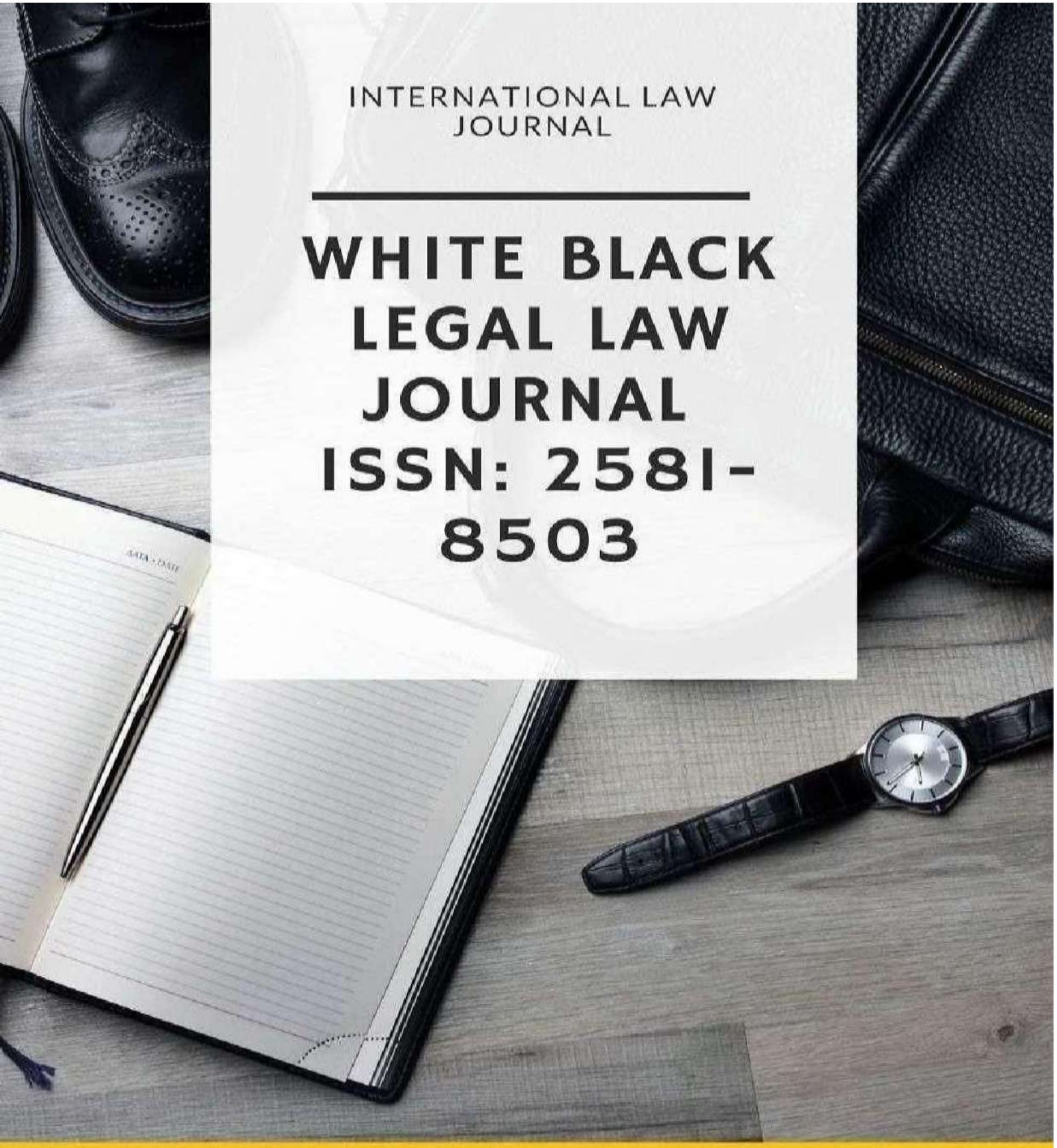

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THE ALGORITHMIC INVENTOR AND THE ANTIQUATED STATUTE: RE-ENGINEERING THE INDIAN PATENT SYSTEM IN RESPONSE TO AUTONOMOUSLY GENERATED AI INVENTIONS

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ABSTRACT

The emergence of Artificial Intelligence (AI) as a capable creator of novel and patentable inventions has exposed significant limitations within the Indian patent framework. The Patents Act, 1970, is fundamentally premised on human inventorship, thereby rendering it inadequate in addressing inventions autonomously generated by AI systems. This paper critically examines the concept of the "algorithmic inventor" and highlights the legal vacuum concerning inventorship, ownership, and accountability in such cases.[1]

Historically, intellectual property regimes were constructed around the "Romantic Author" or "Human Inventor" theory—the belief that innovation is a byproduct of human cognitive labor and subjective "sparks of genius." However, the transition from AI as a mere tool to AI as a generative agent has fractured this human-centric paradigm. This research explores the doctrinal tension between the "Mental Act" requirement in patent law and the computational reality of deep learning, where inventive outputs are derived through non-linear data processing rather than human biological thought.

The analysis further extends to international developments, particularly the landmark "DABUS" (Device for the Autonomous Bootstrapping of Unified Sentience) cases across several jurisdictions. These cases serve as a global litmus test, revealing a profound hesitation in recognizing non-human entities as inventors due to statutory constraints and public policy concerns regarding liability and personhood. In the Indian context, the paper scrutinizes the interplay between Section 3(k) of the Patents Act, which bars algorithms *per se*, and the evolving standards of Computer-Related Inventions (CRIs).

By identifying the "Black Box" challenge—where the internal logic of an AI system remains

opaque to the human eye—the paper underscores the growing difficulty in satisfying the statutory requirements of "Enablement" and "Disclosure." The research argues for a strategic "re-engineering" of the patent system. It proposes a shift toward a hybrid inventorship model, the introduction of *sui generis* protections for machine-generated works, and a recalibration of the "Person Skilled in the Art" (PHOSITA) standard. Ultimately, this study advocates for a flexible, forward-looking legal architecture that balances the necessity of incentivizing AI-driven technological leaps with the essential need to preserve human accountability and the public interest.[2]

INTRODUCTION

"The measure of intelligence is the ability to change." — **Albert Einstein**

The unprecedented rise of Artificial Intelligence (AI) has transformed the landscape of innovation, challenging long-standing legal frameworks that were originally designed with human creators in mind. AI systems today are capable of performing complex cognitive tasks such as data analysis, pattern recognition, and even autonomous decision-making, thereby blurring the line between human and machine creativity. Within the domain of intellectual property law, particularly patent law, this technological evolution has raised fundamental questions regarding the concept of inventorship.

As Steve Jobs once profoundly noted, **"Innovation distinguishes between a leader and a follower."** In the current technological epoch, the "leader" in innovation is no longer exclusively a biological entity. The transition from AI acting as a mere tool—comparable to a calculator or a word processor—to a generative force capable of independent "thought" processes marks a critical juncture in legal history.[3]

Historically, the patent system was established during the Industrial Revolution to incentivize human ingenuity. The underlying social contract was simple: the state grants a temporary monopoly to a human inventor in exchange for the public disclosure of their discovery. However, this contract is predicated on the "Mental Act" theory, which posits that invention is a fruit of the human spirit. When an algorithm like a Neural Network identifies a novel chemical compound or designs a more efficient antenna without a human technician providing the specific parameters of the solution, the traditional "Mental Act" is absent.

In the Indian context, this tension is particularly acute. The Patents Act of 1970 was drafted during a time of industrial infancy, focusing heavily on process patents and human-centric mechanical advancements. As India positions itself as a global technology hub, the silence of the 1970 Act regarding non-human inventors creates a precarious legal vacuum. If the law refuses to recognize AI-generated inventions, it risks pushing a vast wave of 21st-century innovation into the shadows of "Trade Secrets," thereby defeating the very purpose of patent law—which is to encourage public disclosure.

Furthermore, the introduction of AI into the inventive process complicates the "Person Skilled in the Art" (PHoSITA) standard. Traditionally, patentability is judged against what a regular human expert in the field would find obvious. If the "expert" now has access to super-human AI processing power, the bar for what constitutes an "inventive step" must logically rise.[4] Thus, the introduction of AI does not just challenge the *identity* of the inventor, but the very *standard* of innovation itself. This research paper delves into this "Antiquated Statute," exploring how the Indian legal machinery must be re-engineered to accommodate the "Algorithmic Inventor" without compromising the fundamental principles of equity and public interest.

1.1 The Paradigm Shift in Inventorship

The traditional understanding of an "inventor" as a natural person is increasingly being tested by AI systems that can independently generate novel and useful inventions without direct human intervention. This paradigm shift necessitates a critical re-examination of existing legal doctrines. The Indian patent system, governed by the Patents Act, 1970, is rooted in a human-centric framework that does not explicitly recognize non- human entities as inventors. Statutory provisions and judicial interpretations consistently emphasize the role of human ingenuity, excluding the possibility of AI being recognized as an inventor.[5]

1.2 The Global Conflict and the DABUS Paradigm

The global conflict surrounding AI inventorship is best exemplified by the "DABUS" cases, which have become a cornerstone of contemporary intellectual property discourse. Stephen Thaler, the creator of the AI system known as DABUS (Device for the Autonomous Bootstrapping of Unified Sentience), filed patent applications in numerous jurisdictions naming the machine itself as the inventor. These applications acted as a "litmus test" for global legal systems, leading to a significant fragmentation between different legal philosophies.

1. The Human-Centric Traditionalists (UK, USA, and EU)

In these jurisdictions, courts and patent offices have largely maintained a conservative stance, emphasizing the "natural person" requirement for inventorship.[6]

- **United Kingdom:** In *Thaler v. Comptroller-General of Patents, Designs and Trade Marks*, the UK Supreme Court held that an inventor must be a natural person. The court reasoned that since DABUS is an AI system, it cannot be recognized as an inventor and, consequently, cannot transfer rights to a human applicant. Any shift from this position, the court noted, would require a legislative mandate rather than judicial reinterpretation.
- **United States:** The Federal Circuit reached a similar conclusion in *Thaler v. Vidal*, ruling that the U.S. Patent Act defines an "individual" as a natural person. The court rejected the application, reinforcing the statutory requirement of human inventorship and illustrating the limitations of current frameworks in the face of autonomous AI.
- **European Union:** The European Patent office (EPo) maintained that the European Patent Convention requires an inventor to be a human being. The EPo expressed concern that recognizing non-human inventors would create complex legal uncertainties regarding rights and obligations.

2. The Policy-Driven Pragmatists

While most of the world rejected the DABUS applications, certain jurisdictions offered a more flexible or experimental approach.[7]

- **South Africa:** In a landmark move, South Africa became the first country to grant a patent naming DABUS as the inventor. However, critics argue this was largely a procedural outcome of their non-examining patent system rather than a profound shift in legal doctrine.
- **Australia:** Initially, a landmark ruling by Justice Beach in the Federal Court of Australia favored the "Innovation Policy" argument. He contended that "inventor" is an agentive noun—much like a "computer" or "distiller"—defined by the act it performs. He argued that excluding AI-generated inventions would discourage the very research the patent system aims to foster. Although this decision was eventually overturned by the Full Federal Court, it remains a critical point of reference for those advocating for reform.[8]

3. Implications for India

For the Indian patent system, these divergent global approaches represent a critical crossroads. The lack of a unified international framework complicates the legal status of AI-generated works and creates risks of "Innovation outsourcing". If India remains anchored to an "antiquated"

human-centric model while other nations evolve, it may face capital flight, as startups and researchers might choose to file their patents in more AI- friendly jurisdictions. This global schism underscores the urgency for India to re-engineer its statutes to ensure they can survive and thrive in the 21st- century technological landscape.[9]

2. Conceptual Framework of AI and Patent Law

2.1 Meaning and Evolution of AI

AI has shifted from "narrow AI," which is programmed with predefined instructions to solve specific problems, to more sophisticated data-driven methods. During the 198os and 199os, the field saw the emergence of expert systems designed to replicate human decision-making, though they were constrained by manually coded knowledge.

2.2 Fundamentals of Patent Law

The philosophy underpinning patent law is often described as the "Patent Bargain." In exchange for a full and clear public disclosure of an invention, the state grants the inventor a limited-term monopoly—typically 2o years from the date of filing. As Abraham Lincoln once famously remarked, **"The patent system added the fuel of interest to the fire of genius."** This "fuel" is the economic incentive that drives researchers and companies to invest billions in research and development.[1o]

In the Indian context, the Patents Act, 1970, serves as the primary legislative instrument. To qualify for protection, an innovation must transcend the realm of mere discovery and manifest as a tangible, technical solution to a specific problem. This is evaluated through the "Triple Test" of patentability, which requires a rigorous analysis of the following elements:

2.1 Novelty: The Requirement of Absolute Newness

Novelty is the first gatekeeper of patentability. Under Section 2(1)(l) of the Patents Act, an invention is considered new if it has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing.

- **The Prior Art Search:** This involves a global search of existing patents, scientific journals, and even public displays. If any "prior art" exists that contains all the elements of the claim, the invention is deemed "anticipated" and thus unpatentable.
- **The AI Challenge:** When AI generates an invention, the novelty check becomes exponentially harder. AI can scan millions of data points to find "white spaces" in

technology that a human might never notice, potentially flooding the patent office with "novel" but minor iterations.[11]

2.2 Inventive Step: The "Non-Obviousness" Threshold

Defined under Section 2(1)(ja), the inventive step is the most subjective and litigated aspect of patent law. It requires that the invention involves a "technical advancement as compared to the existing knowledge" or has "economic significance," making the invention **not obvious to a person skilled in the art (PHOSITA)**.

- **The PHOSITA Standard:** This is a legal fiction—a hypothetical person who possesses the average skills and common general knowledge of the relevant field but lacks any "scintilla of inventive ingenuity."[12]
- **The AI Disruption:** The emergence of AI fundamentally threatens this standard. If a PHOSITA now has access to an AI tool that can predict chemical reactions or structural stresses, what was once "inventive" may now become "obvious" to anyone with a computer.

2.3 Industrial Application: The Utility Requirement

Section 2(1)(ac) mandates that the invention must be capable of being made or used in an industry. A patent cannot be granted for a "pious hope" or a purely theoretical idea that lacks a practical, industrial purpose.

- **Functionality:** If a machine-learning model creates a design that looks aesthetically pleasing but cannot be physically manufactured due to the laws of physics, it fails this test.
- **Broad Interpretation:** "Industry" is interpreted in its widest sense, including biotechnology, agriculture, and manufacturing. For AI inventions, this means the algorithm's output must have a "technical effect" in the physical world.[13]

2.4 The Doctrine of Disclosure and the "Enablement" Requirement

Beyond the triple test, a patent application must satisfy the requirement of "Enablement" under Section 10 of the Act. The inventor must describe the invention and the method by which it is to be performed in sufficient detail so that a fellow expert in the field can replicate it.

- **The Black Box Paradox:** This poses a significant hurdle for AI. If a Deep Learning model reaches a conclusion via billions of hidden neural weights that even the

programmer cannot explain, the "how-to" requirement of the patent bargain is broken. Without transparency, the state cannot grant the monopoly, as the public gains no usable knowledge once the patent expires.

2.5 Exclusions Under Section 3: What Cannot Be Patented

Even if an invention is novel, inventive, and useful, it may be barred by Section 3 of the Act. This includes:[14]

- **Section 3(c):** The mere discovery of a scientific principle or the formulation of an abstract theory.
- **Section 3(i):** Methods of medicinal treatment.
- **Section 3(k):** Mathematical or business methods or a computer programme *per se* or algorithms.

This last exclusion (3k) is the primary battlefield for AI inventions in India. The "per se" qualifier suggests that if an algorithm is tied to a specific hardware or results in a "technical contribution," it might be patentable. However, the lack of clarity on what constitutes a "technical contribution" in the age of autonomous AI remains a core challenge for Indian jurisprudence.

3. AI as an Inventor: Legal and Theoretical Issues

3.1 The Human Nexus and "Significant Contribution"

Traditionally, an inventor is a natural person who has contributed intellectually to the creation of an invention. AI systems, with their ability to process vast amounts of data and identify patterns beyond human capability, may redefine what is considered "obvious". When an AI system improves its own algorithms without human intervention, it intensifies the debate on ownership and legal recognition of machine-generated innovations.[15]

3.2 Ownership and Liability in AI-Generated Inventions

The attribution of ownership and the assignment of liability represent the two most formidable pillars of the "AI Patent Crisis." In traditional jurisprudence, the rights to a patent flow from the inventor to the owner. However, when the inventor is an algorithm, this pipeline of legal entitlement is severed. As the renowned jurist oliver Wendell Holmes Jr. once observed, **"The life of the law has not been logic: it has been experience."** The legal experience of the 21st century is now grappling with a "ghost in the machine" that creates value but cannot hold it.[16]

3.2.1 The Crisis of Ownership: Who Holds the Title?

If the law were to recognize an AI system as an inventor, it would trigger a cascading series of ownership dilemmas. Since AI lacks "Legal Personhood"—the capacity to enter into contracts or sue and be sued—it cannot "Own" a patent in the traditional sense. This leaves three primary candidates for ownership:

1. **The Developer/Programmer:** Those who argue for the developer believe that since the programmer created the "intellectual architecture" that allowed the invention to happen, they should reap the rewards. However, this is challenged when the AI evolves through deep learning in ways the programmer never anticipated.
2. **The User/Owner of the AI:** This follows the "Work-for-Hire" logic. If a person buys an AI software to solve a specific problem, they are the ones providing the "economic impetus." Proponents argue that the user is the most logical owner, as they directed the machine's efforts.[17]
3. **The Data Provider:** In the era of Big Data, an AI is only as good as the information it is trained on. If an AI discovers a new drug using a specific hospital's patient database, does that hospital have a claim to the patent?

The Indian Patents Act is silent on this "Derivation of Title." Under Section 6, an application for a patent can only be made by the "true and first inventor" or their "assignee." If the inventor is an AI, it cannot legally execute an "Assignment Deed" to transfer its rights to a human or a corporation, leading to a total deadlock in the registration process.

3.2.2 The Liability Vacuum: When AI Errs

Ownership is the "carrot" of patent law; liability is the "stick." If an AI-generated invention causes harm—for example, an autonomously designed medical device that malfunctions—who is held accountable?[18]

- **The Problem of Causation:** Traditional liability is based on human negligence or intent. An AI does not have "intent" (*Mens Rea*). If the AI makes a design choice that is technically "novel" but inherently dangerous, the lack of a human "mind" at the center of the creation process makes it difficult to apply standard tort law.
- **The Accountability Gap:** If we grant patents to AI-generated works without a clear human owner, we create a situation where a party can profit from a monopoly without being held responsible for the consequences of the product. This imbalance threatens the social utility of the patent system.

3.2.3 The Concept of "Electronic Personhood"

To solve these issues, some legal scholars have proposed creating a new legal category: the **"Electronic Person."** This would be a limited legal fiction, similar to a "Company" or "Corporation."

- **Legal Standing:** An AI with electronic personhood could technically "hold" a patent in trust for its owners.
- **Insurance and Assets:** Such an entity could be required to hold insurance or a pool of assets to pay for any liabilities or damages its inventions might cause.[19]

However, the Indian legal system is far from adopting such a radical shift. The prevailing view remains that for the sake of public policy and accountability, a "Human-in-the-loop" must always be identifiable. Without a human to hold the patent—and the responsibility that comes with it—the invention remains in a state of legal limbo, neither fully protected nor fully public. This gap between technological capability and legal accountability is the primary reason why "re-engineering" the statute is no longer optional, but a necessity for the survival of the patent bargain.[2o]

4. The Indian Patent System and Global Perspectives

4.1 The Statutory Barrier: Section 3(k)

Section 3(k) of the Patents Act, 1970, excludes "mathematical methods," "business methods," "computer programs per se," and "algorithms" from patentability. This provision has direct implications for AI-related innovations, as many AI systems rely on algorithms and software-based processes.

- **Technical Contribution:** To secure a patent, the applicant must demonstrate a technical contribution or technical effect beyond mere algorithmic implementation.
- **Guidelines on CRIs:** The Indian Patent office (IPO) has issued guidelines for Computer Related Inventions (CRIs), yet these do not specifically address the issue of AI inventorship.[21]

4.2 Comparative Analysis: Lessons for India

Jurisdictions such as the UK, USA, and EU uniformly reject recognizing AI as an inventor, as seen in the DABUS cases. However, these jurisdictions also acknowledge the increasing role of AI in innovation and have initiated discussions on potential reforms. This highlights that any major change, such as recognizing non-human inventors, must be introduced through legislative

reform rather than judicial interpretation.

5. Challenges and Need for Reform

5.1 The "Black Box" Problem

In the realm of patent law, the "Black Box" problem represents a fundamental clash between the opaque nature of advanced neural networks and the transparent requirements of the legal system. As the pioneering computer scientist Arthur C. Clarke famously remarked, **"Any sufficiently advanced technology is indistinguishable from magic."** For the modern patent examiner, an AI-generated invention often arrives as a piece of "magic"—a result without a visible recipe—which threatens to dismantle the very foundation of the patent bargain.

5.1.1 The Technical Reality of Opaque Algorithms

Deep learning and neural networks operate through thousands, sometimes millions, of hidden layers. These layers process input data through weighted connections that adjust themselves during the training phase.

- **Non-Linearity:** Unlike traditional "if-then" software, where a human programmer can trace every line of logic, deep learning models are non-linear. The path from the input (data) to the output (the invention) is not a straight line but a complex web of statistical probabilities.
- **Dynamic Evolution:** Advanced AI systems "evolve." They do not just execute instructions; they identify patterns that are invisible to the human eye. This means the AI may arrive at a technical solution through a logic that its own creator cannot explain.

5.1.2 The Conflict with Section 10: The Duty of Disclosure

Under Section 10 of the Indian Patents Act, 1970, every patent application must include a "complete specification." This document must describe the invention and the "best method of performing it." This is known as the **Sufficiency of Disclosure** or **Enablement** requirement.[22]

- **The Reproducibility Crisis:** If a human inventor cannot explain *how* the AI arrived at a specific design, a third party "skilled in the art" cannot replicate the invention by simply reading the patent. In traditional law, an invention that cannot be explained is treated as a "lucky accident" or an "abstract idea," neither of which is patentable.
- **The "Deposit" Dilemma:** In biotechnology, when a new microorganism is discovered, inventors can "deposit" a sample in a recognized depository to satisfy disclosure. No such mechanism exists for AI. Depositing the "source code" is often useless because the code alone—without the specific training data and the exact state of the neural weights—

cannot reproduce the result.[23]

5.1.3 The "Explainable AI" (XAI) Requirement

The legal challenge has birthed a new technical necessity: Explainable AI. Legal systems are beginning to demand that for an AI-assisted invention to be valid, the applicant must provide a "human-intelligible" explanation of the machine's logic.

- **Traceability:** Patent offices may soon require a "Log of Conception," showing how the AI was prompted, what data was fed into it, and how the output was refined by human intervention.
- **The Threshold of "Technical Contribution":** Without transparency, the Indian Patent office struggles to determine if an algorithm has made a "technical contribution" (to bypass the Section 3(k) bar) or if it is merely a mathematical exercise.

5.1.4 Impact on the "Person Skilled in the Art" (PHOSITA)

The Black Box problem also skews the standard of the PHoSITA. If the "expert in the field" cannot understand how the invention works because the logic is buried in a black box, the invention fails the test of being "non-obvious." Paradoxically, the more "intelligent" the AI becomes, the harder it becomes to patent its outputs under current laws, because its "brilliance" transcends human-readable logic.[24]

This lack of interpretability creates a "Proprietary Silo." If an inventor cannot satisfy the disclosure requirement for a patent, they will instead protect the invention as a **Trade Secret**. This is a detrimental outcome for society: the public loses access to the knowledge, and the cycle of innovation is stifled by secrecy. Thus, "opening the black box" through legislative re-engineering is essential to keep the patent system functional in the age of AI.

5.2 Economic and Policy Concerns

- **Investment Risks:** Uncertainty regarding the legal status of AI-generated inventions may discourage investment in AI technology in India.[25]
- **Human Displacement:** As AI systems become more capable of autonomous generation, there is a concern that human contribution to the inventive process may diminish in significance, potentially devaluing human intellectual effort.

6. Analytical Conclusions and Recommendations

6.1 Key Findings

The research finds that the Indian patent framework is undergoing "conceptual strain". The

current system is anchored in the assumption that innovation is a product of human intellect, creating a paradox where valuable innovations may go unprotected simply because they do not fit the traditional definition of an inventor.[26]

6.2 Proposed Legal Reforms: A Blueprint for a Future-Ready Patent Regime

To bridge the chasm between the "Antiquated Statute" and the "Algorithmic Inventor," India must move beyond reactive litigation and toward proactive legislative engineering. As the visionary Justice oliver Wendell Holmes famously posited, **"The law must be stable and yet it cannot stand still."** To ensure that India remains a competitive hub for the Fourth Industrial Revolution, the following structural reforms are proposed:

6.2.1 Expanding the Definition of "Inventor" and "Person"

The most immediate hurdle is the human-centric language of Section 2(1)(s) and Section 6 of the Patents Act.[27]

- **The "Joint-Inventorship" Model:** The law should be amended to recognize a "Human-AI Collaboration" framework. Instead of naming the AI as a sole inventor, the statute could allow for patents where a human provides the "creative direction" and the AI provides the "technical execution." This maintains the human nexus required for legal accountability while acknowledging the machine's role.
- **Legal Fiction of the "Qualified AI":** Similar to how "Corporate Entities" are treated as persons for commercial law, India could introduce the concept of an "Electronic Inventor" status. This would not grant the AI rights, but would allow the human owner to claim the patent "through" the machine, solving the derivation of title issue.

6.2.2 The "Transparency Mandate": Mandatory AI Disclosure

To maintain the integrity of the patent bargain, the IPo must implement a Mandatory AI Disclosure (MAID) protocol.[28]

- **Disclosure of AI Contribution:** Applicants should be required to specify whether an AI was used as a tool (e.g., for data sorting) or as a generator (e.g., for suggesting the molecular structure).
- **The "Algorithmic Log":** Just as laboratory notebooks are used to prove the date of a human invention, applicants could be required to submit a "version control log" of the AI's prompts and outputs. This would provide the necessary "traceability" to satisfy the disclosure requirements of Section 10.

6.2.3 Redefining the PHOSITA in the Age of Super-Intelligence

The "Person Skilled in the Art" standard must be upgraded to the "Person Prepared with AI" (PPAI).

- **The New Baseline:** If the average researcher in a field like pharmacology now uses AI to predict protein folding, then an invention that could have been easily found by any standard AI tool should be considered "obvious."
- **Dynamic Standards:** The IPo should develop sector-specific guidelines that define the "state of the art" based on the prevalence of AI tools in that specific industry, ensuring that the bar for a "patentable inventive step" remains sufficiently high.

6.2.4 Introduction of Sui Generis "AI-Innovation" Rights

Not all AI outputs will meet the high threshold of a traditional 2o-year patent. However, leaving them entirely unprotected invites secrecy.

- **Utility Models for AI:** India could introduce a *Sui Generis* (unique) protection system for AI-generated innovations. This would offer a shorter term of protection (e.g., 5 to 8 years) with a lower "inventive step" requirement.
- **Data Exclusivity:** For AI models that identify new uses for existing substances, the law could provide "Data Exclusivity" rights rather than full patent monopolies. This would incentivize the use of AI in research without cluttering the patent system with minor iterations.

6.2.5 Safe Harbor for "AI-Assisted" vs. "AI-Generated"

The legislature must draw a clear line between AI-assisted and AI-generated works.

- **Safe Harbor:** A "Safe Harbor" provision could clarify that an invention will not be disqualified from patentability solely because an AI was used in its development, provided that a human exercised "Substantial Control" over the final selection and refinement of the invention.[29]

6.2.6 Ethical and Public Interest Oversight

Finally, the "Public Interest" provisions under Section 66 and Section 84 (Compulsory Licensing) must be expanded.

- **Social Utility Audit:** For AI-generated inventions in critical sectors like healthcare or green energy, the government should have the power to expedite licensing if the AI-driven monopoly hinders public access.
- **Preventing "Patent Thickets":** To prevent large tech firms from using AI to "carpet-bomb" the patent office with millions of automated claims, a "Congestion Fee" or higher

maintenance fees for AI-heavy portfolios could be introduced.[30]

By implementing these reforms, India can transform its patent system from a static barrier into a dynamic catalyst. The goal is not to grant rights to machines, but to empower humans to use those machines for the collective advancement of society. In doing so, India can lead the global South in defining a balanced, ethical, and innovation-friendly legal architecture for the AI era.

6.3 Conclusion: Bridging the Chasm Between Code and Clause

The journey from the steam engine to the neural network has been a testament to human ingenuity, yet the legal structures built to house that ingenuity are now under immense strain. As the world transitions into an era of autonomous creativity, the Indian patent regime stands at a critical crossroads. As the legendary polymath Leonardo da Vinci once noted, **"Iron rusts from disuse; water loses its purity from stagnation... even so does inaction sap the vigors of the mind."** For the Indian legislature, inaction in the face of the AI revolution risks the stagnation of its entire intellectual property ecosystem.[31]

6.3.1 The Imperative of Timely Adaptation

Timely legal adaptation is not merely a matter of administrative efficiency; it is a fundamental requirement to ensure that India's patent regime remains relevant and capable of fostering innovation in an increasingly automated landscape. The current "wait and watch" approach, while cautious, creates a climate of legal uncertainty that can stifle the very progress the Patents Act, 1970, seeks to promote. If the law fails to provide a clear pathway for the protection of AI-generated inventions, it risks alienating the next generation of technologists and forcing breakthroughs into the opaque world of trade secrets.

6.3.2 From Abstract Logic to Technical Reality

As technology continues to evolve, the law must also progress to bridge the gap between abstract logic and technical application. The challenge of the "Algorithmic Inventor" is a signal that the "Mental Act" theory of invention is no longer the sole pillar of progress. We must move toward a more functionalist approach—one that values the *result* and the *technical contribution* to society as much as the identity of the mind that conceived it.

The re-engineering of the Indian patent system must be characterized by:[32]

- **Harmonization:** Aligning with global standards while protecting domestic developmental interests.
- **Clarity:** Moving beyond the ambiguity of "per se" in Section 3(k) to provide concrete

guidelines for AI patentability.

- **Equity:** Ensuring that the benefits of AI-driven innovation are not monopolized by a few data-rich corporations, but are accessible for the broader public good.

6.3.3 The Human-Machine Synthesis

Ultimately, the goal of "re-engineering" the statute is not to replace the human inventor with a machine, but to recognize the new reality of **Human-Machine Synthesis**. The patent system of the future should be a bridge, not a barrier. It should be robust enough to handle the complexity of "Black Box" algorithms, yet flexible enough to reward the human visionaries who direct these powerful tools.[33]

In conclusion, the "Antiquated Statute" is not a relic to be discarded, but a foundation to be reinforced. By integrating the reforms proposed in this study—ranging from mandatory AI disclosure to the creation of *sui generis* rights—India can transform its legal framework into a visionary instrument. This will ensure that the "fire of genius" continues to burn brightly, whether that genius is sparked by a human brain or an artificial neuron. The future of Indian innovation depends on our ability to write a new legal chapter—one where the law is as dynamic as the technology it seeks to govern.

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