THE DEVICE FOR AUTONOMOUS BOOTSTRAPPING OF UNIFIED SENTIENCE (DABUS) PATENT DEBATE: ARTIFICIAL INTELLIGENCE AS INVENTOR IN INDIA

Rishija Tripathi*

ABSTRACT

With the growth of the fourth industrial revolution (4IR), a term coined by Klaus Schwab in 2016, the unprecedented emergence of machine intelligence also known as artificial intelligence took place. The lines between what a human could do and what a machine could do are blurring, with the machines today being just as capable as humans, if not more.

The growth of artificial intelligence ignited fires in the form of debates in all areas of human life and resultantly the debate which emerged in the context of patent laws is one of whether AI should be recognised as an inventor under the patent laws around the globe or not. The question garnered attention and opinions from various stakeholders after the efforts made by Prof. Ryan Abbott who may be called the pioneer of advocating for providing intellectual property rights and protection to AI. This paper deals with the one of the first patent applications listing AI as an inventor and its fate in different countries, with a focus on how the application has been dealt with by the Indian Patent Office. The paper also lists out various reasons in support of and against the idea of granting inventorship rights to AI. The author also while concluding discusses what could be some other alternatives of providing protection to the works generated by AI.

KEYWORDS: Artificial Intelligence; Inventor; Patents; DABUS; Legal; Ethical.

INTRODUCTION

With the development of Artificial Intelligence (hereinafter referred to as AI) systems that can produce inventions, the relationship between AI and patent law has become a crucial topic of discussion in the twenty-first century. The Device for the Autonomous Bootstrapping of Unified Sentience (hereinafter referred to as DABUS) case, which has questioned conventional ideas of inventorship under patent laws, is at the centre of this discussion. Dr. Stephen Thaler's AI system, DABUS, was named as the inventor in patent applications submitted in more than

* Student, National Law Institute University, Bhopal, India

a dozen nations, including India.[301] Because AI systems lack legal personhood, most jurisdictions like the USA and the UK have rejected the idea, while South Africa, has accepted AI as an inventor. This divergence in global responses highlights the need for a harmonized approach to AI inventorship, particularly in countries like India, where the legal framework remains silent on the issue.

The DABUS case calls into question both the sufficiency of current patent laws and the role of AI in innovation. Is inventorship still a concept that is uniquely human, or can AI systems be acknowledged as inventors? In order to allow AI-generated inventions without impeding innovation, how should patent laws change? These issues are not just theoretical, they have real-world ramifications for companies, legislators and inventors everywhere. This paper examines the DABUS patent controversy, paying special attention to India's reaction and the wider ramifications for innovation and patent law. This study intends to add to the current conversation on AI inventorship by analysing international viewpoints and India's legal system and offering suggestions for improving India's patent legislation.

OVERVIEW OF THE DEVICE FOR AUTONOMOUS BOOTSTRAPPING OF UNIFIED SENTIENCE

The traditional assumption of an inventor being a human is specifically challenged by the DABUS patent debate. AI as an inventor has been rejected outright in most jurisdictions on legal and policy grounds while South Africa is the only country which has taken an inclusive approach. Australia being another country that had initially accepted[302] the patent but withdrew[303] the same later on. The response of different patent offices around the world reflect the conflict between adhering to traditional anthropocentric frameworks and adapting to the technological realities. This chapter presents a brief overview of the DABUS patent applications in the countries of United Kingdom (UK), the United States (US) and South Africa, the three key jurisdictions in this debate.

THE DABUS PATENT APPLICATIONS

DABUS, and AI system invented by Dr. Stephen Thaler, was developed with the aim for it to autonomously generate new inventions without human intervention. Dr. Thaler filed patent applications in multiple jurisdictions in 2019 where DABUS was mentioned as the sole inventor. The applications were for:

---

[301] 'Patent – The Artificial Inventor Project' <https://artificialinventor.com/patent/> accessed 24 March 2025
[302] *Thaler v Commissioner of Patents* [2021] FCA 879
[303] *Commissioner of Patents v Thaler* [2022] FCAFC 62

- A food container with a fractal surface – designed to improve grip and heat transfer.
- A flashing light system for attracting attention in emergencies.

Dr. Thaler claimed that these inventions were generated autonomously by DABUS, without any intervention by a human. Most jurisdictions require the inventor to be a natural person under the existing patent legal framework which led to the applications facing legal scrutiny. Consequently, a number of these applications filed, were rejected showcasing the inability of the traditional patent law system to accommodate inventions generated by AI. South Africa, however has become the first country to grant a patent recognising the AI, DABUS as an inventor.

GLOBAL RESPONSE TO DABUS AS AN INVENTOR

While most jurisdictions worldwide, have taken a strict approach towards the patent applications filed in the name of DABUS, South Africa has been an exception. This section takes a look at the reasoning behind the stand taken by United Kingdom (UK), the United States (US) and South Africa in respect of the DABUS patent applications.

UNITED KINGDOM (UK)

The DABUS patent application was examined at the United Kingdom Intellectual Property Office (UKIPO) which is one of the first patent offices to consider the application. Under the Patents Act, 1977, the definition of an inventor is given as the "actual deviser"[304] of an invention. The ground for rejection by the UKIPO[305] was that DABUS lacked legal personhood and that an inventor to be recognised as such under the existing framework has to be a natural person.

Dr. Thaler went to the High Court[306] and subsequently to the Court of Appeal[307] to challenge the decision of the UKIPO but the rejection was upheld by both the forums. Eventually, the Supreme Court of UK got an opportunity to hear the case, which delivered a landmark judgement in Thaler v Comptroller-General of Patents, Designs and Trade Marks[308]. The Court reaffirmed the decision and held that only a human person can be an inventor and AI does not have the capacity to hold the rights as an inventor. On the analogy of doctrine of accession, argued by Dr. Thaler, the court observed that the doctrine is to be applied on living things

[304] Patents Act 1977, ss 7, 13
[305] *Thaler, Re Patent Application GB1816909.4 and GB1818161.0* (BL O/741/19, 4 December 2019)
[306] *Thaler v The Comptroller-General of Patens, Designs and Trade Marks* [2020] EWHC 2412 (Pat)
[307] *Thaler v The Comptroller-General of Patens, Designs and Trade Marks* [2021] EWCA Civ 1374
[308] *Thaler v The Comptroller-General of Patens, Designs and Trade Marks* [2023] UKSC 49

generated or created by living things and does not extend to the creations of non-living things.[309]

The decision reinforces the idea that any changes in the law in order to designate AI as an inventor has to be brought about through legislative changes and judicial interpretation would not be extended beyond the established notion of inventorship.

UNITED STATES (US)

The United States Patent and Trademark Office (USPTO) while examining the patent applications filed in the name of DABUS as an inventor met with the same fate as that in the UK.[310] The application were rejected on the ground that the Patents Act defines inventor as an "individual".[311] This term was interpreted by the USPTO exclusively to mean and refer to natural persons and thus, AI being excluded from the same.

This rejection was challenged by Dr. Thaler in Thaler v. Vidal[312], where it was argued by his side that the patent system in US should evolve with the times in order to accommodate AI-driven innovations. They argued that not recognising AI as an inventor would lead to discouraging inventions in the field of AI and there would be an issue of misattributing credit. The decision of USPTO, however, was upheld by the Federal Circuit Court of Appeals.

The final decision demonstrates that the US Patents Act will be interpreted strictly in the context of AI-generated inventions and any changes in order to accommodate such inventions would ultimately require the force of the legislature.

SOUTH AFRICA

South Africa is presently the only country that has granted a patent to an invention with AI named as an inventor. The country deviated from the approach of the UK and US patent offices. The Companies and Intellectual Property Commission (CIPC) approved the application in June 2021, thereby becoming the first patent office to grant such a patent.[313]

The catch is that the patent system in South Africa differs significantly from UK and US. This is established by the fact that the country does not conduct a substantive examination before the grant of a patent. South Africa follows a depository system, where the patent applications

---

[309] *Thaler v The Comptroller-General of Patens, Designs and Trade Marks* [2023] UKSC 49, paras. 82 to 89
[310] *In re Application No. 16/524,350* (USPTO, 17 February 2020)
[311] 35 U.S.C §§ 100(f), 101 (2011)
[312] *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022)
[313] Patent Journal of South Africa, July 2021, Vol. 54 No. 7, /3242, p. 255

get registered rather than examine for any legal compliance.[314] This is in stark contradiction to other jurisdictions where a rigorous legal scrutiny of the patent applications is conducted and only on going through the scrutiny successfully, is a patent granted.

This difference in the system of granting patent implies that the decision of South Africa to grant a patent to the inventions generated by DABUS does not help in setting a legal precedent for AI inventorship. It is argued that administrative approval is the basis of the decision to grant the patents rather than any legal reasoning and that the courts are required to rule on the substantive issue of AI as an inventor. The approval of DABUS as an inventor is in any case is a sign demonstrating that some jurisdictions are open to the idea of AI as an inventor under the patent law framework.

THE DABUS PATENT APPLICATION: INDIAN PERSPECTIVE

There is no explicit mention of AI as an inventor in the Patents Act, 1970. The discussion in this context has gained fire with the DABUS patent application (Application No. 202017019068)[315], which mentions DABUS as the inventor and is filed by Dr. Thaler. Similar to the decisions of UK and US, the stand of India in respect of the application has been against AI as an inventor-until now. This is because a final verdict on the application is nowhere in sight in the near future.

The Indian Patent Office (hereinafter referred to as IPO) issued a First Examination Report (hereinafter referred to as FER) after examining the application which was followed by a Pre-Grant Opposition. Both the FER and the opposition raise objections to the idea of AI as an inventor. This chapter briefly mentions the legal framework on the concept of "inventor" under the Patent Act, 1970 followed by a discussion of the IPO's response and the subsequent opposition and reply.

The Patents Act, 1970 provides no definition for the term "inventor" but a reading of the different provisions of the Act suggests that only natural persons can be designated as inventors.

- Section 6[316]: Who can Apply for a Patent?

  The section lays down that a patent application can be filed by one of the three categories:

[314] Robyn-Leigh Merry, 'The Intention To Become A Substantive Search And Examination Office' (*Mondaq*) <https://www.mondaq.com/southafrica/patent/638086/the-intention-to-become-a-substantive-search-and-examination-office> accessed 25 March 2025

[315] Stephen L Thaler, '*Application for Grant of Patent'* (Form 1, Intellectual Property India, 5 May 2020)

[316] The Patents Act, 1970 (39 of 1970) s 6

- The true and first inventor;
- The assignee of the true and first inventor;
- The legal representative of a deceased true and first inventor.

- Section 2(1)(y)[317]: The term "True and First Inventor" is defined under section 2(1)(y), which excludes two categories of person:
  - The first importer of the invention and
  - A person to whom the invention is communicated from outside.
  - AI lacks legal personhood and thus it cannot be recognised as an inventor under the Patent Act, 1970.
- Section 10(6)[318] – Declaration of Inventorship (Form 5)

This provision requires that a patent applicant must declare the true and first inventor in Form 5. In the DABUS application, Dr. Thaler explicitly named DABUS as the inventor, raising questions about compliance with this requirement.

- Section 25[319] – Pre-Grant Opposition

Section 25 allows third parties to oppose the grant of a patent on various grounds, including that the invention does not meet the requirements of the Act. The DABUS application faced opposition under this provision.

RESPONSE TO DABUS PATENT APPLICATION

The IPO was involved with the patent application filed in the name of DABUS as an inventor whereby a FER was issued and later a pre-grant opposition proceeding was handled by the IPO. These instances are a result of India's first legal scrutiny of AI-generated inventions and the question of whether AI can be recognised as an inventor under the Patents Act, 1970. The final decision of the IPO will be an important one in determining as to what would be the stance of the country in respect of AI as an inventor.

FIRST EXAMINATION REPORT AND THE APPLICANT'S RESPONSE

The IPO issued the FER in respect of the patent application no, 202017019068, titled as "*Food Container and Devices and Methods for Attracting Enhanced Attention*" which is filed by Dr. Thaler. The FER raised objections on various grounds, viz. lack of novelty[320], inventive step[321],

[317] The Patents Act, 1970 (39 of 1970) s 2(1)(y)
[318] The Patents Act, 1970 (39 of 1970) s 10(6)
[319] The Patents Act, 1970 (39 of 1970) s 25
[320] Examination Report re application no. 202017019068, Part (2)(I)
[321] Examination Report re application no. 202017019068, Part (2)(2)

definitiveness[322] and lack of unity of invention.[323] Apart from these grounds, in the very fag end of the report, two objections questioning the validity of the applications under the section for "Other Requirements"[324] were raised. These were:

1. Objection with respect to DABUS being designated as the inventor. It was stated by the IPO that only a person as per sections 2[325] and 6[326] of the Patents Act, 1970 can be an inventor. It is explicitly required that the inventor must be a person in the legal sense and thereby, the IPO maintained that DABUS being an AI, does not qualify as an inventor.
2. The IPO stated that no proof of right has been submitted to the IPO even after the date for doing so has expired. According to the Patents Act, 1970, where the applicant is not the same as the inventor, there is a requirement of submitting a valid proof of right to show that the applicant is entitled to file the application. Because of the inability of DABUS to execute an assignment or transfer rights, the omission to submit the proof of right became a deficiency in the application.

Dr. Thaler while responding to the FER agreed that DABUS is not a natural person but contended that there is no express prohibition against the recognition of AI as an inventor in the Patents Act, 1970. It was argued that there have been changes made in the Act to accommodate technological advances and the expanding role of AI in inventions requires a reconsideration of the idea of who can be an inventor. The decision of South Africa, granting a patent in the name of DABUS as the inventor was also cited for support.[327]

Additionally, it was argued that there are broader policy implications of not recognising AI as an inventor as the exclusion of AI would discourage the progress in AI- driven industries. It was contended that AI has been consistently generating inventions that might not be conceivable to humans and thus, the patent law is required to reflect modern realities by recognising the role of AI as an inventor.

PRE-GRANT OPPOSITION AND RESPONSE THERETO BY THE APPLICANT

[322] Examination Report re application no. 202017019068, Part (2) (6)1
[323] Examination Report re application no. 202017019068, Part (2) (5)
[324] Examination Report re application no. 202017019068, Part (7) (I)
[325] The Patents Act, 1970 (39 of 1970) s 2
[326] The Patents Act, 1970 (39 of 1970) s 6, n19
[327] Stephen L. Thaler, 'Reply to First Examination Report on Patent Application No. 202017019068' (25 July 2022) para 37

Dr. Kalyan C. Kankanala filed a pre-grant opposition against the DABUS application. It was argued that the application is inconsistent with the fundamental principles and therefore should be rejected. Three main objections were raised in the opposition. They are:

1. Lack of legal personhood[328]- it was argued that the Patents Act, 1970 defines inventor as the "true and first inventor" by which section 2(1)(y)[329] refers to human beings and entities like corporations, governments and machines are excluded by the definition. AI does not have any legal rights, duties or the capacity to contract which ultimately means that it can not be recognised as an inventor. It was contended that only legislative amendments can give recognition to such inventorship and courts and the patent office does not have the authority required for such recognition.
2. The requirement of proof of right was reiterated in the opposition. It was contended that AI cannot sign documents or engage in legal transactions, therefore Dr, Thaler's claim of being the owner of DABUS would not suffice and he lacked legal standing to apply for the patent.
3. The third objection was based on non-patentability under section 3(b)[330] and 3(c)[331] of the Patents Act, 1970. It was argued that granting a patent to AI generated invention would create ethical concerns in the form of allowing corporation to monopolise AI-driven creations which would be contrary to public order and morality.[332] The mere discovery of scientific principles or natural phenomena is excluded from patentability and the opposition contended that because of the absence of intentional creative input in AI, the generation of inventions by AI could at best be classified as discoveries.[333]

The response to the opposition[334] was on multiple grounds:

1. The definition of "person" under section 2(1)(s)[335] of the Patents Act, 1970 was relied on to argue that it includes the government, which implies that non-human

[328] Kalyan C. Kankanala, 'Pre-Grant Representation Against Indian Patent Application No. 202017019068' (27 October 2022) paras 4-9
[329] The Patents Act, 1970 (39 of 1970) s 2(1)(y), n 20
[330] The Patents Act, 1970 (39 of 1970) s 3(b)
[331] The Patents Act, 1970 (39 of 1970) s 3(c)
[332] Kalyan C. Kankanala, 'Pre-Grant Representation Against Indian Patent Application No. 202017019068' (27 October 2022) para 11
[333] Kalyan C. Kankanala, 'Pre-Grant Representation Against Indian Patent Application No. 202017019068' (27 October 2022) para 12
[334] Stephen L. Thaler, 'Reply to Pre-Grant Opposition Against Indian Patent Application No. 202017019068' (14 March 2024)
[335] The Patents Act, 1970 (39 of 1970) s 2(1)(s)

entities can be recognised as legal persons. They reiterated that because of no explicit exclusion of AI, there is enough possibility of an interpretation allowing AI to be an inventor.

2. They contended that the legislative silence in not explicitly prohibiting AI as inventor should not be understood as a ban and the law should be interpreted in order to promote invention in the absence of clear statutory provisions.
3. They cited the Rajya Sabha Standing Committee on Intellectual Property[336], to demonstrate the acknowledgement of the economic and technological significance of AI-driven innovation. It was recommended in the report that the patent laws should be revisited to acknowledge AI-related inventions.

CURRENT STATUS OF THE APPLICATION

No final decision has been made by the IPO on the DABUS patent application. In view of the oppositions raised in the FER and the opposition, it could be a possibility that India follows the approach of jurisdictions like UK and US and rejects the application.

A rejection by the IPO would mean that the human-centric patent law is given primacy and a confirmation to the effect that only natural persons are to be recognised as inventors under the present legal framework. Thus, AI-generated inventions could only be protected under the Patents Act,1970 when a human applicant is credited as the inventor. That would again be a scenario where legislative reforms may be called for, as it might affect the integrity of the patent law system.

On the other hand, a grant by the IPO, would potentially set a precedent for AI inventorship representing a significant shift in Indian patent law. This would align India with South Africa, the only country that has recognized AI as an inventor so far. Such a decision could lead to legal challenges and further scrutiny from policymakers, who may need to introduce new regulations to clarify AI's role in patent law.

THE DEBATE ON ARTIFICIAL INTELLIGENCE AS AN INVENTOR

ARGUMENTS FOR AI AS AN INVENTOR

The supporters of AI as an inventor contend that it is expected of the patent laws to keep evolving in order to reflect the technological advancements and acknowledging AI as an inventor is a necessary step in that direction. They argue that there is a need to give AI the

[336] Department Related Parliamentary Standing Committee on Commerce, *Review of the Intellectual Property Rights Regime in India* (RS 2020-21, 161) 29

status of an inventor in order to promote innovation, ensure transparency and to prevent any misattribution.

It is argued that inventions that would qualify for patent protection are already being produced by AI. It is stressed upon that the requirements of novelty, inventive step and industrial application is only to be met by the invention and does not require any human cognition as such.[337] AI like the DABUS has already displayed the ability to generate new, useful and non-obvious inventions and thus, the argument as to why should AI not be credited even in situations where the invention generated or created by it meets the patentability standards. Excluding AI from any kind of protection and not crediting it for the inventions it generates could result in the inventions either remaining un-patented or worse, could be credited falsely to a human inventor ultimately failing the purpose of the concept of patent.

The other argument is based on the misattribution and lack of transparency that would be a result of not acknowledging AI as an inventor.[338] In order to get a patent granted on inventions generated by AI, some human person, in most case, the developer or owner of the AI would be required to claim credit. This will create a system where humans are listed as inventors against inventions that they have no contribution in. This would raise concerns about honesty and the importance given to the patent system would be undermined. To ensure transparency and accurately reflect as to who created what, it is argued that AI should be given the status of an inventor.

Another argument which is also backed by Ryan Abbott and Dr. Thaler is that the growth of and investment in AI- driven industries would be greatly hampered if there is status quo in the definition of inventor under patent laws of the world.[339] It is argued that the main intention behind the system of intellectual property rights is to incentivise innovation through protection under the system. When AI-generated inventions are not protected under the patent system, there would be less incentive for developing AI for the purposes of generating inventions because of the fear that the inventions generated would not get

---

[337] Prashanth Shivadass and Pise, '[The Viewpoint] On the Horns of a Dilemma: Inventorship of AI-Generated Inventions' (*Bar and Bench s*, 30 September 2021) <https://www.barandbench.com/law-firms/view-point/the-viewpoint-on-the-horns-of-a-dilemma-inventorship-of-ai-generated-inventions> accessed 25 March 2025

[338] University of Surrey, 'Patent Law Must Encourage the Use and Development of AI to Remain Fit for Purpose: Professor Abbott to Give Evidence to the United States Senate Committee' (7 June 2023) <https://www.surrey.ac.uk/news/patent-law-must-encourage-use-and-development-ai-remain-fit-purpose-professor-abbott-give-evidence> accessed 25 March 2025

[339] Ryan Abbott, 'The Artificial Inventor Project' (*WIPO MAGAZINE,* 11 December 2019) <https://www.wipo.int/web/wipo-magazine/article-details/?assetRef=41111&title=the-artificial-inventor-project> accessed 25 March 2025

adequate protection. This, the proponents for AI as an inventor argue would slow down the progress, especially in the fields of drug discovery and automated engineering where AI is already acting in a transformative role.

The grant of patent listing DABUS as an inventor in South Africa is also used by the supporters of AI inventorship in trying to establish that patent offices need to adapt to creations of AI. The initial court ruling in Australia supporting AI as an inventor before it was overturned is also used to argue that the interpretation of an "inventor" is evolving and it would be the correct thing to include AI within the definition of the same.

ARGUMENTS AGAINST AI AS AN INVENTOR

The group against the recognition of AI as an inventor argue that it contradicts the basic legal principles, creates uncertainties regarding ownership and is not in line with the purpose of patent law. It is contended that AI does not have human intent, is not able to have any rights and thus, does not require any incentives as given under the intellectual property framework.

The primary argument against AI as an inventor is that the patent law in most jurisdictions assume the inventor to be a human being.[340] Almost all jurisdictions over the world, including India, UK and USA define inventor to mean an individual or a natural person. This interpretation of the word inventor under the patent laws of different countries is based on the presumption that inventions need human creativity, intention and the ability to take decisions. AI, in contrast, lacks consciousness, intent and ability to think independently. The AI only functions on the basis of existing data and algorithms fed to it, in order to generate outputs. Acknowledging AI as an inventor would therefore act as a contradiction to the settled legal and philosophical foundations of patent law.

Other concerns include ownership and legal accountability. The question of who owns the patent if AI is recognised as an inventor then arises. AI is not capable enough of owning property, transferring rights or be held accountable legally, unlike humans. If ownership of the patent vests with the developer or owner of the AI, it would result in unfair monopolisation where a few entities would be owning a huge number of AI-generated patents.[341] Such a state of monopoly would ultimately stifle competition instead of encouraging innovation, going against the principle of patent law.

---

[340] Tee Jim Tan, 'Artificial Intelligence as Inventor?' (2024) 36 SAcLJ 346, n 4

[341] Laura Gastaldi and Massimiliano Tiberio, 'AI as Inventor: Legal Challenges and Implications for Patent Law' (*DLA Piper,* 6 September 2023) <https://www.dlapiper.com/en/insights/publications/law-in-tech/ai-as-inventor-legal-challenges-and-implications-for-patent-law> accessed 25 March 2025

It is also argued by the critics of AI being given the status of an inventor that there is no requirement of incentives to be given to the AI. The motive behind the patent system is to reward human ingenuity through grant of temporary monopolies in exchange of public disclosure of their inventions.[342] The idea is to motivate and encourage humans to innovate and invent by helping them financially, giving them professional recognition and personal satisfaction. AI on the other hand only follows programmed algorithms and does not therefore, require any incentive. In essence granting patents to AI does not help in furthering the initial goal of patent system, which is to motivate and encourage human ingenuity in creating inventions.

Another area of concern would be the flooding of inventions resulting in making it difficult for humans to develop and invent. AI, owing to its unprecedented speed is able to generate a huge number of inventions in a short span of time, which will result in a situation where there will be too many patents with overlapping innovations, making it very difficult for the researchers to develop new technologies. This will ultimately increase litigation, stifle progress and limit the access of public to newer technologies.

Ethical concerns cannot be separated from the issue of acknowledging AI as an inventor. In the event, that AI is granted inventorship, the lines between 'artificial' intelligence and human intelligence could blur leading to philosophical and legal questions about the rights that should be attributed to AI. To provide AI the status of an inventor, the obvious preceding requirements would be to provide it with the right of entering into contracts and to make it liable for any consequences of its acts. This could be harmful to the integrity of the society and thus is vehemently opposed.

WAY FORWARD

As AI continues to play an expanding role in scientific and technological progress, India must adopt a clear and forward-thinking approach to AI-generated inventions. While the current legal framework does not accommodate AI inventorship, the rapid advancement of AI-driven innovation necessitates a re-examination of existing laws. India can consider three possible approaches: amending the Patents Act, 1970; developing alternative protection mechanisms; or recognizing AI-human collaboration while maintaining a human-centric system.

Before advocating for AI inventorship, however, it is important to address a fundamental deficiency in the arguments supporting the acknowledgement of AI as an inventor. Currently,

[342] Jeanne C. Fromer, 'Expressive Incentives in Intellectual Property' (2013) 98 Virginia Law Review 1745

AI lacks legal personhood, meaning it cannot own property, be held liable or transfer rights. Since patent law is based on the idea that an inventor must have legal standing, recognizing AI as an inventor would require AI to first be granted some form of legal recognition. Until this issue is addressed, AI-generated inventions will have to be protected through alternative legal mechanisms.

AMENDMENT IN THE PATENTS ACT, 1970

One approach to addressing AI-generated inventions could be to amend the Patents Act, 1970, to explicitly recognize AI as an inventor. This would require explicitly defining the term "inventor" to include AI, allowing AI-generated inventions to be patented. However, since AI cannot own property or exercise legal rights, the law would need to specify who owns the patent rights, whether they should be assigned to the AI's developer, owner, or a designated entity.

Additionally, the proof of right requirement in patent applications would need to be modified. Since AI cannot execute legal agreements, the law would have to establish a default rule for assigning AI-generated inventions to human entities.

While such amendments would align the Patents Act, 1970 with technological advancements, they raise concerns about whether AI can truly be considered an inventor and who should benefit from AI-generated inventions. Furthermore, given that most jurisdictions currently reject AI inventorship, India's decision to amend its laws would need to be carefully considered within the context of global intellectual property harmonization.

ALTERNATIVE PROTECTION

If India chooses not to amend the Patents Act, an alternative approach would be to develop a separate legal framework for AI-generated inventions. Instead of granting AI inventorship, the legal system could protect AI-driven innovations through alternative mechanisms such as trade secrets, sui generis rights or modified copyright protections.

One possibility is protection through trade secrets. Since patent protection requires public disclosure, companies that develop AI-generated inventions may prefer to keep them confidential rather than risk legal uncertainty over AI inventorship. Trade secret laws allow businesses to retain control over AI-driven innovations without the complexities of assigning inventorship. However, this approach limits the public dissemination of knowledge, which is a core objective of the patent system.

Another approach is to introduce sui generis protection for AI-generated inventions, similar to semiconductor design protections. A new legal category could be created that grants exclusive

rights to AI-generated inventions for a limited duration, ensuring that AI-driven discoveries are protected while maintaining flexibility.

RECOGNIZING AI-HUMAN COLLABORATION

A middle-ground approach would be to retain human inventorship requirements while acknowledging AI's contribution to the innovation process. Instead of recognizing AI as an independent inventor, patent laws could be updated to establish clear guidelines for AI-assisted invention.

One way to implement this would be to grant patents to inventions only if a human played a key role in developing or refining the AI-generated output. This would ensure that AI serves as a tool for human innovation, rather than an autonomous inventor.

Additionally, the concept of AI-assisted inventorship could be formally recognized in patent applications. India could adopt a policy where AI's role is acknowledged in the patent specification, even if the patent itself is granted to a human inventor. This would provide transparency in AI-generated inventions while maintaining legal and ethical clarity.

This approach preserves the human-centric nature of patent law while ensuring that AI-driven innovations do not go unrecognized. It also aligns with global trends, as most jurisdictions currently favour human-AI collaboration models rather than granting AI full inventorship rights.

CONCLUSION

The rise of AI-generated inventions presents a fundamental challenge to traditional patent systems, including India's Patents Act, 1970. While current laws assume that inventors are human, AI has demonstrated the ability to generate novel and useful inventions, raising the question of whether patent laws should evolve to reflect these technological advancements. India must decide whether to recognize AI as an inventor, develop an alternative protection framework or continue to require human inventorship while acknowledging AI's role in the innovation process. Any approach must balance legal certainty, ethical considerations and the need to promote innovation, ensuring that AI-driven discoveries contribute to scientific and economic progress without undermining the principles of patent law.