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Artificial Intelligence and Patent Ownership: Should India Amend Patent Act, 1970?

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Abstract

The rapid advancement of Artificial Intelligence (AI) has transformed the innovation landscape, raising critical questions about inventorship and patentability under existing legal frameworks. This study examined whether India's Patent Act, 1970, adequately addressed AI-generated inventions and analyzed international approaches, economic implications, and ethical considerations. Using a descriptive research design and secondary data sources, including legal statutes, case law, and scholarly articles, the study found that the current Act, which recognizes only natural persons as inventors, created ambiguity and potential legal uncertainty for AI-driven innovation. Comparative analysis of global jurisprudence, particularly the DABUS cases in the United States, United Kingdom, European Union, and Japan, revealed a predominant reluctance to grant inventorship to AI, while some jurisdictions explored sui generis rights or hybrid frameworks. The study highlighted that excluding AI from patent protection could discourage investment and innovation, whereas unregulated human attribution might raise ethical and economic concerns. Based on these findings, the study suggested that India consider legislative reform, interpretive flexibility, or hybrid models to clarify ownership, incentivize AI research, and align with global trends. The research emphasized the need for a future-ready patent framework that balanced human accountability, ethical considerations, and India's competitiveness in the global knowledge economy.

Keywords: Artificial Intelligence, Patent Act, AI-generated inventions, DABUS, Intellectual Property, India, Legal reform, Innovation policy

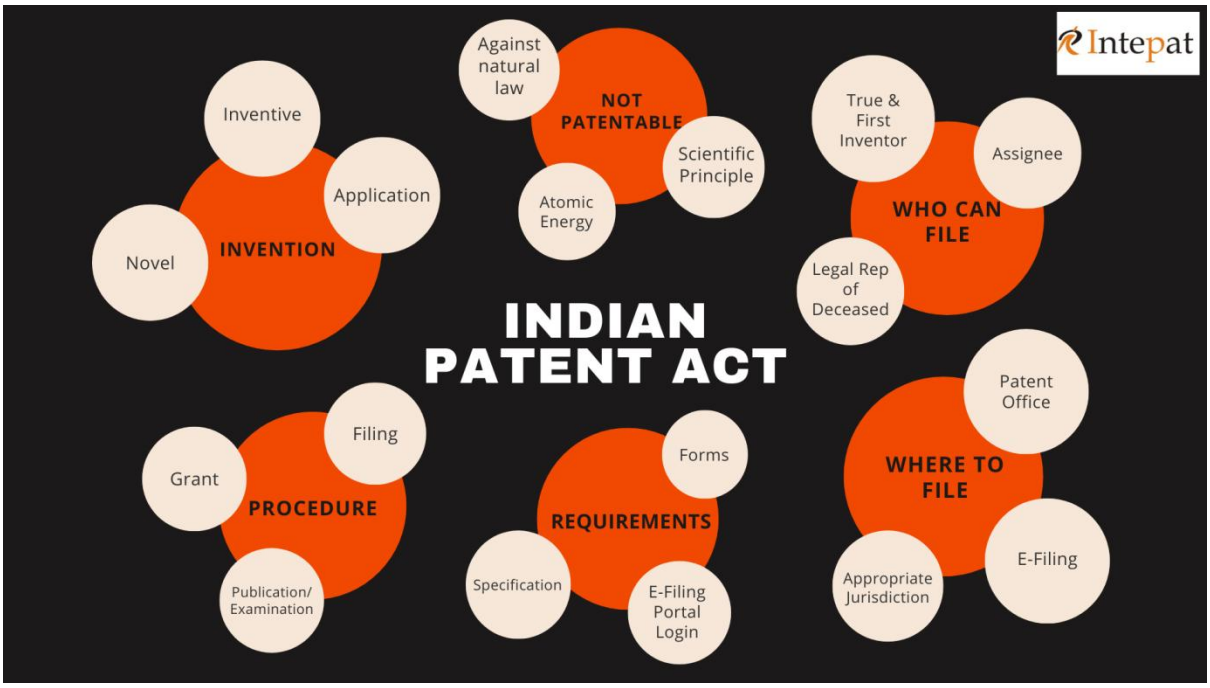
Introduction

The rapid advancement of Artificial Intelligence (AI) has transformed global technological, economic, and legal landscapes, raising fundamental questions about the nature of creativity, authorship, and ownership in the digital age. AI systems—once limited to rule-based automation—now demonstrate capabilities that resemble human problem-solving, learning, prediction, and creative generation. From designing pharmaceutical molecules and optimizing industrial processes to generating artworks and drafting code, AI has evolved into a powerful tool capable of producing outputs that were traditionally considered products of human intellect. This accelerated evolution has sparked intense debate within the global intellectual property community, particularly concerning whether AI-generated inventions should be eligible for patent protection and, if so, who should be recognized as the legitimate inventor or owner of such creations. As countries grapple with the legal implications of autonomous and semi-autonomous AI systems participating in the inventive process, India faces a crucial juncture: whether the current Patent Act, 1970, is adequate to address the complexities of AI-driven innovation or if it requires amendment to remain relevant in the emerging technological era. Under the existing legal framework in India, the Patent Act, 1970, conceptualizes an "inventor" as a natural person—one who contributes intellectually to the creation of an invention. This definition aligns with traditional understandings of inventorship but presents ambiguity in cases where AI systems contribute significantly, or even autonomously, to innovative activity. Section 2(1)(y) of the Act refers to the "patentee" as the person entered on the register as the grantee or proprietor of the patent, again implying human or juridical personhood. However, as AI increasingly undertakes inventive tasks without direct human intervention, questions arise about the legal status of such outputs and whether they fit within the current definition of an invention created by a "person." Globally, similar debates have emerged around notable cases such as the "DABUS" AI system, where applications filed listing an AI as the inventor were rejected by multiple jurisdictions—including the United States, the United Kingdom, and the European Patent Office—because their laws, like India's, do not recognize non-human inventors. These developments underscore a growing disconnect between technological capabilities and the legal frameworks designed to regulate innovation.

India's position in the global AI ecosystem makes this issue particularly relevant. With rapid digital transformation across sectors such as healthcare, finance, agriculture, mobility, and manufacturing, the country is increasingly relying on AI-driven solutions to accelerate economic growth and enhance technological competitiveness. Government initiatives such as the National Strategy for Artificial Intelligence (NITI Aayog, 2018) highlight India's ambition to emerge as a global AI leader. However, the legal infrastructure governing innovation must evolve in tandem with technological progress to

support this vision. A rigid adherence to traditional notions of inventorship may limit India's ability to incentivize, protect, and commercialize AI-driven innovations. At the same time, granting AI the status of an inventor raises profound ethical, economic, and philosophical concerns: Can a machine hold rights? Would recognizing AI as an inventor undermine human accountability? How should ownership and liability be assigned in AI-developed inventions? Beyond conceptual questions, practical challenges also emerge. If AI cannot be recognized as an inventor, then inventions autonomously generated by AI risk falling into the public domain, reducing incentives for investment in advanced AI research and development. Conversely, assigning ownership solely to human operators or corporations may raise concerns about unjust enrichment, given that the human contribution might be minimal. Furthermore, without a clear framework, disputes may arise over who qualifies as the true inventor when multiple stakeholders—developers, programmers, users, or data contributors—interact with the AI system. These challenges indicate the need for a policy-oriented discussion on whether India should modify its patent law to explicitly address AI-generated inventions. Any amendment must balance innovation incentives, ethical considerations, and social welfare while aligning with international IP norms. Internationally, nations are adopting varied approaches to the question of AI inventorship. While most jurisdictions currently restrict inventorship to natural persons, several governments—including Japan, South Korea, and the United Kingdom—have initiated consultations to explore the possibility of legal amendments or new categories of intellectual property protection for AI-generated creations. The World Intellectual Property Organization (WIPO) has also facilitated global dialogue through its "WIPO Conversation on Intellectual Property and Artificial Intelligence," recognizing the urgency of establishing coherent international standards. India, as a member state of WIPO and a rapidly expanding digital economy, must consider these global trends when evaluating the future of its patent law. The Indian judiciary has also begun encountering cases involving AI-generated works and automated decision-making, though patent-specific disputes remain limited. Nonetheless, emerging trends in copyright and data protection law indicate that Indian courts recognize the need to adapt existing frameworks to digital realities. The judiciary's proactive engagement with technology-related issues signals that artificial intelligence and intellectual property law will soon intersect more directly within the Indian legal system. Given the increasing sophistication of AI and its ability to contribute to invention, Indian policymakers, legal scholars, and innovators face a forward-looking challenge: determining whether the existing provisions of the Patent Act can accommodate AI-driven inventions through interpretative flexibility or whether a formal legislative amendment is necessary to preserve India's competitive edge in the global innovation ecosystem.

Figure 1-Indian Patent Act



(Source- Secondary)

This research paper therefore seeks to address the central question: Should India amend the Patent Act, 1970, to recognize or regulate AI-generated inventions and clarify the ownership of such patents? To answer this, the paper examines the current legal framework, analyses international developments, evaluates potential models for reform, and considers the broader economic and ethical implications of AI-driven inventorship. With India poised to become a hub for technology-led development, the need for a modernized, future-ready patent system is more pressing than ever. A clear and comprehensive policy on AI and patent ownership will not only provide certainty to innovators and investors but also help India harness the full potential of artificial intelligence in shaping its knowledge economy.

Literature Review

Abbott (2016) examined whether emerging artificial intelligence systems could qualify as inventors under existing patent laws worldwide. His analysis aimed to determine whether traditional human-centric definitions of inventorship aligned with the technological reality of autonomous machine creativity. The study found that current patent frameworks were inadequate for recognizing AI-generated inventions because they required mental conception by a natural person, concluding that legislative reforms would eventually be necessary to address non-human contributions in innovation.

Thaler (2018) explored the legal implications of the "DABUS" AI system by submitting patent applications listing the AI as the sole inventor. The objective was to test whether patent offices would accept AI inventorship under existing statutes. The findings revealed that multiple jurisdictions, including the USPTO, EPO, and UKIPO, rejected the applications on the grounds that only a human could qualify as an inventor, demonstrating a global legal gap when dealing with autonomous AI innovation.

Ginsburg (2018) evaluated the doctrinal foundations of intellectual property law to assess whether non-human entities could possess rights traditionally attributed to human creators. The objective was to analyze whether the philosophical and legal underpinnings of IP could be extended to AI systems. The study found that IP regimes were fundamentally based on human creativity and accountability, making it conceptually difficult to attribute inventorship or ownership to machines without weakening legal responsibility and enforcement mechanisms.

Samuelson (2019) analyzed the challenges posed by computational creativity to intellectual property law, focusing on how automated systems complicate definitions of originality and inventorship. The objective was to evaluate whether traditional IP protections could adapt to machine-generated outputs. The study found that existing laws lacked clarity on authorship and inventorship for AI-generated works, emphasizing that reform was necessary to avoid uncertainty and inconsistent interpretation across jurisdictions.

The World Intellectual Property Organization (2020) conducted a global survey to examine stakeholder perspectives on AI and IP regulation. The objective was to understand how governments, researchers, and industry participants perceived the need for legal amendments to accommodate AI-generated inventions. The report found widespread agreement that AI was transforming innovation processes, but it also revealed significant disagreement regarding whether AI should be recognized as an inventor, demonstrating the urgency for national-level policy clarity.

Surden (2020) investigated the technological capabilities of modern AI systems and their increasing role in creative and inventive activities. His objective was to differentiate between human-assisted and machine-autonomous invention. The findings indicated that AI could independently generate patent-eligible subject matter, raising questions about whether human inventorship requirements could continue to serve as meaningful thresholds for patent protection.

NITI Aayog (2021) examined India's preparedness for adopting AI across key sectors and evaluated the policy gaps in intellectual property protection relating to AI-driven innovation. The objective was to assess whether India's legal framework—particularly the Patent Act, 1970—was aligned with future

technological demands. The findings showed that while India was advancing in AI deployment, its patent laws lacked provisions addressing AI inventorship, suggesting that legislative reform would be crucial for ensuring global competitiveness.

Ryan (2021) reviewed comparative legal approaches to AI-generated inventions across major jurisdictions. The objective was to evaluate whether existing laws could accommodate AI inventorship through reinterpretation or whether legislative amendments were required. The study found that although some countries attempted flexible interpretation, most legal systems maintained human-inventor requirements, concluding that comprehensive amendments would eventually be necessary to address the unique challenges posed by autonomous AI creation.

Hilty and Richter (2022) analyzed the economic and policy consequences of attributing inventorship to AI systems in patent law. Their objective was to determine how assigning or denying AI inventorship would impact innovation incentives, investment, and technological advancement. The findings showed that excluding AI as an inventor could discourage investment in advanced AI R&D, whereas recognizing AI inventorship without human accountability could create enforcement challenges, suggesting the need for balanced reform.

Pila (2023) explored the theoretical foundations of inventorship in patent law to assess how AI-generated inventions fit within long-standing legal principles. The objective was to evaluate whether the concept of inventorship required redefinition in the context of autonomous AI systems. The findings indicated that while AI challenged traditional views of human creativity, inventorship could still be linked to human intention, contribution, and control, implying that reform should focus on clarifying human–AI collaborative roles rather than granting rights to AI itself.

Prabhu (2024) examined India's growing reliance on AI-driven innovation and assessed whether the Patent Act, 1970, provided sufficient legal clarity for AI-generated inventions. The objective of the study was to analyze loopholes within Sections 2(1)(j), 6, and 28 relating to inventorship and ownership. The findings showed that the Act lacked explicit provisions on autonomous or semi-autonomous AI inventors, resulting in legal uncertainty for research institutions and start-ups engaging in AI-enabled R&D. The study concluded that without statutory amendments or interpretative guidelines, India risked falling behind global innovation standards.

Banerjee and Rao (2024) evaluated how India could align its patent framework with emerging international norms concerning AI-generated inventions. Their objective was to compare India's legislative position with developments in the EU, UK, Japan, and Singapore. The findings revealed that while several jurisdictions had begun official consultations to modernize IP laws in response to AI,

India remained dependent on traditional human-inventor interpretations. The study argued that this gap could hinder India's competitiveness and recommended targeted amendments, particularly recognizing human–AI collaborative inventorship rather than granting rights directly to AI.

UNESCO (2025) conducted a global assessment on the ethical and legal governance of AI creativity, including patent ownership. The objective was to evaluate how member states managed AI-generated inventions and the ethical concerns arising from granting rights to non-human agents. The report found that most countries still restricted inventorship to natural persons but emphasized that the absence of clear policies for AI-generated innovations created legal ambiguity, reduced investor confidence, and led to inconsistent administrative decisions. For India, the report recommended updating IP law to balance ethical safeguards with innovation incentives.

Iyer (2025) investigated the increasing role of generative AI tools in India's pharmaceutical, biotechnology, and engineering sectors, with a focus on patent eligibility for AI-assisted inventions. The objective was to assess whether the Patent Act, 1970, could accommodate inventions substantially contributed to by AI systems. The findings showed that examiners struggled to determine human contribution levels in AI-assisted research, leading to delays and inconsistent decisions. The study concluded that India required amendments introducing clear criteria for determining inventorship in human–AI collaborations and guidelines defining when AI involvement crossed the threshold into autonomous inventorship.

The Global AI Policy Review (2025) analyzed international patent law reforms anticipated between 2025–2030, focusing on how countries prepared for AI-generated inventions. The objective was to identify emerging trends that could guide developing economies such as India. The findings indicated a growing global shift toward hybrid inventorship models, where humans remain legal inventors but AI contributions must be documented, disclosed, and evaluated. This model was found to maintain legal accountability while encouraging AI-driven innovation. The report suggested that India adopt similar reforms to modernize its Patent Act without disrupting foundational principles of human-centric IP law.

Research Objective

To critically examine whether India's Patent Act, 1970, adequately addresses AI-generated inventions, evaluate international approaches and their economic, ethical, and legal implications, and propose policy recommendations for reforming the Act to effectively regulate AI-driven innovation while safeguarding human inventorship and promoting India's competitiveness in the global knowledge economy.

Research Methodology

The present study adopts a **descriptive research design** aimed at systematically examining the current legal framework governing patent law in India and its adequacy in addressing AI-generated inventions. The research relies primarily on **secondary data sources**, including scholarly articles, legal commentaries, government reports, international case studies, and publications from organizations such as WIPO. This approach enables a comprehensive analysis of both domestic and global perspectives on AI inventorship, facilitating comparisons between India's Patent Act, 1970, and international practices. By synthesizing existing literature, judicial pronouncements, policy documents, and reported legal cases, the study identifies gaps, challenges, and opportunities in the current system. The descriptive design allows for an in-depth understanding of the legal, ethical, and economic dimensions of AI-generated inventions, while secondary data ensures reliability, accessibility, and relevance in addressing the research objectives.

Data Analysis

1. Introduction to AI and Patent Law

The transformative rise of Artificial Intelligence (AI) has significantly altered the traditional landscape of creativity and invention. AI systems are no longer limited to data-processing or automation tasks; many now demonstrate capacities that resemble human-like creativity and problem-solving — for example, suggesting molecular designs for pharmaceuticals, generating novel software code, or producing novel designs and artworks. Some AI systems claim to autonomously generate inventions without direct human "conception" in the conventional sense. This fundamental shift raises deep conceptual and legal questions about how "invention," "inventor," and "authorship" should be understood in the age of AI. Historically, patent systems worldwide have been built on the assumption that invention is a product of human intellect — involving mental activity, creative insight, and human judgment. Under this paradigm, the "inventor" must be a natural person (i.e., a human being) capable of conceiving the inventive idea, understanding its technical contribution, and bearing legal responsibilities such as disclosure, assignment, and oath/declaration.

However, AI-driven inventions challenge these assumptions in two major respects:

- Autonomous or semi-autonomous creation: As AI becomes more advanced, there may be inventions where human input is minimal — perhaps only initial parameters, training data, or high-level instructions — with the AI generating the inventive leap. In such scenarios, attributing inventive "conception" to a human becomes difficult or arguable.

- Machines lacking legal personality: Since AI systems are not human, they lack the legal capacity to hold rights, make declarations, or assign ownership. Traditional patent law — national or international — ties rights and obligations to persons (natural or sometimes legal), which complicates granting patents to non-human entities. WIPO+1

Given these developments, scholarly and policy discourse has increasingly considered whether existing patent frameworks need reinterpretation or reform. As argued in sources like the piece from World Intellectual Property Organization (WIPO) titled "The Artificial Inventor Project," the absence of explicit legal rules for AI-generated inventions leaves a lacuna in global intellectual property regimes. WIPO+1. Thus, the rise of AI-generated inventions does not merely present technical or economic challenges — it poses foundational questions about the very concepts underpinning patent law: What constitutes an "invention"? Who can be an "inventor"? What legal and moral rights attach to inventive activity? Given this paradigm shift, there is a growing imperative to critically examine whether existing patent laws — drafted in a pre-AI era — remain fit for purpose. If not, the law may need reinterpretation or structural reform to maintain relevance, stimulate innovation, and ensure equitable allocation of rights and responsibilities in the AI age.

Table 1: Comparison of Traditional Patent Assumptions vs. AI-Based Realities

Aspect	Traditional Patent System (Human-Based)	AI-Driven Invention Scenario
Source of invention	Human intellect	Machine-generated insights
Legal Inventor	Natural person	Unclear (AI not legally recognized)
Ownership	Assignable by human inventor	Complex — multiple stakeholders involved
Disclosure Requirements	Inventor declaration, oath	AI cannot fulfill legal requirements
Risk	Low legal ambiguity	High uncertainty; possible public-domain loss

(Source- Secondary Data)

2. India's Patent Act, 1970: Legal Framework and Challenges

Turning to the Indian context, the relevant statute governing patent protection is Patents Act, 1970. Under the current act, the concept of "inventor" is understood in human-centric terms — rooted in the assumption of human intellectual contribution. For example, interpretations of "inventor," "patentee,"

and "applicant" generally presuppose a natural person (or a juridical/legal person) as eligible for holding patent rights.

This alignment with traditional principles of inventorship is well-understood and has functioned effectively in the era when inventions necessarily arose from human creativity or human-guided processes. However, this framework becomes problematic in the context of modern AI-driven inventions for several reasons:

- Absence of explicit recognition of AI systems: The 1970 Act does not contain any provision that contemplates non-human inventors (e.g., AI systems) or assign inventorship status based on machine-generated contributions. This omission means there is no clear statutory mechanism to handle inventions where an AI system plays a central or sole inventive role.
- Legal Uncertainty and Risk of Public-Domain Release: In a scenario where an AI autonomously generates an invention, under the existing framework there is a real risk that such inventions may not qualify for patent protection — either because no eligible "inventor" can be identified, or because the required legal formalities (assignment, oath/declaration by inventor) cannot be satisfied. This may result in such inventions falling into the public domain, depriving potential innovators (or AI-owners/users) of exclusive rights. That, in turn, can disincentivize investment in AI-based R&D or in exploiting AI-generated inventions commercially.
- Complexity in Ownership and Stakeholder Attribution: Modern AI-based invention may involve multiple parties: developers of the AI system, operators who run it, data contributors, end-users, or those who provided high-level problem statements or constraints. The current law does not offer guidance on how to attribute inventorship or rights among such diverse stakeholders when AI plays a significant role. The absence of such clarity poses risks of disputes, legal ambiguity, or unjust enrichment — where a party with minimal human input claims full ownership, or where genuine human contributors remain uncredited.
- Interpretive vs. Legislative Gap: While courts or patent offices could — in principle — adopt an expansive or liberal interpretation of "inventor" to include non-human agents, the lack of explicit statutory provision means such an approach would likely face serious legal, doctrinal, and practical challenges. Moreover, existing international jurisprudence (from other jurisdictions) shows strong resistance to such reinterpretation under current law. This suggests that, for India, simply relying on interpretive flexibility may not suffice; rather, a formal legislative amendment or new regulatory framework might be necessary to address AI-driven inventions properly.

Given India's growing digital economy and increasing reliance on AI across sectors (pharma, software, agriculture, manufacturing, etc.), this legal inadequacy represents a strategic challenge. If unaddressed, it risks stifling AI-led innovation or forcing innovators to rely on alternative — and perhaps weaker — mechanisms (e.g., trade secrets, contracts, non-disclosure) rather than patents. On the other hand, any reform must carefully balance competing considerations: incentivizing innovation, ensuring fair attribution, preserving accountability, and aligning with international IP norms. In sum, while India's Patent Act, 1970 has served well in a human-centric inventive environment, it appears ill-equipped — both structurally and conceptually — to accommodate the realities of AI-driven invention. This gap underscores the urgency and importance of re-evaluating India's patent framework in light of rapid technological evolution.

- The first section underscores the urgency and conceptual challenge: AI disrupts traditional assumptions about invention, demanding rethinking of core legal concepts.
- The second section demonstrates that India's existing law lacks the necessary provisions to adequately deal with AI-generated inventions — creating legal uncertainty, potential loss of protection, and disincentives for investment.
- Together, they build a strong foundation for arguing that your research question — whether India should amend the Patent Act to accommodate AI-generated inventions — is not merely hypothetical or academic, but deeply relevant to the country's innovation policy, economic competitiveness, and legal preparedness.

Table 2- How the Two Sections Support the Need for Patent Law Reform for AI-Generated Inventions in India

Section	Core Idea	Key Points Highlighted	Implication for India	How It Supports the Research Question
1. Conceptual Challenge of AI Inventorship	AI disrupts traditional, human-centric assumptions of inventorship.	- "Inventor" under Patents Act, 1970 implies a human. - AI systems are not recognized as inventors. - Courts and patent offices cannot easily reinterpret "inventor" to include AI.	The legal framework is conceptually outdated for handling AI-generated inventions.	Shows why the question arises: the current legal framework is built on assumptions no longer valid in an AI-driven environment. Highlights the urgency and conceptual gap.
2. Practical Gaps in India's Patent Act, 1970	The Act lacks mechanisms to manage AI-generated inventions.	- No statutory recognition of AI systems. - Risk that AI-generated inventions become unpatentable and enter public domain. - Unclear ownership where multiple stakeholders (AI developers, operators, data providers) are involved. - Reliance on workarounds like trade secrets.	Creates legal uncertainty, discourages AI innovation, and risks economic disadvantage.	Demonstrates that the issue is not theoretical: India already faces legal and economic risks if the law is not updated. Strengthens the practical necessity for reform.
Combined Impact	The issue is both conceptual and operational.	- Traditional definitions are insufficient. - Practical consequences harm innovation and investment. - International jurisprudence similarly resists non-human inventors.	India may fall behind globally in AI-led R&D unless laws evolve.	Shows that the research question is timely, policy-relevant, and essential for India's innovation ecosystem and legal preparedness.

(Source- Secondary)

3. Comparative International Jurisprudence & Global Trends on AI-Generated Inventions

3.1 The DABUS Case

The DABUS AI system, developed by Dr. Stephen Thaler, has been central to global debates on AI inventorship. Patent applications listing DABUS as inventor were filed internationally via the PCT. Most jurisdictions, including the EU, US, and UK, rejected these applications, holding that only a natural person can qualify as an inventor. Some registration-only regimes have granted patents based on AI outputs, though these are limited and often contested. The DABUS case highlights the challenge: current patent systems almost universally require human inventorship.

3.2 Judicial Decisions Reinforcing Human Inventorship

Recent rulings reaffirm this stance:

- Japan's Tokyo District Court (2024) and IP High Court (2025) held that inventorship is limited to natural persons, emphasizing that legislative reform, not judicial interpretation, is needed.
- The UK Supreme Court (2023) similarly ruled that AI cannot be listed as inventor under existing law.

These decisions underline the emphasis on legal personhood and accountability in existing statutes.

3.3 Global Trends and Reform Approaches

Despite conservative rulings, AI proliferation has prompted global reflection:

- There is no uniform international approach, though some countries (e.g., China, Japan, South Korea) are exploring regulatory or sui generis frameworks for AI-generated inventions.
- WIPO encourages harmonized international standards and discussions on AI and IP.
- Proposed models include treating AI as a tool with human inventorship, creating sui generis rights for AI-generated inventions, or hybrid systems recognizing AI's role while retaining human accountability.

4. Implications for India

Global trends highlight the risks of inaction: India could fall behind in AI innovation if its patent framework does not adapt. Legislative reform may be more effective than relying on judicial

interpretation. Models observed internationally provide options for India, including human-centric, hybrid, or sui generis approaches.

The international experience strengthens the basis for India-specific recommendations: existing laws are insufficient for AI inventions, global momentum favors reform, and India has an opportunity to develop a context-sensitive, innovation-friendly framework aligned with ethical and legal norms.

Table 3- AI Inventorship Developments & India's Position

Topic	Global Position	Key Examples	Implication for India
DABUS Case (3.1)	Most countries reject AI as inventor; laws require a human inventor.	EU, US, UK rejected DABUS; only registration-based systems accepted it.	Shows India's current human-centric law is consistent but outdated for AI-era inventions.
Judicial Decisions (3.2)	Courts reaffirm human-only inventorship and stress that change must come from legislation.	Japan (2024, 2025), UK Supreme Court (2023).	Indicates Indian courts are unlikely to expand inventorship without amendments to the Patents Act.
Global Trends (3.3)	Countries exploring reforms; no uniform approach. Options include human-inventor models, hybrid systems, or sui generis rights.	China, Japan, South Korea; WIPO discussions.	India can learn from these models to craft a context-specific, innovation-friendly legal framework.
Implications for India (4)	Inaction risks loss of competitiveness in AI innovation.	—	Legislative reform is needed to address AI-generated inventions and align with global momentum.

(Source- Secondary)

Discussion

The rapid evolution of AI has challenged traditional notions of inventorship, revealing significant gaps in India's Patent Act, 1970, which currently recognizes only natural persons as inventors. Comparative analysis of global jurisprudence, including the DABUS cases and rulings in Japan, the UK, and the EU,

demonstrates a consistent reluctance to attribute inventorship to AI, highlighting the tension between technological capabilities and human-centric legal frameworks. At the same time, international discussions and reforms in countries like Japan, South Korea, and China, as well as WIPO's ongoing deliberations, indicate a growing recognition of the need for legal adaptation to ensure that AI-driven innovations are appropriately incentivized and protected. For India, these insights underscore the urgency of carefully calibrated reform — whether through interpretive flexibility, human-centric recognition of AI as a tool, or the creation of sui generis rights — to balance innovation incentives, ethical accountability, and alignment with global IP norms. In conclusion, amending the Patent Act to address AI-generated inventions is essential not only to provide legal clarity and promote equitable ownership but also to position India as a competitive hub in the global knowledge economy, ensuring that technological advancement continues to be rewarded while safeguarding human creativity and responsibility.

Future Scope and Suggestions

The future scope of research on AI-generated inventions in India is vast, encompassing legal, ethical, economic, and technological dimensions. As AI systems become increasingly sophisticated and autonomous, further studies can explore frameworks for recognizing AI's role in innovation without undermining human inventorship, including hybrid or sui generis models tailored to India's socio-economic context. Policymakers and scholars should examine comparative international practices to develop balanced legislation that incentivizes investment in AI-driven R&D, ensures equitable ownership, and addresses potential disputes among developers, operators, and users. Additionally, research can focus on integrating AI-generated inventions into India's broader innovation ecosystem, including industry, academia, and public sector collaboration, while assessing the ethical implications of machine-assisted creativity, liability, and accountability. These efforts will help establish a forward-looking, adaptable, and internationally coherent patent framework, positioning India as a global leader in AI innovation while safeguarding human creativity and societal welfare.

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