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# AI AS AN INVENTOR: PATENT LAW CHALLENGES IN RECOGNIZING NON-HUMAN CREATIVITY

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## ABSTRACT

The rapid advancement of artificial intelligence (AI) in the realms of creativity and invention poses a significant challenge to the fundamental principles of patent law. Global patent systems have consistently relied on human ingenuity, with the concept of the "*inventor*" inherently associated with an actual individual. This article examines the escalating legal and philosophical crisis resulting from autonomous AI creation. It delineates the primary legal obstacles to acknowledging non-human inventors, concentrating on the definition of "*inventor*" in significant jurisdictions such as the US, the UK, and under the European Patent Convention. The international legal dispute regarding the "*DABUS*" AI system exemplifies a significant case study demonstrating that nearly all courts concur that the existing patent framework is ill-equipped to accommodate machine inventorship. The study examines the responses of major patent offices, particularly the "*significant contribution*" framework proposed by the USPTO, to evaluate its potential as a temporary solution. This article asserts that neglecting the potential for AI inventorship results in a doctrinal impasse, leaving an increasing number of potentially valuable inventions unprotected by law and possibly relegating them to the ambiguous realm of trade secrets. This may inhibit the emergence of new ideas by discouraging investment in AI-driven research and development. The article discusses proposed legal frameworks, including the establishment of sui generis rights and specific amendments to the law, advocating for a re-evaluation of patent law. It provides policymakers, attorneys, and innovators with strategic counsel and advocates for a novel legal framework that acknowledges AI's creative capabilities while maintaining the primary objectives of the patent system: to promote the progress of science and the useful arts.

***Keywords:*** *AI, Inventorship, Ownership, Sui Generis Rights, Anthropocentrism, DABUS, Patents*

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# I. Introduction

The fundamental principle of the global intellectual property system is that invention is exclusively a human endeavour.[1] The principal concept underlying patent law is to promote and safeguard technological innovation. In return for disclosing their invention, the inventor obtains a restricted monopoly. This is a reciprocal arrangement intended to facilitate advancement.[2] This model has functioned for society for centuries; however, it now confronts an existential threat from a novel creator: Artificial Intelligence (AI).[3]

This inquiry is not a speculative exploration of science fiction; it is a critical legal reality.[4] The global litigation concerning the DABUS (Device for the Autonomous Bootstrapping of Unified Sentience) applications, which explicitly designate an AI as the sole inventor, has highlighted this conflict.[5] Courts and patent offices in major jurisdictions, including the United States[6], the United Kingdom[7], and the European Patent Office[8], have consistently rejected these applications, basing their decisions on statutory language that assumes a human inventor.[9] While this approach is doctrinally valid under a textualist interpretation of existing statutes, it creates a significant void.[10] Inventions that fulfil the patentability criteria of novelty[11], inventive step[12], and industrial applicability[13] may be deemed unprotectable solely due to their non-human origin.[14]

As AI systems evolve from basic tools assisting human inventors to autonomous agents capable of generating novel and unforeseen solutions to complex issues, they begin to fulfil the

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1 Peter Drahos, *A Philosophy of Intellectual Property* 43 (Dartmouth Publishing, 1996).
2 The Constitution of the United States, art. I, s. 8, cl. 8; *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).
3 Margaret A. Boden, *The Creative Mind: Myths and Mechanisms* (Routledge, 2nd edn., 2004).
4 Jeffrey A. Oelke, "AI Inventorship and the Patent Law Doctrinal Deadlock," 35 *Harvard Journal of Law & Technology* 571 (2022).
5 WIPO, *WIPO Intellectual Property and Artificial Intelligence: An Overview*, WIPO/IP/AI/3/GE/22/1 (May 2022).
6 *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022).
7 *Thaler v. Comptroller-General of Patents, Designs and Trade Marks*, [2023] UKSC 24.
8 *J 8/20 and J 9/20*, Legal Board of Appeal, EPO, 21 December 2021.
9 Noa Noy, "The Inventorship Riddle: Artificial Intelligence and the Human Inventor," 24 *Yale Journal of Law & Technology* 163 (2022).
10 Robert Plotkin, *The Genie in the Machine: How Computer-Automated Inventing is Revolutionizing Law and Business* 115 (Stanford University Press, 2009).
11 The United States Patent Act, 35 U.S.C. s. 102.
12 The United States Patent Act, 35 U.S.C. s. 103.
13 The United States Patent Act, 35 U.S.C. s. 101.
14 United Kingdom Intellectual Property Office, "Artificial intelligence and intellectual property: copyright and patents," Government response to consultation, (June 2022), available at: https://www.gov.uk/government/consultations/artificial-intelligence-and-intellectual-property-copyright-and-patents (last visited on June 27, 2025).

essential criteria for inventorship.[15] Nonetheless, they falter at the initial and fundamental obstacle: they lack human consciousness.[16]

**Key Research Questions**

This paper examines the significant and unresolved research inquiry:

i. To what degree do existing patent law frameworks, which mandate a "*natural person*" as the inventor, create a legal void for autonomously generated AI inventions?
ii. What legislative or judicial modifications are necessary to rectify this void without compromising the fundamental principles of patent law?[17]

**Research Methodology**

This article employs a doctrinal methodology, complemented by a comparative and socio-legal perspective, to enhance the significance and utility of this critical global discourse. The article asserts that the present legal circumstances are untenable. Patent law may become obsolete if it exclusively emphasises human inventors.[18] This would imply that a new category of valuable inventions would lack protection, potentially dissuading innovation by rendering investments in creative AI systems less lucrative.[19]

**Chapterization**

This analysis will consist of four components.

i. In Part II, we will analyse the doctrinal impediments within contemporary patent legislation and examine how the legal definition of "*inventor*" in significant jurisdictions renders AI incapable of functioning effectively.
ii. Part III will examine the judges' rationale in the DABUS cases, highlighting the shared legal principles and policy concerns that have resulted in the widespread rejection of AI inventorship.

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15 Ryan Abbott, "I Think, Therefore I Invent: Creative Computers and the Future of Patent Law", 57 *Boston College Law Review* 1079 (2016).
16 Ben Hattenbach, et.al., "The AI-Inventorship Challenge: A Perfect Storm for a Legislative Fix", 42 *Santa Clara High Technology Law Journal* 1 (2025).
17 WIPO, "WIPO Conversation on Intellectual Property (IP) and Artificial Intelligence (AI)," available at: https://www.wipo.int/about-ip/en/artificial_intelligence/conversation.html (last visited on June 27, 2025).
18 Mark A. Lemley, "The Rise of the Robot-Authors," available at: https://ssrn.com/abstract=2650821 (last visited on June 27, 2025).
19 Reto M. Hilty, et.al., "Artificial Intelligence and Intellectual Property," Max Planck Institute for Innovation and Competition Research Paper No. 20-13 (2020).

iii. Part IV will examine temporary solutions and proposed frameworks, including the "*significant human contribution*" test and concepts for sui generis protection, while evaluating their advantages and disadvantages.

iv. Ultimately, Part V will provide targeted, solution-oriented recommendations for modifications to legislation and policies. It will advocate for a pragmatic approach that acknowledges AI's creative potential while safeguarding the integrity and objectives of the patent system.

## II : The Doctrinal Wall: Analysing the Legal Definition Of "Inventor"

The primary issue with patenting AI-generated inventions lies not in the quality of the inventions, but in the legal identity of their creator.[20] Global patent laws were established at a time when it was difficult to conceive of creativity originating from anything other than a human entity.[21] These laws contain language that, either explicitly or implicitly, presumes the inventor is a natural person. This section delineates the principal patent laws in the US, the UK, and the European Patent Convention, illustrating how both textualist and purposive interpretations of the term "inventor" have established a robust doctrinal barrier against AI inventorship.

**The United States is a "individual" possessing rights and responsibilities**

The U.S. Patent Act exemplifies this inherent anthropocentrism.[22] Section 100(f) of the Act defines an "*inventor*" as "the individual or, in the case of a joint invention, the individuals collectively who invented or discovered the subject matter of the invention."[23] Although the term "*individual*" is not explicitly defined as a natural person, its legal interpretation strongly endorses this understanding.[24] The U.S. Supreme Court stated in *Mohamad v. Palestinian* Authority that the term "*individual*" in a statute typically denotes a natural person unless explicitly specified otherwise.[25] This principle has been uniformly implemented across diverse legal contexts.[26]

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20 Paul Torremans, *Holyoak and Torremans Intellectual Property Law* 101 (Oxford University Press, 8th edn., 2016).

21 Brad Sherman and Lionel Bently, *The Making of Modern Intellectual Property Law: The British Experience, 1760-1911* 59 (Cambridge University Press, 1999).

22 Donald S. Chisum, *Chisum on Patents* § 2.01 (LexisNexis, 2023).

23 The Leahy-Smith America Invents Act, 35 U.S.C. s. 100(f).

24 Jane C. Ginsburg, "People and Persons: The Copyright-ability of AI-Generated Works," 47 *Columbia Journal of Law & the Arts* 1 (2023).

25 *Mohamad v. Palestinian Authority*, 566 U.S. 449 (2012).

26 *Clinton v. City of New York*, 524 U.S. 417 (1998).

Additional sections of the Patent Act support this interpretation. Section 115 stipulates that each inventor must execute an oath or declaration, a legal act permissible solely by an individual possessing legal personality and consciousness.[27] The provision mandates that the inventor affirm they "*believe himself or herself as the original inventor*."[28] The inclusion of personal pronouns such as "himself or herself" further underscores the human requirement into the statutory fabric.[29] Furthermore, inventorship entails legal rights, including the right to assign the patent[30], and legal obligations, such as the duty of candour and good faith to the United States Patent and Trademark Office (USPTO).[31] These concepts, under prevailing legal frameworks, are applicable exclusively to individuals.[32] The Federal Circuit, in its seminal Thaler v. Vidal ruling regarding the DABUS application, heavily relied on this statutory context to conclude that the Patent Act "unambiguously and directly" necessitates that an inventor be a human being.[33]

**The United Kingdom: An Entity with Rights**

The UK Patents Act 1977 presents a comparable yet distinct barrier.[34] Section 7(1) stipulates that the "*inventor or joint inventors*" possess the entitlement to a patent.[35] Section 7(3) defines the "*inventor*" as "*the actual deviser of the invention*."[36] Although "deviser" may appear neutral, the accompanying legal context, similar to that in the U.S., exclusively refers to a natural person.[37]

Section 13(2) is paramount as it stipulates that an applicant must submit a statement "*identifying the person or persons whom he believes to be the inventor or inventors*."[38] The term "*person*" is pivotal. In English law, the term "*person*" typically refers to either a natural or legal entity, such as a corporation.[39] Nonetheless, an AI is neither.[40] The UK Supreme Court

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27 The United States Patent Act, 35 U.S.C. s. 115(a).
28 The United States Patent Act, 35 U.S.C. s. 115(b)(2).
29 H.R. Rep. No. 112-98, pt. 1, at 45 (2011).
30 The United States Patent Act, 35 U.S.C. s. 261.
31 37 C.F.R. s. 1.56.
32 Shawn Bayern, "The Implications of Modern Business-Entity Law for the Regulation of Autonomous Systems", 19 *Stanford Journal of Law, Business & Finance* 93 (2013).
33 *Supra* note 9 at 1211.
34 W.L. Cornish, et.al., *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* 145 (Sweet & Maxwell, 8th edn., 2013).
35 The Patents Act, 1977, s. 7(1).
36 *Id*., s. 7(3).
37 *Yeda Research and Development Co Ltd v. Rhone-Poulenc Rorer International Ltd* [2007] UKHL 43.
38 The Patents Act, 1977, s. 13(2)(a).
39 *Salomon v. A. Salomon & Co. Ltd*, [1897] AC 22.
40 The Law Commission, "Artificial Intelligence and the Law," Scoping Paper (Nov 2021).

concurred with the Court of Appeal's rationale in the DABUS case, asserting that the statutory framework fundamentally presupposes that the inventor is an individual.[41] Lord Kitchin, author of the principal judgement, emphasised that the entitlement to apply for a patent is conferred upon the inventor, and this entitlement can solely be possessed and transferred by an individual with legal personality.[42] The law of property, which regulates the transfer of patent rights from the inventor to an applicant (such as an employer), is fundamentally predicated on the actions of legal entities.[43] An AI, however, is incapable of generating an invention and subsequently legally transferring the right to file for a patent.[44]

**The European Patent Convention: A Distinct Legal Construct**

The European Patent Convention (EPC) distinctly emphasises its focus on individuals for over 40 countries.[45] Article 81 of the EPC stipulates that a European patent application "*must designate the inventor.*"[46] Furthermore, it states that "*if the applicant is not the inventor or is not the sole inventor, the designation must include a statement indicating the origin of the right to the European patent.*"[47] This regulation is of significant importance. It establishes a legal connection, or chain of title, between the inventor and the applicant.[48]

Rule 19(1) of the EPC Implementing Regulations stipulates that the designation of the inventor "*shall state the family name, given names and full address of the inventor*."[49] This stipulation for a human-like name and address explicitly excludes non-human entities.[50] The European Patent Office (EPO) Legal Board of Appeal, in its conclusive ruling on the DABUS application, determined that the term "*inventor*" under the EPC pertains exclusively to a natural person.[51] The Board reasoned that the EPC framework regarding patent entitlement is predicated on the inventor being an individual with legal capacity capable of transferring rights, a status that artificial intelligence lacks.[52] The Board concluded that interpreting the EPC to allow for non-

41 *Supra* note 10.
42 *Id*. at [52].
43 *Id*. at [60].
44 Emily Michiko Morris, "Intangible Inventions," 68 *DePaul Law Review* 297 (2019).
45 European Patent Office, *Guidelines for Examination*, Part F, Ch. II, 4.1 (2023).
46 The European Patent Convention, 1973, art. 81.
47 *Ibid*.
48 The European Patent Convention, 1973, art. 60(1).
49 Implementing Regulations to the Convention on the Grant of European Patents, r. 19(1).
50 Cees Mulder, *The Cross-Referenced Patent Convention* 125 (30th edn., 2022).
51 *Supra* note 11.
52 *Ibid*.

human inventors would constitute a "*departure from the clear meaning of the provision*" and an act of judicial legislation rather than mere interpretation.[53]

## III. The Dabus Saga: An International Judicial Accord

Dr. Stephen Thaler's DABUS AI system has been utilised globally as a case study to determine the patentability of inventions generated by artificial intelligence.[54] Dr. Thaler submitted patent applications in various jurisdictions for two inventions: a food container utilising fractal geometry and an emergency light beacon designed to attract attention. He designated DABUS as the sole inventor. The subsequent legal disputes have resulted in the near-universal rejection of AI inventorship by courts, generating an extensive body of case law that elucidates the doctrinal issues.

### Thaler v. Vidal: Denial in the United States

The USPTO rejected the DABUS application in the United States due to the absence of a designated individual as the inventor.[55] The courts reviewed this decision, and the Federal Circuit's ruling in *Thaler v. Vidal* was conclusive. The court's rationale was founded on a textualist interpretation of the U.S. The Patent Statute. The court concentrated on the legal definition of an "*inventor*" as an "*individual*," as previously discussed. The Federal Circuit stated that "*individual*" typically refers to a human being, as established by the Supreme Court's ruling in *Mohamad v. Palestinian Authority*.[56]

The court concurred with this interpretation of the law due to its consistent use of personal pronouns and the stipulation of an inventor's oath.[57] Dr. Thaler advocated for a more expansive, functionalist interpretation, asserting that acknowledging AI inventors would optimally fulfil the constitutional objective of the patent system "to promote the Progress of Science and useful Arts."[58] Nevertheless, the court determined that this policy argument lacked sufficient strength to alter the explicit wording of the law. It stated that although policy considerations are significant, they cannot alter explicit statutory language.[59] The ruling clarified that it is

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53 *Ibid*.
54 Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law* 85 (Cambridge University Press, 2020).
55 USPTO, "Rejection of Patent Application Naming AI as Inventor," Decision on Petition, Application No. 16/524,350 (Apr. 22, 2020).
56 *Supra* note 9 at 1211, citing *Mohamad v. Palestinian Authority*, 566 U.S. 449 (2012).
57 *Id*. at 1212.
58 *Id*. at 1213.
59 Petitioner's Brief for Writ of Certiorari, *Thaler v. Vidal*, No. 22-919 (U.S. Mar. 20, 2023).

Congress, rather than the judiciary, that holds the authority to amend the law to safeguard AI inventors.[60] The Supreme Court subsequently denied certiorari, rendering the Federal Circuit's decision the prevailing law in the United States.[61]

**The United Kingdom's Approach: The Case of Thaler v. Comptroller-General**

The Supreme Court represented the final stage in the legal process within the United Kingdom. The UK Intellectual Property Office (UKIPO) initially stated that the applications were retracted due to non-compliance with Section 13 of the Patents Act 1977, which mandates that the individual recognised as the inventor must be identified.[62] The primary concern in the UK Supreme Court's ruling was not the capability of an AI to invent in a technical context, but rather whether an applicant could obtain patent rights from a non-human entity.[63]

The consensus among individuals is that the UK Patents Act stipulates that the "inventor" must be a "*person*."[64] Consequently, since DABUS is not a person, it cannot possess or convey the rights to the invention. Dr. Thaler asserted ownership of the DABUS machine, thereby granting him the entitlement to the patent. The court clarified that possessing a tool (the AI) is distinct from being the inventor.[65] The law of accession, which may confer ownership of tangible products derived from property (such as fruit from a tree), does not extend to the intangible rights associated with an invention.[66] The court ruled that Dr. Thaler lacked an independent entitlement to the invention; the rights resided with the inventor, and since the designated inventor was not a person, there was no legitimate application.[67]

**The European Patent Office: Restricting Access Based on Policy Considerations**

One of the most comprehensive analyses originated from the European Patent Office (EPO). The EPO's Examining Division and subsequently its Legal Board of Appeal rejected the DABUS application for several reasons. The primary reason, as previously stated, is that the EPC stipulates that the inventor must be a natural person capable of legally owning the patent.[68]

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60 *Supra* note 9 at 1213.
61 *Thaler v. Vidal*, 143 S. Ct. 2438 (2023).
62 UKIPO, "Patents Formality Manual," s. 3.06, available at https://www.gov.uk/government/publications/formalities-manual (last visited June 27, 2025).
63 *Supra* note 10 at [2].
64 *Id*. at [54].
65 *Id*. at [62].
66 *Id*. at [73].
67 *Thaler v. The Comptroller-General of Patents, Designs and Trade Marks* [2021] EWCA Civ 1374.
68 *Supra* note 11.

The Board emphasised that identifying an inventor is not merely a formality but a crucial aspect of determining patent rights.[69]

The EPO also examined the implications of the policy, which is highly significant. It concurred with the notion that withholding patents for AI-generated inventions could impede advancement. Nonetheless, it determined that its role was to interpret the current EPC rather than to "participate in a political discourse regarding the patentability of AI-generated inventions."[70] The Board emphasised that this matter should be resolved through "*a comprehensive dialogue concerning the potential implications for the patent system*," which falls under the purview of the legislature.[71] This rationale underscores a prevalent theme across jurisdictions: judges and administrators exhibit reluctance to implement significant policy alterations through interpretative innovation, favouring legislative action instead.[72]

**The Initial Australian Achievement: A Singular Anomaly**

The Federal Court of Australia rendered an uncommon yet ephemeral ruling in favour of Dr. Thaler, contrasting with global trends. Justice Beach conducted a more deliberate examination of Australia's Patents Act 1990 in *Thaler v. Commissioner of Patents*.[73] He stated that the term "*inventor*" in the Act functioned as an agent noun that need not denote an individual.[74] He stated that prohibiting AI from being an inventor would create a "*gap in the system*" and contradict the Act's objective of fostering innovation.[75] Proponents of AI inventorship lauded this decision as pragmatic and progressive approach.[76]

This victory, however, was short-lived. The full bench of the Federal Court unanimously reversed the decision on appeal.[77] The appellate court reverted to a conventional interpretation of the law, asserting that the legislative framework, when considered in its entirety, unequivocally encompassed a human inventor.[78] The High Court of Australia subsequently

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69 *Ibid*.
70 EPO, "EPO publishes grounds for its decision to refuse patent applications naming a machine as inventor," 28 January 2020, available at: https://www.epo.org/en/news-events/news/2020/20200128 (last visited on June 27, 2025).
71 *Ibid*.
72 Mark Schulz, "AI and Patents: A Time for Restraint by Courts and Legislatures," 33 *Fordham Intellectual Property, Media & Entertainment Law Journal* 1 (2022).
73 *Thaler v. Commissioner of Patents*, (2021) FCA 879.
74 *Id*. at [116].
75 *Id*. at [9].
76 Alexandra George, "A Robot Walks into a Patent Office: Can it be an Inventor?", 45 *University of New South Wales Law Journal* 1 (2022).
77 *Commissioner of Patents v. Thaler*, [2022] FCAFC 62.
78 *Id*. at [107].

rejected Dr. Thaler's petition for special leave to appeal, aligning Australia with the international consensus.[79] The brief success in Australia illustrates the tension between a stringent, textualist approach.

## IV. Closing the Divide: Proposed Remedies and Interim Structures

The rejection of all DABUS applications has created a distinct legal issue: an increasing number of valuable inventions that could be patented may remain unprotected due to their creation by an AI.[80] This circumstance is broadly regarded as untenable. In response, various solutions have been proposed, ranging from minor modifications to administrative regulations to the establishment of new intellectual property rights. This section critically examines the most significant of these proposals.

### The "Significant Human Contribution" Test: The USPTO's Provisional Guidance

In February 2024, the USPTO published "*Inventorship Guidance for AI-Assisted Inventions*," marking a significant advancement in clarifying the existing legal framework.[81] The guidance clarifies that AI cannot be designated as an inventor; however, inventions assisted by AI are not inherently unpatentable. The primary component of the guidance is a test derived from the principles established in *Pannu v. Iolab Corp*. for determining whether two individuals qualify as joint inventors.[82]

This guidance states that a natural person who "*significantly contributed*" to the conception of an invention claimed in a patent application qualifies as a legitimate inventor. The USPTO asserts that merely identifying a problem, possessing or managing an AI system, or implementing an AI's output is insufficient.[83] An individual must have made a contribution that is "*not insignificant in quality, when assessed against the entirety of the invention*."[84] This indicates that the individual must have influenced the concept of the invention, such as by

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79 *Thaler v. Commissioner of Patents* [2022] HCATrans 199 (11 November 2022).

80 WIPO, "Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence," WIPO/IP/AI/2/GE/20/1 Rev., (May 21, 2020), available at: https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_ai_2_ge_20/wipo_ip_ai_2_ge_20_1_rev.pdf (last visited on June 27, 2025).

81 United States Patent and Trademark Office, "Inventorship Guidance for AI-Assisted Inventions," 89 Fed. Reg. 10043 (Feb. 13, 2024).

82 *Pannu v. Iolab Corp.*, 155 F.3d 1344 (Fed. Cir. 1998).

83 *Supra* note 81 at 10046.

84 *Id*. at 10049.

designing the AI for a particular inventive objective or by making a creative selection from the AI's output.

**Critique**

The USPTO's guidance constitutes a pragmatic and essential interim remedy. It provides numerous AI-assisted innovations with a pathway to obtain patents, thereby alleviating an imminent crisis. However, it will not be effective for an extended duration. The primary deficiency is its failure to address the core issue of inventions generated *autonomously* by AI, wherein no human can legitimately assert they made a "*significant contribution*" to the concept. As AI systems advance, the "*human contribution*" may diminish to a mere formality, compelling individuals to either inaccurately designate a human as the inventor or forgo patent protection entirely. This may result in a new array of legal issues regarding the definition of a "*significant*" contribution, thereby creating ambiguity for innovators.

**Altering the Definition of "Inventor"**

Amending patent legislation to explicitly permit AI inventors is a more straightforward approach to this issue. Altering the definition of "*inventor*" to encompass "*a natural person or an artificial intelligence system*" would constitute a straightforward amendment to the law. Proponents assert that this would be the optimal resolution as it would directly confront the doctrinal conflict presented by the DABUS cases.[85] It would enable the patent system to function optimally, providing protection based on the quality of the invention rather than the category of inventor.

**Critique**

This concept appears straightforward initially, yet it raises significant enquiries. The paramount issue is the determination of ownership. Who possesses the patent if an AI generates novel concepts? The law confers ownership to the inventor, who may subsequently transfer it. An AI cannot possess or transfer property due to its lack of legal personhood. Legislation must establish a new framework for initial ownership, which may be assigned to the AI's proprietor, developer, or user. Each option entails intricate policy implications concerning liability, incentives, and market concentration. Granting ownership of several potent AI systems to their developers may result in an unparalleled amalgamation of intellectual property.

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[85] *Supra* note 4.

**Establishing a Sui Generis Right**

An alternative is to abandon the conventional patent system and establish a novel category of intellectual property rights specifically for AI-generated creations. This category of rights would be exclusive to works generated by artificial intelligence. This approach has previously been employed in contexts such as semiconductor chip designs and database rights within the EU, where conventional intellectual property systems proved inadequate. This new right may entail distinct regulations, a reduced duration of protection, and a proprietary framework tailored to AI innovation. For instance, it may provide a reduced duration of exclusivity compared to a patent, as AI-driven innovation can occur at an accelerated pace.

The *sui generis* option provides the greatest autonomy, yet it entails significant risks. Establishing a new intellectual property right is a protracted and intricate process that may lead to global complications if not uniformly implemented. This would establish a dual system of protection, potentially diminishing the value of AI-generated inventions compared to those created by humans. Challenging enquiries will arise regarding the demarcation: when does an invention qualify as "*AI-assisted*" (and thus patentable) versus "*AI-generated*" (and consequently governed by the new right)? This may result in strategic manipulation and legal ambiguity, undermining the objective of fostering innovation. Despite these challenges, the sui generis approach remains a robust alternative as it enables the formulation of a tailored solution without necessitating the integration of new technology into an antiquated legal framework.

## V. Conclusion and Recommendations

Artificial intelligence and patent law are currently at a critical juncture. The legal fiction that an "*inventor*" must be a person is untenable due to the consensus among judges and legal scholars on this matter. It renders a system designed to promote advancement oblivious to a significant new source of innovation. While it is acceptable to await legislative action, such action has now become critically important. An intricate and globally synchronised strategy is required to address this issue.

Prompt Legislative Action to Redefine "Inventor" with a Distinct Ownership Framework: The most effective and direct remedy is for legislatures in key jurisdictions to amend their patent laws. This entails implementing two primary modifications:

i. First, the definition of the term "*inventor*" should be revised to encompass AI systems. For instance, the United States. The Patent Act could be amended to define an inventor as "*an individual or an artificial intelligence system that generates an invention*."

ii. Second, and most critically, there must be a definitive law regarding ownership rights. The default principle should stipulate that the legal entity responsible for facilitating the AI's creation of the invention possesses the patent rights for that invention. The AI's owner, developer, or user may vary based on the context. In copyright law, this parallels the "work for hire" doctrine, while in patent law, it resembles the treatment of employee inventions. It clarifies the chain of title from the outset.

Promote International Harmonization through WIPO: The World Intellectual Property Organisation (WIPO) should oversee the facilitation of international treaty negotiations to establish a cohesive framework for AI inventorship. Diverse national legislation on this matter will complicate matters for global technology firms, necessitating litigation in various jurisdictions and resulting in legal ambiguity. To ensure the efficacy of the global patent system, a unified standard for application procedures is necessary, akin to that established by the Patent Cooperation Treaty (PCT).

Reject the Sui Generis Approach for the Time Being*:* A sui generis right may appear advantageous due to its flexibility; however, it could complicate matters and disrupt the intellectual property framework. It would complicate the delineation of boundaries and potentially diminish the significance of AI-generated innovations. Regardless of the origin of an invention, the existing patent system is sufficiently robust to evaluate its merit according to stringent criteria of novelty, non-obviousness, and disclosure. The objective should be to reform the patent system, rather than circumvent it.

Strengthen Disclosure Requirements for AI-Generated Inventions: Mandate that patent applications for AI-generated or significantly AI-assisted inventions include a disclosure statement. This will enhance clarity and alleviate concerns regarding "*black box*" AI. The "*AI Disclosure*" must specify the AI system utilised and its contribution to the conceptualisation of the invention. This would provide patent examiners with essential information, establish a public record of AI's contribution to innovation, and facilitate monitoring of the technology's impact on the patent system.

The law has consistently evolved in response to emerging technologies, from the printing press to the internet. Creative AI presents a significant threat as it undermines the principle of human

authorship central to our intellectual property legislation. The DABUS case has unequivocally demonstrated that the existing legal framework is no longer effective. A legal framework that mandates a human inventor for a self-generating machine invention constitutes a system of denial. It removes an incentive where one should exist.

Maintaining this antiquated mindset may result in not only doctrinal inconsistency but also hinder the patent system's ability to foster the innovation it was designed to support. The absence of legal protection for AI-generated inventions diminishes the likelihood of investment in a technology that has the potential to address some of the world's most significant challenges. It is not a matter of choosing between preserving the patent system and accommodating AI. It is a decision between permitting the system to evolve or allowing it to become obsolete. The present moment necessitates legislative action. We can ensure that the patent system remains a crucial driver of advancement for the 21st century and beyond by judiciously amending our laws to recognise that machines can exhibit creativity and by clarifying ownership and control over them.