



AI-Assisted Inventions and Inventorship: A Commentary on *Thaler v. Comptroller-General* for Strengthening India's Patent Framework

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1. Introduction

The rapid development of artificial intelligence is changing the innovation landscape, which has enabled the invention of things that are not only complex but also very creative. However, this brings significant challenges to traditional patent systems, which are rooted in the concept of human inventorship. These have been exemplified in landmark cases such as *Thaler v Comptroller-General of Patents, Designs and Trade Marks*¹, which considered whether an AI system is recognisable as an inventor under the UK's patent law, through the example of Device for the Autonomous Bootstrapping of Unified Sentience (DABUS).² The judgment reaffirmed the view that only natural persons could be identified as inventors, leaving inventions that originate using autonomous AI without clear pathways for patent protection. This case is a point of significant reference for India as it reconsiders its patent regime. Much like its UK counterpart, the Indian Patents Act 1970 currently limits inventorship to natural persons.³ However, as AI becomes integral to innovation processes, questions arise about how the law should address AI-assisted and AI-generated inventions. Should the owner or developer of the AI system be recognized as the inventor?⁴ Should India follow UK's example, or should it take a more progressive stance to accommodate AI's unique role in the inventive process? This case comment examines the legal

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¹ *Thaler v. Comptroller-General of Patents, DESIGNS & TRADE MARKS*, (2023) UKSC 49.

² Hereinafter referred to as DABUS. Abbe E.L. Brown & Charlotte W.A. Waelde, *Research Handbook on Intellectual Property and Creative Industries* (Edward Elgar Publishing 2018) 92.

³ The Patents Act 1970, Sec6. (India)

⁴ Ryan Abbott, ARTIFICIAL INTELLIGENCE, BIG DATA AND INTELLECTUAL PROPERTY: PROTECTING COMPUTER-GENERATED WORKS IN THE UNITED KINGDOM, 27(3) INFO. & COMM'NS TECH. L. 190 (2018).

nuances of *Thaler*⁵ and tries to understand what insights can be gathered for the betterment of India's patent regime.

2. Facts of the Case

The case of *Thaler*⁶ deals with two patent applications submitted by Dr Stephen Thaler under the UK Patents Act, 1977, for inventions created by an AI system named DABUS.⁷ Dr Thaler claimed that the inventions were autonomously generated by DABUS and identified it as the sole inventor. The United Kingdom's Intellectual Property Office (UKIPO) upheld the rejection of applications and claimed only natural persons could be recognised as an 'inventor' as per the Act.⁸ An appeal to the High Court and that of the Court of Appeal also upheld the judgment handed down by the UKIPO, though one dissenting judge stated that the honest belief held by Thaler over who the inventor was, complied with procedural requirements.⁹ Finally, Thaler appealed to the Supreme Court of UK.

3. Legal Issues Discussed

1. Can a machine be considered an inventor under the UK Patents Act 1977?
2. Can the owner of the AI system claim patent over the inventions made by the machine?
3. Whether the UKIPO is right in concluding that an application stands withdrawn upon non fulfilment of the statutory requirements.

4. Arguments

Dr. Stephen Thaler, the appellant, argued that technological advancements require an evolution in the legal definition of an inventor. He claimed that the traditional requirement for inventors to be natural persons is outdated and should include AI systems like DABUS.¹⁰ Dr. Thaler asserted that DABUS autonomously generated the inventions, and its designation as the inventor reflected this reality. Thaler claimed that his ownership of DABUS entitled

⁵ *supra* n. 1

⁶ *Ibid.*

⁷ UK Patents Act 1977, Sec 7(3).

⁸ LIONEL BENTLY & BRAD SHERMAN, INTELLECTUAL PROPERTY LAW 451 (6th ed., Oxford Univ. Press 2022).

⁹ Christopher Wadlow, *The Status of AI as an Inventor: A Critical Analysis of Thaler*, 45(2) J. Intell. Prop. L. & Prac. 123 (2023).

¹⁰ Catherine Seville, *EU Intellectual Property Law and Policy* 356 (2d ed., Edward Elgar Publ'g 2018).

him to patents for its outputs under section 7(2)(b) of the UK's Patents Act, 1970, which allows rights to be bestowed from an inventor.¹¹ He also argued that the naming of DABUS as the inventor satisfied section 13(2) of the Act and was within his honest belief, which satisfies procedural requirements. The UKIPO, representing the respondent, argued that the Patents Act clearly limits inventorship to natural persons.¹²

It was further emphasised that the term 'inventor' by itself refers to human beings, and AI systems are automatically excluded from being inventors, regardless of their contributions. The UKIPO also stated that ownership of a machine does not give entitlement to its outputs since a machine is devoid of legal personality and cannot transfer rights.¹³ Procedurally, the failure to name a human inventor rendered the applications defective under section 13(2) of the UK's Patents Act, 1970¹⁴. These arguments underscore the growing tension between established patent law and the legal implications of AI-generated inventions amid ongoing technological change.

5. Judgment

The UK Supreme Court dismissed Dr. Thaler's appeal, annulling decisions made within the lower courts and the interpretation of the UK's Patents Act 1977 on questions of AI-generated inventions¹⁵. The Court discussed three principal points. First, under Section 7(3) of the Act, an inventor is defined as the 'actual deviser' of an invention, inherently requiring a natural person. The Court emphasised that a machine, such as DABUS, lacks legal personality and human ingenuity, and therefore cannot be recognised as an inventor within the current legal framework.¹⁶ Second, the Court ruled that the ownership of an AI system does not automatically grant entitlement to its outputs. The statutory requirement that patentable inventions originate from human inventiveness, either through direct creation or lawful

¹¹ *supra* n. 1 Paras., 19, 76-78; Trevor Cook, *The Artificial Inventor: Legal Implications and Policy Challenges*, 29 *Intell. Prop. Q.* 255 (2021).

¹² Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law* 6-7 (Cambridge Univ. Press 2020).

¹³ Christopher Yoo, *AI Inventions and the Law of Patent Eligibility*, 51 *IIC Int'l Rev. Intell. Prop. & Competition L.* 1 (2022).

¹⁴ *supra* n.7 Para. 45-46.

¹⁵ See *Hearing Officer Decision*, UKIPO, BL O/741/19 (Dec. 4, 2019), <https://ipo.go.v.uk/p-challenge-decision-results/o74119.pdf>; *High Court (Patents Court, Chancery Division)*, [2020] EWHC 2412 (Pat) (Sept. 21, 2020), <https://artificialinventor.com/wp-content/uploads/2022/11/2412.pdf>; *Court of Appeal*, [2021] EWCA Civ 1374 (Sept. 21, 2021), <https://www.wipo.int/wipolex/en/text/585910>.

¹⁶ *supra* n. 1 Paras. 57-58; SIVA VAIDHYANATHAN, *THE GOOGLIZATION OF EVERYTHING (AND WHY WE SHOULD WORRY)* (Univ. of Cal. Press 2011).

derivation from a human inventor, was found to conflict with the object and scheme of the Patent Act when confronted with the claim that ownership of DABUS entailed entitlement to its inventive outputs.¹⁷ Third, the Supreme Court affirmed the UKIPO's decision to treat the applications as withdrawn for failure to comply with Section 13, which requires the identification of a human inventor in patent applications. The failure to identify a human inventor rendered the applications procedurally invalid. The Court, by rejecting the appeal, reasserted that the current patent laws do not allow for the acceptance of AI systems as inventors by rejecting the appeal.¹⁸ This action brought home the message that the need for legislative reform to change how patents work in regard to the increasing role of AI in innovation is growing.

6. Analysis of the Judgment

The Judgment in *Thaler* affirms foundational patent law principles and highlights human centrality to inventorship with clear and consistent legal frameworks. While the decision reflects a careful interpretation of the UK's Patents Act 1977, it also exposes significant gaps in the law concerning AI-generated innovations. The Court maintained fidelity to the language and intent of the UK's Patents Act, 1977, which defines an inventor as the 'actual deviser' of an invention, implicitly requiring a natural person. This conformity to legislative intent further ensures consistency in the imposition of patent law, away from arbitrary expansions that threaten to compromise the foundational principles established by it. In essence, by denying Dr. Thaler's argument against recognising DABUS as an inventor, the judgment upholds the integrity of patent law. The need to establish trust among inventors, businesses, and indeed other stakeholders is critical, particularly in a competitive field like intellectual property. Moreover, the exercise of judicial restraint by the Court further aligns with constitutional principles in that it focuses more on its role as an interpreter of existing law rather than a body for policy innovation.

This leaves it upon the legislature to decide if and how patent laws should adapt to deal with AI-generated inventions. However, there are limitations to the judgment. It avoids the broader policy questions surrounding implications of AI in innovation by strictly focusing on statutory interpretation while leaving unresolved the future patentability of AI-generated inventions. The reliance on a human-centric definition of inventorship may limit the protection of valuable AI-generated innovations

¹⁷ Ryan Abbott, I THINK, THEREFORE I INVENT: CREATIVE COMPUTERS AND THE FUTURE OF PATENT LAW, 57(4) B.C. L. Rev. 1079 (2016).

¹⁸ *supra* n. 1; Paras. 79-90; Stephen Thaler, AI AND PATENT LAW: A CASE FOR INVENTORSHIP, 35 COMPUT. L. REV. 23 (2021).

and discourage investment and development in AI technologies, potentially hindering progress in areas as varied as drug discovery and pharmaceutical development, autonomous vehicle engineering, and advanced materials science that lack human intermediaries. Where commendable judicial restraint has kept the Court from guiding the legislature or making recommendations about legislative reform, a new industry transformation by AI now opens a critical gap in the protection of intellectual property since its contributions are not recognised by law. Ensuring short-term consistency and clarity, the judgment emphasises on urgent legislative reform that might balance the protection of these innovations with the principles of patent law. Without proactive intervention, the legal system will lag behind technological advancements that could negatively impact innovation and its social benefits.

7. Global Approach

The global approach to AI inventorship indicates a sharp divergence in how jurisdictions interpret the term of an inventor. Even leading offices such as the European Patent Office (EPO) and the United States Patent and Trademark Office (USPTO) could not deny the patentability of the inventions that the AI system DABUS had come up with, but refused them all on the grounds of their respective legal frameworks that mandated an inventor to be a natural person, thus excluding AI systems.¹⁹ Contrasted against this, South Africa did something historic when, on July 28, 2021, DABUS was recognised as an inventor in its Patent Journal, becoming the first jurisdiction to do so. Thereafter, on July 30, 2021, the Federal Court of Australia gave a landmark ruling in the case of *Commissioner of Patents v Thaler*²⁰, holding that AI can be named as an inventor and emphasised the need for patent laws to evolve with the advancement of technology.²¹ These decisions are indicative of present-day debates surrounding how intellectual property systems must be in tandem with the developing role of AI.

8. Inventorship under Indian Law

Indian patent law has traditionally based the concept of inventorship on the creative interaction of a human mind, moral responsibility, and the sharing of knowledge for the good of the community. India's Patents Act of 1970, though it does not provide a formal definition of an 'inventor', implies human action structurally. Section 2(1) (y), 6 and 7 of the Act mention that a patent right can be connected only to a 'person' who is the 'true and first inventor'

¹⁹ Kenneth S. Corts, *AI in the Innovation Process*, 8 J. ECON. PERSP. 31 (2020).

²⁰ [2022] FCAFC 62

²¹ Matthew U. Scherer, *Regulating Artificial Intelligence Systems*, 29(2) HARV. J.L. & TECH. 353 (2016).

or to that individual's most rightful owner. The principles underlying patent law (the reward theory and disclosure theory), as reflected in this legal framework, are to some extent the features of the human mind they talk about, namely conscious will and moral accountability, which are not found in self-governing artificial intelligence.

Judicial reasoning has also supported and strengthened this anthropocentric perspective. The Karnataka High Court in *V.B. Mohammed Ibrahim v. Alfred Schafranek*²² held that an inventor must 'directly contribute through skill and ingenuity' and it therefore rejected applications made by financiers who had no part in the creative process. The substantive requirement of inventorship, 'intellectual contribution,' is indicative of the judicial stance that invention is not only a technical process but also a proof of human cleverness and therefore, the one who innovatively presents it should get the exclusive rights to the invention. The Supreme Court in *Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries*²³ had encountered a similar situation and stated that the groundwork for invention must come from 'the exercise of the inventive faculty of the mind,' thereby bringing in the concept of inventive creation being not only a technical, but also a conscious, mental act of innovation.

The later decisions, like *Novartis AG v. Union of India*²⁴ and *Monsanto Technology LLC v. Nuziveedu Seeds Ltd.*²⁵ reflect the Supreme Court's approach of interpreting the patent law as it should help to achieve a balance between the pursuits of innovation and consideration of public welfare. The Court's purposive approach is intended to align legal interpretation with policy goals. Such an approach discloses the intrinsic flexibility that can be extended even to AI-assisted inventions. There is no explicit text in sections 6 and 7 of the Patents Act, 1970 of India, that bans the consideration of an assignee, programmer or an operator who has significant control over the AI system as the 'true and first inventor,' provided that person shows a close human intellectual link to the inventive output of the AI.

The Intellectual Property Office (IPO) Manual of Patent Office Practice and Procedure (2019), as it stands, requires the disclosure of the inventor's name, nationality, and address, but it can change with the help of an administrative clarification that will help a human supervisor in creative disclosure of

²² *V.B. Mohammed Ibrahim v. Alfred Schafranek*, 1960 Mys LJ 44, para. 38

²³ *Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries*, 1979 2 SCC 511, paras. 22, 23

²⁴ *Novartis AG v. Union of India*, 6 SCC 1, paras. 190, 191 (2013)

²⁵ *Monsanto Technology LLC v. Nuziveedu Seeds Ltd.*, (2019) 3 SCC 381, paras. 41, 43

AI-assisted inventorship²⁶. India can manage this transformation without legislation by interpreting the term 'inventor' as the 'human-in-the-loop', the one who initiates, configures, or verifies AI outputs. The point of Indian law and court decisions that the human inventor shall be credited remains, but the legal and moral aspects of the doctrine, which methodologically are based on accountability, disclosure, and reward, are actually broad enough to accommodate the changes in technologies that involve machine and man. Acknowledging AI as a creative agent, with purposive human attribution, would balance credit and accountability, aligning India's patent law with current innovation trends and ensuring legal adaptability to technological change.

9. Insights from *Thaler v Comptroller-General of Patents*

The *Thaler* case²⁷ provides the Indian judiciary with abundant learning on the handling of indeterminate law governing AI-based inventions. The decision of the UK Supreme Court stipulating that only a human being can be regarded as the 'actual deviser' under Section 7(3) of the UK Patents Act 1977 highlights the primacy of human creativity kept intact in patent law. In spite of that, the Court's qualification that it finds itself in a policy vacuum, not a lack of power, suggests that legislatures all over the world, including India, may need to reconsider if the existing definitions of 'inventor' and 'ownership' are still appropriate in the case of autonomous creation. This decision of the UK Supreme Court points out two primary gaps in India. The first is that the Indian Patents Act 1970 conceptualises inventorship under human agency entirely as shown in Sections 6 and 7, which associate patent rights with 'a person' who is the 'true and first inventor.' By this statutory language, non-human inventors are practically excluded. On the other hand, the case of *Thaler* exhibits how legal systems can still cling to human-centred ideals while acknowledging the use of reform to facilitate their adjustment. India might establish legal clarification distinguishing AI-assisted from AI-generated inventions, thereby ensuring that ownership and moral responsibility rest with identifiable human contributors such as developers and operators.

Next, the case of *Thaler*²⁸ uncovers the question of the ownership of AI outputs. The Supreme Court of the UK turned down the lawsuit brought forward by Dr. Thaler, where he claimed that the release of DABUS, a machine capable of producing inventions, makes the rights over the inventions its

²⁶ See for more, Manual of Patent Office Practice and Procedure, Version 3.0, available at https://ipindia.gov.in/writereaddata/Portal/Images/pdf/Manual_for_Patent_Office_Practice_and_Procedure_.pdf

²⁷ *supra* n. 1

²⁸ *supra* n. 1

own. Indian legislation replicates the flaw that the above-stated reason sheds light on the fact that there are no provisions in the UK's Patents Act, 1977, explicitly referring to who is entitled to obtain AI-derived inventions. In the absence of changes in the law, this area could become even murkier in collaborative or corporate scenarios where AI tools are functioning with very little human input and consequently, the question arises who owns AI-generated innovations.

These rulings further indicate the need for balancing the incentives for innovation with ethical and social responsibilities. India can follow the example of the UK when it comes to cautious interpretation, but may take a more assertive view of the policy like for instance, by amendments or guidelines issued by the Department for Promotion of Industry and Internal Trade and the Indian Patent office. India can utilise the influence of similar situations such as the *Thaler* case²⁹ and the European Patent Office 'Guidelines for Examination 2023,' to transform the AI-assisted scenario into one where the inventor is a human and at the same time machine contributions are allowed. So, what needs to be noted is that, the case of Thaler shows perfectly well that judges should exercise self-control to encourage lawmakers in taking the anticipatory step³⁰. For India, it is the double effect of the example and the challenge to innovate, not only by using technology but also by the patent system, to keep pace with technology and enhance accountability and public trust in the intellectual property administration.

10. Conclusion

The landmark decision in *Thaler*³¹ has reignited global discourse on the question of whether artificial intelligence can be recognized as an inventor under existing patent regimes. By ruling that only natural person can be the inventor as per the UK Patents Act 1977, the Supreme Court of the United Kingdom opens up the same gap within the Indian patent law framework, which follows the Patents Act 1970 and is still based on a human-centric concept of inventorship. The *National Institute of Virology v. Mrs. Vandana S. Bhide*³² is one of many court cases from India that has recognised human

²⁹ *Supra* n. 1, 2021 FCA 879

³⁰ Arul George, Learning from *Thaler v. Comptroller-General of Patents*, DESIGNS AND TRADEMARKS: SHORT-TERM AND LONG-TERM IMPLICATIONS FOR INDIA'S PATENT REGIME (JANUARY 24, 2024). BENNETT JOURNAL OF LEGAL STUDIES VOL. 05(01), APR 2024, PP. 103 – 114; Saravanan A. and Deva Prasad M., AI AS AN INVENTOR DEBATE UNDER THE PATENT LAW: A POST-DABUS COMPARATIVE ANALYSIS, EUROPEAN INTELLECTUAL PROPERTY REVIEW, VOLUME 47(1) pp. 26-39 (last accessed Jan. 29, 2025).

³¹ *supra* n. 1

³² Pre-Grant Opposition to Patent Application No. 581/BOM/1999

beings as the only possible inventors and that inventions must involve "some contribution from the intellect towards the making of the work that is patented." The same principle was also earlier mentioned in *V. B. Mohammed Ibrahim v. Alfred Schafranek*³³ and *Shining Industries v. Shri Krishna Industries*³⁴ where both cases declared that only human beings who are intellectually and technically capable may invent works, whereas AI and employers as a whole can only have rights as assignees. Further, the Indian Patent Office Manual of Practice and Procedure (2019) obligate the disclosure of the first and last names, place of domicile and nationality of the inventor of a patent attribute that are human in nature and thus, non-human beings cannot fulfil these criteria³⁵.

Nevertheless, the AI revolution represented by DABUS and other AI systems has put these long-standing views into question. The necessary hallmarks of patentability, novelty, utility, and inventiveness for the outputs created by AI can be present even when the technology is completely autonomous. However, the current law does not allow for the acknowledgment of these systems as inventors because they do not have legal personality or intent. This legal, rather incomplete framework might halt the pace of technological development and discourage investments in AI-led industries.

It is therefore imperative that we have a separate legal system for inventions supported by artificial intelligence that explicitly defines the notion of inventorship and ownership as being matters of contractual clarity, provides for human accountability, and encourages innovation. With *Thaler*³⁶ and *Vandana Bhide's*³⁷ legal principles to lean on, India would be well-placed to develop a comprehensive, policy-driven perspective that recognises AI-created inventions as eligible for intellectual property protection and yet stays faithful to the key idea of human intellect and responsibility. In addition to bringing an overhaul of the current Indian patent system in India, this transformation would also elevate the country to one of the global front-runners reconciling technology, innovation, and law in the era of artificial intelligence.

³³ *supra* n. 20.

³⁴ *Shining Industries v. Shri Krishna Industries*, AIR 1974 All 490

³⁵ *supra* n. 24.

³⁶ *supra* n. 1

³⁷ *supra* n. 28