNDERGRADUATE L.J. 64(Fall 2024).

China being a global leader in AI development and deployment, has poignantly confronted these challenges in the judiciary. A landmark Chinese case, *Shenzhen Tencent Computer System Co., Ltd. v. Sanghai Yingxun Technology Co., Ltd.*[39], saw the Nanshan District People's Court recognise that works generated by AI applications such as Tencent's Dreamwriter software can qualify for copyright protection. The court held that copyritability depends on the intellectual creativity and specific arrangements by human developers and operators supporting the AI system. Despite the article's automatic generation by AI, the plaintiff's team provided original contributions through data selection, analysis, trigger condition settings, template choices and corpus styling, which shaped its unique expression and satisfied originality requirement under China's Copyright law. Unauthorised reproduction by the defendant was ruled infringing under Chinese Copyright law.

In another notable case before the Beijing Court involving Gao Yang and Youku in *Gao Yang et al. vs Golden Vision (Beijing) Film & Television Culture Co. Eld. Et al.*[40] the court held that photos automatically taken by a camera on a hot air balloon were protectable under copyright law as this emphasises the "personal touch" or minimal originality standard, recognising originality. Additionally in 2023 Beijing Internet Court recognise AI generated images created with human input through prompt and design and granted copyrighted protection.[41] Thus, the Chinese approach does not over rightly reject the idea of AI works rather gives protection and follow a balanced approach.

C. UK

The United Kingdom has taken a distinctive approach for the protection of AI generated works under Section 9(3)[42] of the Copyright Designs and Patents Act 1988 (CDPA). This provision discusses "computer-generated works" and defines them as literary, dramatic, musical or artistic works generated by a computer "in circumstances when there is no human author." This legal fiction creates and establishes under Section 9 (3) grants authorship to the person who made all

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[39] Shenzhen Tencent Computer System Co., Ltd. V. Sanghai Yingxun Technology Co., Ltd.2019 Yue 0305 Min Chu No. 14010 (Nanshan District People's Cout).
[40] Gao Yang et al. v. Golden Vision(Beijing) Film & Television Culture Co. Eld. Et al.2017 Jing 73 Min Zhong 797.
[41] Beijing Internet Court, (2023) Jing 0491 Min Chu No. 11279 (Beijing Internet Ct. 2023) (AI generated image copyright infringement case).
[42] Copyright, Design and Patents Act, 1988, c. 48, s. 9(3)(UK).

the arrangements and gave command to the computer's output rather than the traditional evolution of human creativity.

This framework is one of the pioneer enactments that aimed to curb the gap that exists in conventional copyright doctrines that do not contemplate authorship without human intervention. In the case of *Nova Production Ltd. V. Mazooma Games Ltd.*[43], the court held that the programmer or the person who created the essential conditions for the output was the author and not someone who merely interacts with the software i.e. the users who "contribute artistic skill and labor" can be an author.[44] The decision aligned with the concept that the human involvement is a must for establishing authorship, even when much of the work is computer generated.

Despite this, ambiguity subsists around how originality is assessed for AI generated works created autonomously by machines.

D. INDIA

India's approach being the 4th largest economy to AI generated works within the copyright framework remains rooted in the traditional principles of human authorship but it is currently undergoing significant evolution to address emerging technological realities. The Indian Copyright Act, 1947 defines an "author" under Section 2(d)[45], as a human being or juristic person, thereby leaving no scope of AI generated works from recognised authorship.

Indian Courts have consistently reinforced the primacy of human agency in copyright protection. In *Rupendra Kahyap V. Jiwan Publishing House Pvt. Ltd.*[46], the Delhi HC held that only natural persons are eligible to claim copyright, disallowing artificial entities such as CBSE to hold copyrights, which similarly applies to AI models. Likewise, in the landmark ruling like *Eastern Book Co. V. D.B. Modak*[47], emphasise the necessity of a "modicum of creativity" and human

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[43] Nova Production Ltd. v. Mazooma Games Ltd., [2007] EMLR 427.
[44] Lauren LaPorta, Authorless AI: Navigating Copyright Challenges of Generative AI Works, 11 PENN UNDERGRADUATE L.J. 64(Fall 2024).
[45] Indian Copyright Act, 1957, 17, No. 14, Acts of Parliament, 1957, s. 2(d).
[46] Rupendra Kashyap V. Jiwan Publishing House Pvt. Ltd., 1996(38) D.L.R. 81(Del. H.C.).
[47] D.B. Modak v. Eastern Book Company, (2017) 1 SCC 44.

intellectual effort to qualify for copyright. Additionally, the influential *Naruto V Slater*[48] case is referenced to illustrate courts' refusal to extend copyright to non human's authors.

Nonetheless, there has been some experimental recognition, such as the Indian Copyright Office's initial acknowledgement of the *RAGHAV AI Painting App* as co-author; through this was later withdrawn pending legal clarity. The emerging approach suggests potential joint ownership in cases where AI assists humans, while works created autonomously by AI remain contentious.[49]

To address ambiguities, the Government of India (GOI) established an expert panel in 2025 to review the Copyright Act concerning generative AI. The panel's mandate includes examining authorship, ownership, licensing infringement risks and the impact of AI training datasets on existing copyrights. Proposed reforms contemplate recognising "AI-assisted" Versus "AI generated" works distinctly, introducing mandatory disclosures about AI use and adapting ownership norms akin to the Section 9(3) of UK'S Copyright Designs and Patents Act 1988.[50]

Furthermore, India's Ministry of Electronics and Information Technology issued AI governance guidelines in 2025, promoting innovation balanced with rights protection and a graded liability framework across AI development chains.[51] This guideline also suggests that copyright infringement is done by human or legal entities and not on AI generated content.

V. CONCLUSION

The doctrinal pillars of copyright such as originality, authorship and fixation reveal the inadequacies in dealing with AI-generated works throughout various jurisdictions as dealt throughout the paper in 2025. These tensions demand legislative recalibration to foster certainty amid AI's $500 billion market worldwide.[52]

Moving forward, the imperative is clear and urgent: policymakers must prioritise rapid, evidence-based reforms that distinguish meaningfully AI assisted (human-dominant) works

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[48] Naruto V. Slater, 888 F.3d 418 (9th Cir. 2018).
[49]Tanya Saraswat, ChatGPT and IP Issues, MONDAQ (May 5, 2023), available at: https://www.mondaq.com/india/copyright/1311836/chatgpt-and-ip-issues, (Last Visited on Nov. 17, 2025).
[50] Rommel Khan, "AI works- the future of Intellectual Property Law," MONDAQ(Feb. 20, 2023)
[51] Ministry of Electronics and Information Technology, AI Governance Guidelines (Nov. 5, 2025).
[52] Statista Global AI Market Size 2031(Jan.14, 2016), https://www.statista.com/forecasts/1474143/global-ai-market-size/.

which have THE merit of full copyright with a human as the author, AI aided collaborations (eligible for protection proportionate to demonstrable human creative contribution) and purely autonomous outputs.

International harmonisation ideally through WIPO led treaty or at minimum coordinated national positions in ongoing USCO[53], EU AI Act[54] implementation and India's 2025 Copyright Review Panel deliberations must be pursued with deliberate speed to avoid a fragmented global regime that stifles cross border innovation while rewarding a forum shopping.[55] The choices made in the next two to five years will shape the creative economy for decades. Consequently, the call to modernise copyright must prioritise balanced, technologically informed legislative frameworks that reinforce human authorship principles without suppressing AI facilitated creativity.

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[53] U.S. Copyright Office, Copyright & Artificial Intelligence: Part 2- Copyrightability(Jan. 29, 2025), https://copyright.gov/ai/.
[54] Regulation 9EU) 2024/1689 (AI Act), Aug. 1, 2024.
[55] Dep't for Promotion of Indus. & Internal Trade, Working Paper on Generative AI & Copyright (Part1) (Dec. 2025).

Affording Trade Secret Protection Against Reverse Engineering: Global Approaches and Lessons for India

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Abstract

Trade secrets constitute a very essential intellectual property asset for software companies in recent times. They contribute to the business's economies of scale, which gets adversely impacted by instances of breach. Breach of trade secrets are caused by breach of confidentiality, unauthorised public disclosure, and access to these assets. Reverse engineering is essentially moving back from the product to the very origin of the idea, tracing the procedural nuances resulting in such innovation. This procedural knowledge is then used by these developers to redesign or remodel new products based on the same technical knowledge. India does not have a legal framework either for trade secrets or reverse engineering processes, and thus, it becomes more challenging for the original owners of this information to raise claims against breach of their trade secrets. The economic significance of a trade secret is lost once it loses its confidentiality and is made publicly available, thus disincentivising producers from exploring and designing new modes of knowledge. This paper addresses the concerns relating to inadequate protection of trade secrets, along with the grave intensity of the issue in relation to the use of reverse engineering processes and how other nations have responded to it.

Keywords: Trade Secrets, IP Asset, Reverse Engineering, Non-Disclosure Agreement, Misappropriation

Introduction

Trade Secrets are generally protected through the signing of Non-Disclosure Agreements ('NDA') between the parties and do not require a formal registration process like patents.

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These private contracts are the only instruments for employers and businesses to contain the misuse of sensitive information by former employees through restrictive covenants such as NDAs. Although India does not have a codified statute conferring protection on trade secrets, common law jurisprudence has developed in this area based on the principles of equity, contract, and breach of confidence.[2] The Supreme Court ('SC') has also upheld the enforceability of post-employment obligations, clarifying the scope of this restriction to be limited to the extent of protection and not to restrict professional freedom unduly.[3]

Reverse engineering is a process of disassembling a product to comprehend its operation or design. This process may be violative of intellectual property laws in many jurisdictions, especially if it violates patents or is used for unauthorised extraction of trade secrets. The process remains lawful so long as it obtains permission or access from the owner of such an IP asset, and when done for specific reasons like interoperability or education. But there isn't any clear marker for when this process can result in an innovation or invention, especially if it originates from enhancements or modifications in the pre-existing proprietary knowledge.[4]

Defining Trade Secrets

A trade secret relates to technical know-how and knowledge, confidential to its holder. This form of IP is of a highly commercial nature, giving the holder a competitive edge in the outside world over this knowledge.

"An intellectual property may be recognised as a trade secret if it contains the elements of confidentiality, significant economic value and the making of reasonable efforts to maintain secrecy of such information. The information must be kept confidential and should not be publicly accessible and such confidential information holds significant economic value to its holder, which, if compromised in any way, causes economic loss to the holder. The owner of this property makes reasonable efforts and takes adequate measures to protect the confidentiality of this knowledge from unauthorised disclosure to the public."[5]

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[2] Mohini V, Guarding the Invisible: Trade Secrets Law in India, *Managing Intellectual Property* (Oct. 16, 2025), https://www.managingip.com/article/2fgqllnfh03y9dwpvpm9s/sponsored-content/guarding-the-invisible-trade-secrets-law-in-india

[3] Niranjan Shankar Golikari vs The Century Spinning And Mfg. Co. Ltd (1967) AIR 1098.

[4] Shubham Kumar Jha, *Legality of Reverse Engineering: Impact on Trade Secrets and Intellectual Property* (SSRN Working Paper No. 5112045, 2024).

[5] Sharad Vadehra, Shikha Mittal & Rachana Bishnoi, *Trade Secret Protection in India: A Comprehensive Overview*, Kan & Krishme (May 12, 2025), available at https://kankrishme.com/trade-secret-protection-in-india-a-comprehensive-overview/

To decide as to whether such confidential information amounts to a trade secret, the relevant factors to be considered are: the status of the employee and the nature of his work, nature of the information itself, imposition of a duty to maintain the secrecy of information by the employer and a clear distinction between confidential and non-confidential information[6]

International Standards Relating to Trade Secrets

Article 39 of the Agreement on Trade Related Aspects of Intellectual Property Rights ('TRIPS Agreement')[7] provides protection for trade secrets against unfair competition. Article 44 of the agreement sets forth the minimum requirement for enforcement as *"that "judicial authorities shall have the authority to order the infringer to pay the right holder damages adequate to compensate the injury the right holder has suffered"*, provided that the infringer knew or *"had reasonable grounds to know"* that she was engaging in an infringing activity."[8]

"It also enables Members to adopt in their internal legal system a wide variety of effective remedies perfectly in sync with the principles of international law, including, among others, provisional measures inaudita altera parte."[9] Bilateral Trade Agreements and other IP-related Agreements are also relevant in interpreting TRIPS obligations because of the 'Most Favoured Nation' rule set forth by Art. 4 TRIPS[10]. The most favoured national rule provides for an equitable standard of protection, privileges and immunities if granted to one nation to be accorded to all other nations in a similar and alike manner by the signatory member with only an exception to any bilateral or multilateral agreement.

Evolving Jurisprudence in India

In the *Burlington Home Shopping Pvt. Ltd. v. Rajnish Chibber[11]*, the Delhi HC had observed that 'Trade secret law protects a wide array of business data, Customer Lists and other compilations of business data which may be copyrightable as fact works. The courts have time and again upheld the use of confidentiality clauses in employment contracts as a necessary provision to secure the employer's intellectual assets.

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[6] Pollock & Mulla, "Indian Contract and Specific Relief Acts" (13th ed. Vol. 1, Lexis Nexis Butterworths Wadhwa, 2006), pg. 839.

[7] Agreement on Trade-Related Aspects of Intellectual Property Rights art. 39, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299.

[8] Ibid.

[9] Davide Arcidiacono, The Trade Secrets Directive in the International Legal Framework, 1 Eur. Papers 1073, 1080–81 (2016).

[10] Agreement on Trade-Related Aspects of Intellectual Property Rights art. 4, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299.

[11] 1995 IV AD (Delhi) 732.

In *V.N. Deshpande v. Arvind Mills[12]*, the court was examining clause 9 of the agreement, which restricted the employee from sharing any secret and confidential information of such nature as was mentioned in the list after his termination from employment. Therefore, the court was right in granting an injunction against the divulging of such trade secrets by the employee as a means to protect the reputation and brand value of the employer in the market.

It has also been clarified through judicial rulings that the details of the customers are not trade secrets nor are they property.[13] The reason for uploading restraints against an employee is to prevent the proprietary rights of the employer if it is reasonably necessary for securing trade relations or trade secrets. However, this right is available for use to curb competition or against the use of personal skills acquired by the employee during his employment tenure.[14] Also, the stance of the court is very clear as to the period of such limitation on the employee, which is to prevent the sharing or divulging of inside trade information by the employee only up to the contract period.[15]

Available Remedies

Section 27 of the Contract Act[16] comes into rescue for the employers to protect their confidential trade information from being shared by the employee. This provision restricts the employee from disclosing any information which he has acquired during the tenure of his employment with the employer.

The courts have granted the relief of injunction (both interim and final) in a suit for infringement of a trade secret. The Delhi High Court in the *Mr. Arjun Dagal & Anr. v. Mr. Shubham Gandhi & Anr*[17] case granted the plaintiff an ex parte ad interim injunction restraining the defendants from manufacturing, marketing, distributing, selling, using, advertising, marketing, offering for sale or in any manner dealing in any garment or product under the plaintiff's label. Damages in the form of actual, punitive or exemplary have also been awarded in cases of serious misuse of such information causing undue loss to the owner. Moreover, the courts are also empowered to pass specific orders directing the defendant to return or destroy the misappropriated information.

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[12] MANU/MH/0080/1945.
[13] MANU/DE/2106/2006.
[14] Herbert Morris Ltd. v. Saxelby, (1916-17) ALL ER Rep. 305.
[15] Zaheer Khan v. Percept D'mark (India) MANU/MH/1576/2003.
[16] Indian Contract Act, No. 9 of 1872, § 27 (India).
[17] Mr. Arjun Dagal & Anr. v. Mr. Shubham Gandhi & Anr. CS(COMM) 918/2025.

Current Dilemma

Trade secret protection in India is weak due to the absence of a dedicated law to confer statutory protection, whereas jurisdictions like the US[18] or EU[19] has have specific legal statutes for the protection of trade secrets. The absence of a statutory framework in India gives space for enforcement issues to arise. Enforcement is challenged because the scope of protection and the available remedies for infringement are missing, and trade secret protection is mainly enforced through contractual relationships between parties. The jurisprudence is also not concrete on the issue, and time and again, courts have given varied and distinct opinions on the nature and ambit of protection guaranteed to the holder. There is no unanimity of opinions among precedents as well.

The legislative or jurisprudential progress in the area is much lower than the number of breaches committed, or the value of economic loss caused because of such breaches to business entities. The problem has accelerated at a high pace in recent years, due to the growth of cross-border and transnational trade. In the absence of an established domestic framework, it disregards the interests of domestic parties in case of a breach committed by international parties. The domestic holders are at a much more vulnerable state, wherein all the technical knowledge gets drained by way of such breaches by international firms in Joint Venture arrangements. There is no uniform international enforcement standard, whereas some jurisdictions like the US and EU have a well-developed legal framework to confer protection to their domestic companies, which makes it a more urgent need for Indian companies at this juncture.

The EU Comparative

The Trade Secrets Directive [20] provides for common rules of protecting trade secrets across member nations. The framework enforces consistent statutory governance of trade secrets to prevent their misappropriation. The Trade Secrets Directive aims at approximating Member States Laws and Legislation concerning the protection of "undisclosed know-how and business information against their unlawful acquisition, use and disclosure.[21]

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[18] Uniform Trade Secrets Act (Nat'l Conf. of Comm'rs on Uniform State Laws 1985).

[19] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure art. 3, 2016 O.J. (L 157) 1.

[20] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure, 2016 O.J. (L 157) 1.

[21] Davide Arcidiacono, The Trade Secrets Directive in the International Legal Framework, 1 *Eur. Papers* 1073 (2016).

The protection extends to trade secret by defining it as *"is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question"*, that *"has commercial value because it is kept secret"* and that *"has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret."*[22] For claiming reliefs against such infringement and obtaining damages, the element of fault or intention must be established according to Article 14.[23]

A very peculiar provision under Article 3 mentions, permissible means of acquisition of trade secrets, *"independent creation or discovery"*; *"observation, study, disassembly or testing of a product or object that has been made available to the public or that is lawfully in possession of the acquirer of the information who is free from any legally valid duty to limit the acquisition of the trade secret."*[24] This ensures the permissibility for obtaining access to such trade secrets through another person using authorised means. This clearly explains how well thought out the framework is, which not only defines trade secrets, recognises them as IP, and provides relief of damages, but also lays down the clear distinction between lawful use of trade secrets and their misappropriation.

The US Comparative

The U.S. has two major legal frameworks to govern the misuse of trade secrets: the Uniform Trade Secret Act ('UTSA')[25] and the Economic Espionage Act of 1996 ('EEA')[26]. Both these acts establish two key elements for defining a trade secret; firstly, the person has subjected such information to reasonable efforts to maintain its secrecy, and secondly, the information derives independent economic value. The remedies available under UTSA are protective orders passed by the courts, holding in-camera proceedings, sealed cover records, and granting an injunction against the defendant restricting him from disclosing the alleged trade secret without the court's prior approval.[27]

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[22] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure art. 2, 2016 O.J. (L 157) 1.

[23] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure art. 14, 2016 O.J. (L 157) 1.

[24] *Supra* note 19.

[25] *Supra* note 18.

[26] Economic Espionage Act of 1996, 18 U.S.C. 1831–1839.

[27] Uniform. Trade Secrets Act § 5 (Uniform Law Comm'n 1985).

The US courts have recognised the operation of the doctrine of inevitable disclosure in cases of trade secrets, mostly in cases of employer-employee relationships. The courts believe that the misappropriation of the trade secrets is inevitable if the employee who has the knowledge of such trade secrets of the employer or his company accepts an equivalent position with a competitor.[28]

Impact of Reverse Engineering Technologies on Trade Secrets

As previously discussed, trade secrets provide businesses and companies with an economic edge over their competitors, and this IP asset is a result of the hard labour and technological knowledge of the creators, which ought to have protection to foster self-reliance in technology among various sectors of the economy. Reverse engineering processes are used these days by companies to break down a software program and understand its underlying algorithm. This knowledge about the constituents of a program helps these developers in innovatively developing new programs; these developers must first obtain consent from the original creators before accessing it.

Reverse engineering is a pro-innovation measure that helps in the enhancement and growth of innovation by promoting the use of existing technical know-how to create new and updated solutions to the problems of changing times. The same technical knowledge used a decade back, with some improvements, could restructure the existing program and result in a technological revolution.

The benefits of this process are attractive towards fostering re-innovation. However, it also poses serious concerns for the owners or original creators of this sensitive information which provides them with a competitive edge in the market. Their interests are compromised if their knowledge is misused unlawfully without their prior permission and then broken down and used for the remodelling of a new product. The most adverse impacts would be unethical counterfeiting and cloning. This undermines the work of the original producers and compromises their IPR.

Since Indian law does not cover reverse engineering methods under its statutory framework, it becomes even more difficult for original creators to seek protection against a breach of their trade secrets committed by way of reverse engineering. Some recent cases related to such

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[28] David W. Quinto, Stuart H. Singer, "Trade Secrets – Law and Practice" (OUP, 2009) Pg. 91.

breaches include counterfeit Apple AirPods[29] and the piracy of Taylor Swift's[30] DRM-protected songs.[31]

Finding Solutions

With the elaborate discussion as to how significant trade secrets are as an Intellectual Property to commercial enterprises remains starkly clear. Now the real question which arises is whether reverse engineering poses serious concerns regarding misappropriation of trade secrets, and if so, what is the way to afford adequate protection for these intellectual assets against this process?

To reduce the risk of losing trade secrets, which hold economic importance to their owners and holders, they must confer protection using licensing agreements, confidentiality agreements, and increasing brand awareness for customers to eliminate the chances of product piracy. The easiest and most feasible method would be by way of licensing agreements, wherein the holders consent to the use of these trade secrets in a limited manner through conferring a license for use. They may limit the licensee to deploy reverse engineering processes. This also grants the holder economic benefits from the sharing of these secrets through the collection of licensing revenues. This reduces the opportunity costs for the holder.[32]

Confidentiality Agreements are mostly used in employment arrangements between employers and employees to maintain the secrecy of the information, but can also be extended to other developers for further innovation by limiting the reverse examination of the mechanical or technical processes.

The most effective way to protect the technical know-how about the development of a product is to balance the adverse effects of reverse engineering, which are generally the flooding of markets with pirated products or cloning, by creating consumer awareness. This ensures that the consumers know the product and the brand very well so as to differentiate between real and fake products developed through the breakdown of the original processes of

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[29] Aaratrika Bhaumik, Sale of Alleged Fake Apple AirPods to Lawyer: Allahabad High Court Orders No Coercive Action Against Flipkart Officials, *LiveLaw* (Nov. 4, 2022), https://www.livelaw.in/news-updates/sale-alleged-fake-apple-airpods-lawyer-allahabad-high-court-no-coercive-action-flipkart-officials-213286.

[30] Alan Chiu, James Choi & Alison Choy, A Swift Return – A Lesson in Music IP from Taylor Swift's Reclaiming of Master Recordings, *Lexology* (June 4, 2025), https://www.lexology.com/library/detail.aspx?g=203bf1b9-bebf-4f9b-b5cd-6244f469aff1.

[31] Shubham, *supra* note 4.

[32] Carmen Tamara Ungureanu & Ștefan Răzvan Tataru, *The Legality of Reverse Engineering or How to Legally Decipher Trade Secrets*, 177 SHS Web Conf. 02001 (2023).

manufacturing, such as Coca-Cola, a very famous beverage drink has a lot many deceptive look alike products available in the market, however the marketing and advertising lessen the chances of consumer purchasing the counterfeited ones.

Lastly, the trade secret holder can implement protection measures against reverse engineering starting from the design and manufacturing stage of the product. Thus, the trade secret holder may use sealing systems or construction materials that break down in the disassembly process and make reverse engineering difficult, if not impossible. The manufacturer or developer can use different techniques in this context, such as encapsulation of hardware components to make non-destructive disassembly almost impossible; mislabelling or marking components to mislead a potential reverse engineer; adding some 'locks' on the product components or within the software program.[33]

Conclusion

It is pertinent to note from all this discussion that trade secrets are as valuable an intellectual property as the others, such as copyright, trademarks, and patents. Most of the IPs have today secured protection, which develops the ambition for creative and innovative developments. However, trade secrets contribute much more to the economies of scale of a commercial entity but still lack adequate protection from the lawmakers. The nature of protection afforded is mainly through contractual relations among parties and creates huge potential for infringement disputes arising out of contractual breaches. Also, the variation in judicial interpretation leads to uncertainty and a lack of uniformity. By drawing out a comparative analysis of the US and EU laws, it brings to our attention that there exists a codified legal framework guaranteeing relief against economic damages suffered from misappropriation of such secrets; the EU's framework in this regard has a more nuanced structure.

The complexities in the protection of trade secrets have increased manyfold with the growing use of reverse engineering technologies in the absence of any statutory guidelines to regulate their limited use in decoding or deciphering the trade secret of a mechanical process. This instigates a fear in mind of trade secret holders regarding unauthorised exploitations without any remedies or limitations per se, to address this challenge. Since reverse engineering methods are mostly deployed for breaking down the manufacturing or development process of a product, which necessarily exploits the trade secrets of the creator or owner, the extent to which such use of the derived knowledge of trade secrets should be allowed to protect genuine

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[33] P. Samuelson, S. Scotchmer, The Yale Law Journal, 111(7), 1662 (2002).

interests of the general public and in specific the asset holder remains ambiguous and up for legislative dialogue towards the enactment of a law addressing all these key issues.