2024

Impossibility of Artificial Inventors

Matt Blaszczyk

IMPOSSIBILITY OF ARTIFICIAL INVENTORS

Matt Blaszczyk[1]

Recently, the United Kingdom Supreme Court decided that only natural persons can be considered inventors. A year before, the United States Court of Appeals for the Federal Circuit issued a similar decision. In fact, so have many the courts all over the world. This Article analyses these decisions, argues that the courts got it right, and finds that artificial inventorship is at odds with patent law doctrine, theory, and philosophy. The Article challenges the intellectual property (IP) post-humanists, exposing the analytical and normative perils of their argumentation, and recommends against getting rid of the nominally central place of humans in the law. This response to IP post-humanism rests in equal measure on patent doctrine, legal causation, and the mythology which creates and justifies the law.

Table of Contents

---

[1] Research Fellow in Law and Mobility, University of Michigan Law School; LL.M., Georgetown University Law Center; LL.B., King's College London. A version of this Article has been published in September 2024 issue of the *Intellectual Property Forum* published by the Intellectual Property Society of Australia and New Zealand. *See* Matt Blaszczyk, *Impossibility of Artificial Inventors*, 137 INTELL. PROP. F. 39 (2024). An edited version is scheduled for publication in the December 2024 issue of the *UC Law Science and Technology Journal*. *See* Matt Blaszczyk, *Impossibility of Artificial Inventors*, 16 Hastings Sci. & Tech. L.J. (forthcoming, 2024).

I. INTRODUCTION

Readers will likely be familiar with DABUS (Device for the Autonomous Bootstrapping of Unified Sentience) and the associated Artificial Inventor Project, the initiative of the inventor Stephen Thaler and Ryan Abbott, who have launched a plethora of patent and copyright lawsuits around the world to advance the post humanist cause.[2] As the name of Thaler's artificial intelligence system suggests, he believes it to be sentient. In an interview, he said: "Is DABUS an inventor? Or is he an artist? I don't know. I can't tell you that. It's more like a sentient, artificial being. But I even question the artificial part," meanwhile describing himself as a "pioneer," who wants to do something "truly outrageous."[3] On another occasion, Thaler proclaimed his intellectual property law activism has been "a philosophical battle, convincing humanity that my creative neural architectures are compelling models of cognition, creativity, sentience, and consciousness" adding that "DABUS has created patent-worthy inventions [which] is further evidence that the system 'walks and talks' just like a conscious human brain."[4] Finally,

---

[2] *See* Claire Gregg & Ryan Abbott, *DABUS Down Under – AI at Work in Australia and Around the World*, 129 INTELLECTUAL PROPERTY FORUM 32 (2022); Ryan Abbott, Rita Matulionyte, & Paul Nolan, A *Brief Analysis of DABUS, Artificial Intelligence and the Future of Patent Law*, 125 INTELLECTUAL PROPERTY FORUM 10 (2021); *see generally*, THE ARTIFICIAL INVENTOR PROJECT, https://artificialinventor.com/patent.

[3] Shanti Escalante-De Mattei, *Stephen Thaler's Quest to Get His 'Autonomous' AI Legally Recognized Could Upend Copyright Law Forever*, ART IN AMERICA (Jan. 8, 2024), https://www.artnews.com/art-in-america/features/stephen-thaler-quest-ai-legally-recognized-upend-copyright-law-1234692243.

[4] Alexandra Jones, *Artificial intelligence can now be recognised as an inventor after historic Australian court decision*, ABC (July 31, 2021), https://www.abc.net.au/news/2021-08-01/historic-decision-allows-ai-to-be-recognised-as-an-inventor/100339264.

Thaler pronounced: "[t]here is a new species here on Earth and it's called DABUS."[5]

At the same time, it remains the case that "artificial inventors" are impossible as a matter of law in several jurisdictions, including the United States, the United Kingdom, Australia, and others. Their very idea further conflicts with historical justifications of patents, the theory of the "bargain" which presupposes an individual and the society to which he belongs, and further the broader mythology of IP law. This article describes these challenges, together with some analytical perils of Thaler's argumentation. It concludes, modestly, with a proposal not to destroy the integrity of the modern legal system – and if we do, then please, let's have a clear direction of where to go.

II. DOCTRINAL IMPOSSIBILITY OF ARTIFICIAL INVENTORS

A. The View from the US: Thaler v. Vidal

In the US, courts have held that under the *Patent Act*, an "individual" must be defined as a natural person and since only a natural person may be an inventor, artificial intelligence cannot be an inventor, effectively rejecting two of Thaler's applications listing DABUS as the sole inventor.[6] The matter, as is now well known, was an appeal from the United States Patent and Trademark Office's ("USPTO") denial of

[5] Will Bedingfield, *The Inventor Behind a Rush of AI Copyright Suits Is Trying to Show His Bot Is Sentient*, WIRED (Aug. 31 2023), https://www.wired.com/story/the-inventor-behind-a-rush-of-ai-copyright-suits-is-trying-to-show-his-bot-is-sentient.
[6] Thaler v. Vidal, 43 F.4th 1207, 1209 (Fed. Cir. 2022) *cert. denied*, 143 S. Ct. 1783, 215 L. Ed. 2d 671 (2023).

patents to Thaler, who claimed he did not contribute to the inventions' conception, which were rather "generated by artificial intelligence."[7] While the US Supreme Court declined to hear the case, the Federal Circuit delivered a strong judgment, giving an answer as a matter of statutory interpretation that "only a natural person can be an inventor, so AI cannot be."[8]

Indeed, perhaps no more was needed. To restate the basics of US patent law briefly, "whoever" invents new and useful subject matter may obtain a patent.[9] In this respect, too, an "inventor" is the "individual" or the "individuals collectively" who "invented or discovered the subject matter of the invention."[10] The invention has to be novel,[11] non-obvious to the person of ordinary skill in the art,[12] and importantly, must have been invented by the inventor himself.[13] Here, American patent law speaks more pronouncedly anthropomorphically than elsewhere, making it a requirement that the applicant for a patent be the inventor, filed in his name, and only then perhaps assigned to a legal person.[14] A

[7] *Id.* at 1209.
[8] *Id.* at 1213.
[9] 35 U.S.C.A. § 101.
[10] 35 U.S.C.A. § 100. *See* PATENT LAW BASICS § 1:13 (John Gladstone Mills III et al. eds, 2023) ("The term 'invention' properly signifies that which was created or contrived by man.")
[11] 35 U.S.C.A. § 102.
[12] 35 U.S.C.A. § 103.
[13] 35 U.S.C.A. § 102 (f).
[14] *See* Bd. of Trs. of the Leland Stanford Junior Univ v. Roche Molecular Sys., Inc., 131 S. Ct. 2188, 2192, 2194-95 (2011); United States v. Dubilier Condenser Corp., 289 U.S. 178 (1933).

misrepresentation of actual inventorship is ground for invalidity[15] – today, as historically, a patent "can only be granted to the real inventor."[16]

In other words, patent law is premised on there being an inventor who "conceives" an idea for an invention. According to the courts, "conception" is the "touchstone of inventorship, the completion of the mental part of invention."[17] The law thus requires "the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice."[18] It is a "mental act," which presupposes there being an inventor, and is only "complete only when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation."[19] By insisting on the language of actuality, the courts make clear that there is no place for "constructive" conception in patent doctrine.[20]

---

[15] *See e.g.,* Pannu v. Iolab Corp., 155 F.3d 1344, 1349 (Fed. Cir. 1998).
[16] Pointer v. Six Wheel Corp., 177 F.2d 153, 157 (9th Cir. 1949).
[17] Burroughs Wellcome Co. v. Barr Lab'ys, Inc., 40 F.3d 1223, 1227–28 (Fed. Cir. 1994) (citing Sewall v. Walters, 21 F.3d 411, 415 (Fed. Cir. 1994)).
[18] *Id.* at 1228 (citing Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986))
[19] Burroughs Wellcome Co. v. Barr Lab'ys, Inc., 40 F.3d 1223, 1227–28 (Fed. Cir. 1994) (citations omitted). As the Federal Circuit explained:

> the test for conception is whether the inventor had an idea that was definite and permanent enough that one skilled in the art could understand the invention; the inventor must prove his conception by corroborating evidence, preferably by showing a contemporaneous disclosure. An idea is definite and permanent when the inventor has a specific, settled idea, a particular solution to the problem at hand, not just a general goal or research plan he hopes to pursue.

Id. at 1228.
[20] *But see* John Villasenor, *Reconceptualizing Conception: Making Room for Artificial Intelligence Inventions*, 39 SANTA CLARA HIGH TECH. L.J. 197 (2023).

In fact, Thaler's argument for rights of artificial "persons" – which I have argued to be inconsistent with both the legal doctrine, theory, and international framework in copyright –[21] was completely inapposite in the patent case, which has generally no place for a "hired to invent" doctrine.[22] For better or worse, the law institutionalizes myth, so that "[t]he presumptive owner of the property right in a patentable invention is the single human inventor."[23] As Lord Coke pronounced, corporations "cannot commit treason, nor be outlawed, nor excommunicated, for they have no souls."[24] They also cannot invent.[25]

It is thus not surprising that the Court's analysis of the statutory language shows that an "inventor" is defined as an "individual."[26] While there is no definition of the latter in the Act, the Court cited precedent that, when used "[a]s a noun, 'individual' ordinarily means a human

---

[21] *See* Matt Blaszczyk, *Impossibility of Emergent Works' Protection in U.S. and EU Copyright Law*, 25 N.C. J.L. & TECH. 1 (2023); Matt Blaszczyk, *Contradictions of Computer-Generated Works' Protection*, KLUWER COPYRIGHT BLOG (Nov. 6, 2023), https://copyrightblog.kluweriplaw.com/2023/11/06/contradictions-of-computer-generated-works-protection.

[22] Sean M O'Connor, *Hired to Invent vs. Work Made for Hire: Resolving the Inconsistency among Rights of Corporate Personhood: Authorship, and Inventorship*, 35 SEATTLE U. L. REV. 1227, 1229 (2012). *But see* Jeffrey Wu, Note, *Bridging the AI Inventorship Gap*, 91 FORDHAM L. REV. 2515, 2515 (2023) (arguing that "Congress should adopt and repurpose copyright law's work-for-hire doctrine and recognize the natural person using the invention-generating AI as the legal inventor of those inventions.").

[23] DONALD CHISUM, CHISUM ON PATENTS § 22.01 (2011).

[24] The Case of Sutton's Hosp., (1612) 77 Eng. Rep. 960 (K.B.) 973.

[25] *See* Sean M O'Connor, *Speech, Authorship, And Inventorship: A New Approach to Corporate Personhood*, at *44 (University of Washington School of Law Research Paper No. 2012-03, June 2012), https://ssrn.com/abstract=2016568 ("the fact remains that natural person inventors always retain attribution under the patent law, and there is no such thing as a corporate person inventor").

[26] *Vidal*, 43 F.4th at 1211.

being, a person"[27] unless a contrary Congressional intent is persuasively shown; it was not, especially in face of case law construing inventors as human beings.[28] In this way, any other interpretation would have been impossible.[29]

Finally, the Court rejected constitutional arguments that permitting AI programs to be inventors would support the constitutional purpose of patents "[t]o promote the progress of science and the useful arts."[30] Entertaining this idea, it is important to observe that the Patents and Copyright Clause of the US Constitution speaks also of "Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[31] Indeed, one of the few instances of historic kinship between copyright and patents is that both property rights are supposed to benefit social welfare, with "the People, their progress, learning, creations and inventions, being an ultimate referent."[32] It is thus unsurprising that IP law concepts have a humanistic colouring: this is exactly their end.

---

[27] *Id.* (citing Mohamad v. Palestinian Auth., 566 U.S. 449, 454 (2012)).
[28] *Vidal*, 43 F.4th at 1211-1212. (citing Univ. of Utah v. Max-Planck-Gesellschaftzur Forderung der Wissenschaften E.V.*,* 734 F.3d 1315, 1323 (Fed. Cir. 2013) ("inventors must be natural persons and cannot be corporations or sovereigns."); Beech Aircraft Corp. v. EDO Corp.*,* 990 F.2d 1237, 1248 (Fed. Cir. 1993) ("only natural persons can be 'inventors.'")
[29] *Id.* at 1213 ("Statutes are often open to multiple reasonable readings. Not so here. This is a case in which the question of statutory interpretation begins and ends with the plain meaning of the text."); *see also* Southern Pacific Co. v. Jensen, 244 U.S. 205, 221 (1917) (Holmes J., dissenting) ("I recognize without hesitation that judges do and must legislate, but they do so only interstitially; they are confined from molar to molecular motions").
[30] *Id.* at 1213.
[31] U.S. Const. art. I, § 8, cl. 8.
[32] Matt Blaszczyk, *AI is Not Creative Per the USCO and the Courts – And That's a Good Thing*, IPWATCHDOG (Nov. 30, 2023), https://ipwatchdog.com/2023/11/30/ai-not-creative-per-usco-courts-thats-good-thing/id=170055.

The aftermath included a public consultation[33] and issuance of USPTO guidance,[34] which clarified the law further and picked up where the Federal Circuit ended, that is with the question of AI assistance. The USPTO recognised that "while an AI system may not be named an inventor or joint inventor in a patent or patent application, an AI system – like other tools – may perform acts that, if performed by a human, could constitute inventorship under our laws ... The patent system is designed to encourage *human* ingenuity."[35] At the same time, it also recognised that AI assistance does not preclude a natural person from qualifying as an inventor if he "significantly contributed to the claimed invention" analogizing the contribution to one of joint inventorship.[36] In this way, the USPTO's guidance relies on principles of patent doctrine and theory, of constitutional law, and of the whole politico-legal tradition, affirming them all.[37]

---

[33] *See* Request for Comments Regarding Artificial Intelligence and Inventorship, 88 FR 9492.
[34] Inventorship Guidance for AI-Assisted Inventions, 89 FR 10043.
[35] Inventorship Guidance for AI-Assisted Inventions, 89 FR 10043.
[36] Inventorship Guidance for AI-Assisted Inventions, 89 FR 10043. For a discussion of different levels of upstream and downstream involvement in AI-assisted inventorship, see e.g., Trevor F. Ward, *DABUS, An Artificial Intelligence Machine, Invented Something New and Useful, but the USPTO is not Buying It*, 75 ME. L. REV. 71, 94 (2023).
[37] *See* David I. Schwartz & Max Rogers, *"Inventorless" Inventions? The Constitutional Conundrum of AI-Produced Inventions*, 35 HARV. J.L. & TECH. 531, 531 (2022) ("Al cannot be an inventor for constitutional purposes"); Daryl Lim, *AI & IP: Innovation & Creativity in an Age of Accelerated Change*, 52 AKRON L. REV. 813, 858-861 (2018) ("It is unlikely … that an AI can qualify as an inventor under current law. Conception can be performed only by natural persons because AI has no *mind* to speak of … [But] [i]t may be better for AI to be identified in a patent application as long as AI is used"); Ben Hattenback & Joshua Glucoft, *Patents in an Era of Infinite Monkeys and Artificial Intelligence*, 19 STAN. TECH. L. REV. 32, 46 (2015); Yuan Hao, *The Rise of "Centaur" Inventors How Patent Law Should Adapt to the Challenge to Inventorship Doctrine by Human-Ai Inventing Synergies*, 104 J. PAT. & TRADEMARK OFF. SOC'Y 71, 133 (2024)

B. The View From the UK: Thaler v Comptroller-General of Patents, Designs and Trade Marks

The British episode in the DABUS litigation recently ended with a unanimous UK Supreme Court ruling in *Thaler v Comptroller-General of Patents, Designs and Trade Marks*, upholding the decisions of the lower courts and of the Hearing Officer for the Comptroller-General of Patents, that only a natural person can be named as an inventor on a patent application.[38] In this way, the UK Supreme Court embraced long standing principle, aligning itself with the scholarship and international decision-making.[39]

On the facts, Thaler had submitted applications as an owner of the machine, which in turn allegedly autonomously invented the subject matter.[40] Neither application designated a human inventor.[41] When asked for additional forms on this issue, in compliance with the *Patents Act* 1977 (UK), Thaler specified he "was *not* an inventor of the inventions

("Being mindful of the *toolish* nature of AI, we should always strive to put human agency at the focal point of policy choices… the conventional shrine of inventorship is simply not the right place for a machine"). *But see e.g.*, Max Stul Oppenheimer, *The Perks of Being Human*, 80 WASH. & LEE L. REV. ONLINE 323 (2023); Briana Hopes, *Rights for Robots? U.S. Courts and Patent Offices Must Consider Recognizing Artificial Intelligence Systems as Patent Inventors*, 23 TULANE J. TECH. & INTELL. PROP. 119, 134 (2021); Ursula Smartt, *Can Robots Have Feelings? Should We Now Apologise to the AI-beast Called DABUS and Compliment ANNs Instead?*, 46 EUR. INTELL. PROP. REV. 183, 187 (2024); Cole G. Merritt, Note, *A Compulsory Solution to the Machine Problem: Recognizing Artificial Intelligence As Inventors in Patent Law*, 25 VAND. J. ENT. & TECH. L. 211, 229 (2023) ("The US patent system's functioning will improve if AI is recognized as a possible inventor.").

[38] [2023] UKSC 49.

[39] *See* Eva Stanková, *Human Inventorship in European Patent Law*, 80 CAMBRIDGE L. J. 338 (2021).

[40] [2023] UKSC 49, ¶ 1.

[41] [2023] UKSC 49, ¶ 6.

described in the applications,"[42] that he "identified no person whom he believed to be an inventor because the invention was 'entirely and solely conceived by DABUS'," and that the machine "must be named as inventor."[43] This was found by all courts to contravene sections 7 and 13 of the Patents Act, since DABUS was neither a "person" nor an "inventor" in the legal sense of the terms. The applications were thus deficient and taken to be withdrawn, while Thaler was not entitled to apply for patents for any inventions described in his applications.

Turning to the text of the statute, the UK Supreme Court emphasized that section 7 provides that the inventor is the "actual deviser of the invention," section 7(3) Patents Act that "*any person* may make an *application* for a patent"[44] and finally, a code for determining "to whom a patent *may* be *granted*"[45] whether the grantee is a natural or legal person. While we can contrast the UK approach to ownership with the US, since it is "not uncommon for a person who is not an inventor to apply for a patent for an invention, and to do so entirely properly,"[46] it remains the case that the list of eligible persons and the order priority is exclusively contained in the statute's provisions.[47] There is also a presumption that a

[42] [2023] UKSC 49, ¶ 6 (emphasis in original).
[43] [2023] UKSC 49, ¶ 13.
[44] [2023] UKSC 49, ¶ 27 (emphasis in original); *see* Patents Act 1977 (UK) § 7(1).
[45] [2023] UKSC 49, ¶¶ 28-31 (emphasis added).
[46] [2023] UKSC 49, ¶ 7.
[47] *See* Patents Act 1977 (UK) § 7(3). This point was also emphasized by the European Patent Office holding:

> AI systems or machines have at present no rights because they have no legal personality comparable to natural or legal persons…Where nonnatural persons are concerned, legal personality is only given on the basis of legal fictions. These legal fictions are either directly

natural person making an application is the inventor and, significantly, the right of the inventor to be mentioned as such.[48] Thus, the statute "recognises the central position of an inventor" conferring the moral right.[49] Finally, an applicant is not required to name the "inventor" but the person he "believes to be" the inventor or, otherwise, to indicate how he derived his right to the application.[50] Thus, the UK Supreme Court moved to answer the questions posed by the appeal on narrow grounds of statutory interpretation, quite similarly to the approach of the Federal Circuit.

First, the UK Supreme Court found that the "structure and content" of the relevant sections and of the statute's whole "permit only one interpretation" i.e., that "an inventor … must be a natural person, and DABUS is not a person at all, let alone a natural person: it is a machine" which purportedly "created or generated the technical advances" disclosed in the applications.[51] Of course, the meaning of concepts such as "inventor" is contained within and given life by particular legal orders, and in sharp contrast with any non-legal conceptions, and thus derived directly from the statute which brings the right in question to life. And so,

---

> created by legislation or developed through consistent jurisprudence. In the case of AI inventors, there is no legislation or jurisprudence establishing such a fiction. It follows that AI system or machines cannot have rights that come from being an inventor such as the right to be mentioned as the inventor or to be designated as an inventor in patent application.

European Patent Office 18275163 Grounds of Decision (January 27, 2020).

[48] See Patents Act 1977 (UK) § 13.

[49] [2023] UKSC 49, ¶ 35.

[50] [2023] UKSC 49, ¶ 37.

[51] [2023] UKSC 49, ¶ 56.

the Court held that, as a matter of statutory interpretation, an inventor has to be a natural person.

Consequently, if there is no person who qualifies as an inventor, then there is no invention which can be protectable. This mirrors the copyright idea-expression dichotomy perfectly well: in copyright, there must be an expressor of an idea, which must in turn be expressed in an original way, to be protectable. In patents, on the other hand, there must be a natural person who comes up with the inventive concept, actually devises the invention, which in turn has to satisfy further requirements.[52] Only he who invents – or someone "through him" – can claim a patent according with the statute.[53] To borrow the language of a US case, conception is the "formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice."[54] Indeed, it is impossible to get rid of the individual within the architecture of the law. As the UK Supreme Court emphasized, the lack of robotic legal personality and the impossibility for a non-human to be considered an inventor is not a mere formal objection – "[i]t goes to the heart of the system for granting a monopoly for an invention."[55]

---

[52] [2023] UKSC 49, ¶ 61. *See also* Rhone-Poulenc Rorer International Holdings Inc v Yeda Research and Development Co Lt [2007] UKHL 43, [2007] Bus LR 1796 ¶ 20; University of Southampton's Applications [2004] EWHC 2107 (Pat), [2005] RPC 220, 234.
[53] [2023] UKSC 49, ¶¶ 62-65.
[54] Mergenthaler v. Scudder, 11 App. D.C. 264, 276 (D.C. Cir. 1897).
[55] [2023] UKSC 49, ¶ 75.

Going deeper, the requirement that the inventor be a natural person stems from the Enlightenment metaphysics which underly all of the IP enterprise. Indeed, we recognise that patents have a "peculiar nature" of a "result of an inventive act, the birth of an idea and its reduction to practice; the product of original thought";[56] a recognition which is by no means obvious or ideologically neutral.[57] Not without a reason, too, some have proposed to analyze this insistence on the requirement of the inventor to be human through a Hegelian or Radinian prism.[58]

Further, there are two doctrinal corollaries. Firstly, there is no property in ideas as such,[59] and to remove individual is to also remove the ontological difference between the devised and the discovered, between the idea and the invention. Moreover, putting aside the simple logic that there are no inventor-less inventions, in fact all attempts to obtain an IP right extra-statutorily are illegitimate; and so was Thaler's further argument that he was entitled to file applications for and obtain the grant of patents for DABUS's supposed inventions. This the Court found without merit as a matter of statutory interpretation,[60] though one may add

---

[56] United States v. Dubilier Condenser Corp., 289 U.S. 178, 188 (1933).
[57] *E.g.,* James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CALIF. L. REV. 1416 (1992).
[58] *E.g.,* Steven Cherensky, *A Penny for Their Thoughts: Employee-Inventors, Preinvention Assignment Agreements, Property, and Personhood*, 81 CALIF. L. REV. 595 (1993); Justin Hughes, *The Personality Interest of Artists and Inventors in Intellectual Property*, 16 CARDOZO ARTS & ENT. L.J. 81 (1998).
[59] *See e.g.,* Diamond v. Diehr, 450 U.S. 175, 185 (1981). *See generally* Arthur R Miller, *Common Law Protection for Products of the Mind: An "Idea" Whose Time Has Come*, 119 HARV. L. REV. 703, 716 (2006).
[60] [2023] UKSC 49, ¶ 77.

that attempts to support an "if value, then right" approach through custom or common law are no less misguided now than they were centuries ago.[61] The Court concluded that the arguments based in the doctrine of accession were wholly unpersuasive.[62] Finally, the Court found that the application was properly taken to be withdrawn.[63]

III. THEORETICAL IMPOSSIBILITY OF ARTIFICIAL INVENTORS

C. Patents as Monopolies for Human Welfare

Perhaps IP allows us to see the axiom of "by the people, for the people" at play better than other corners of private law precisely because of its monopoly roots; and this account applies insomuch in the US, as in the UK, and other jurisdictions. Modern patent law begins with the *Statute of Monopolies* 1623, at least at least partially breaking with the paradigm of prerogative for statute and common law, and even more importantly, transforming the "natural right" of a patent into a "legal right" that is a "civil right adjudicated in civil society."[64] Recent English cases claim

---

[61] *See* E Wyndham Hulme, *History of the Patent System Under the Prerogative and at Common Law*, 12 LAW Q. REV. 141, 141 (1896) ("[I]n practice the Statute of Monopolies has been regarded as the first and final source of authority.") On the Copyright side, see Ronan Deazley, *The Myth of Copyright at Common Law*, 62 CAMBRIDGE L. J. 106 (2003). And on "if value, then right," see e.g., Alfred C Yen, *Brief Thoughts about If Value/Then Right*, 99 B.U. L. REV. 2479 (2019).

[62] [2023] UKSC 49, ¶ 86.

[63] [2023] UKSC 49, ¶ 91. It is worth mentioning another British case, Emotional Perception AI Ltd v Comptroller-General of Patents, Designs and Trade Marks, [2023] EWHC 2948 (Ch), [2024] Bus LR 14. There, the High Court of England and Wales found that artificial neural networks ("ANN") do not fall within the exclusion from patent protection of "program[s] for a computer…as such. *Id.* ¶ 84. *See* Patents Act 1977 (UK) § 1(2)(c).

[64] Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History 1550-1800*, 52 HASTINGS L. J. 1255, 1272-73, 1300 (2001). *Cf.* Oren Bracha, *The Commodification of Patents 1600-1836: How Patents Became Rights and Why We Should Care*, 38 LOY. L.A. L. REV. 177, 192 (2004) (contesting this historiography).

that since then, the "purpose of a grant of a patent has been to encourage innovation," allowing the inventor to "charge a higher price than would have been possible if there had been competition."[65] The patent bargain, as defined by Lord Hodge, is that "the inventor obtains a monopoly in return for disclosing the invention and dedicating it to the public for use after the monopoly has expired."[66] This principle underlies all of patent law concepts, from validity, novelty, inventive step, industrial application, to sufficiency, remaining as strongly invoked today as in early modernity.[67] The case is similar in European jurisprudence, which iterates the bargain in numerous dicta[68] and in the US, with courts emphasizing the quid pro quo aspect both in theory and doctrine.[69]

[65] Actavis Group PTC EHF & Ors v ICOS Corporation & Anor [2019] UKSC 15, ¶ 53.
[66] *Id.* ¶ 53.
[67] Generics (UK) Ltd (trading as Mylan) v Warner-Lambert Co LLC [2018] UKSC 56; [2019] Bus LR 360, ¶ 17. For the history, see John N. Adams & Gwen Averley, *The Patent Specification the Role of* Liardet v Johnson, 7 J. LEGAL HIST. 156 (2007). As Stanková has argued, the inventive step requirement also reinforces the human inventorship requirement. *See* Stanková, *supra* note 39, at 357.
[68] *See* Case 15/74, Centrafarm v Sterling Drug [1974] ECR 1147, [9] ("[T]he specific subject matter of the industrial property is the guarantee that the patentee, to reward the creative effort of the inventor, has the exclusive right to use an invention …"); Case 19/84, Pharmon BV v Hoechst AG, [1985] ECR 2281 [26]; Case T-939/92, Triazole Herbicides v AgrEvo UK Ltd., [1996] EPOR 171, [2.4.2] ("[I]t has for long been a generally accepted legal principle that the extent of the patent monopoly should correspond to and be justified by the technical contribution to the art").
[69] *See* Pennock & Sellers v Dialogue, 27 U.S. 1, 23 (1829) ("If the public were already in possession and common use of an invention ... [t]here would be no quid pro quo –no price for the exclusive right or monopoly conferred upon the inventor …"); Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 US 141, 161 (1989) (explaining the grant of patent as conditioned on "the quid pro quo of substantial creative effort"); Flick-Reedy Corp. v Hydro-Line Mfg. Co., 351 F.2d 546, 550–1 (7th Cir. 1965) ("The quid pro quo for the monopoly is disclosure which will enable those skilled in the art to practice the invention at the termination of the monopoly, and to 'warn the industry concerned of the precise scope of the monopoly asserted.'") (footnotes omitted).

Indeed, the goal of the patent system is to encourage innovation by giving innovators economic rewards.[70] In the dominant utilitarian approach, "free competition is the norm" while patent law is an exception, granted only when, and to the extent necessary to encourage invention.[71] Thus, while it is true that justifications of IP are general are nominally "welfarist"[72] patents are justified mainly in terms of public benefit realized through the patent bargain, or simply as regulation aimed to increase public welfare.[73] They are also a great example of property rights being born with the law, demonstrating the positivist maxim.[74] As this article shows further, there are two players in this story – the mythologized individual inventor and the society to which he belongs. Since the very beginning, the public good was the reason for the grant of the patent monopoly, while the common detriment a reason for invalidity.[75] This dynamic, while transformed through liberal rule of law

---

[70] Mark A Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1031 (2005).

[71] *Id*. at 1031. *See also* Precision Instrument Mfg. Co. v Automotive Maintenance Machinery Co., 324 U.S. 806, 816 (1945) ("A patent is…affected with a public interest [as a] special privilege designed to serve the public purpose of promoting the 'Progress of Science and useful Arts…' [and] an exception to the general rule against monopolies and to the right to access to a free and open market.") (alterations added).

[72] *See* Brian L Frye, *IP as Metaphor*, 18 CHAP. L. REV. 735, 736 (2015) ("In theory, intellectual property is justified on welfarist grounds, because it solves market failures in innovation and thereby increases the public surplus. But in practice, the scope of intellectual property rights is unrelated to their ostensible welfarist justification").

[73] *See* Shubha Ghosh, *Patents and the Regulatory State: Rethinking the Patent Bargain Metaphor After Eldred*, 19(4) BERKELEY TECH. L.J. 1315, 1369 (2004). *See generally* HAOCHEN SUN, TECHNOLOGY AND THE PUBLIC INTEREST (2022).

[74] *See* JEREMY BENTHAM, THE THEORY OF LEGISLATION 113 (Richard Hildreth trans., 1931) (1802) ("Property and law are born together, and die together. Before laws were made there was no property; take away laws, and property ceases").

[75] Bracha, *supra* note 64, at 194 ("The fundamental common law criterion for reviewing the validity of monopoly grants [was] whether the grant served the public good. [A]

principles fundamentally continues to underly all modern jurisprudence, with cases proclaiming that "[p]roperty rights serve human values. They are recognized to that end, and are limited by it."[76]

D. Heroic Inventor Entangled

It remains true today that the "individual inventor as crucial to the production of new inventions and innovations."[77] According to some, this does not result from "any legislation, statute, or even the Constitution" but rather is the "collective belief in the narrative itself: that small inventors are crucial to technological innovation and that the patent system should support their activities" notionally at least protecting them from big corporation.[78] This is despite the fact that the "canonical story of the lone genius inventor is largely a myth," since inventions are often a product of group effort,[79] perhaps thus undermining traditional justifications of patents.[80] As a matter of law, be it the US, the UK, or Article 4ter of the Paris Convention, "the individual inventor today has just as prominent a place on patent documents as in the past."[81]

---

grant that was assumed to be prejudicial to the public good was contrary to law, and thus invalid.") (alterations added). *See* Darcy v Allin, 73 Eng. Rep. 1131 (1603).

[76] State v. Shack, 277 A.2d 369, 372 (1971).

[77] Christopher A Cotropia, *The Individual Inventor Motif in the Age of the Patent Troll*, 12 YALE J.L. & TECH. 52, 57 (2009).

[78] *Id.* at 88.

[79] Mark A Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 709 (2012); *see also* Sean B. Seymore, *The Invention Myth* (Vanderbilt Law Research Paper No. 24-24, May 2024), https://ssrn.com/abstract=4727669.

[80] *See generally* FRANK TAUSSIG, INVENTORS AND MONEY-MAKERS: LECTURES ON SOME RELATIONS BETWEEN ECONOMICS AND PSYCHOLOGY (1915).

[81] Graham Dutfield, *Collective Invention and Patent Law Individualism, 1877–2012 – Or, the Curious Persistence of Inventor's Moral Right*, *in* KNOWLEDGE MANAGEMENT

At fundamental level, the intertwining of the individual with political legitimacy, and in the context of patents with technology, has been a great topos of modernity. The modern imagination of the human person begins as a "self-centred in a notably prudent manner" individual; one who "follows well-understood self-interests, is free from all sociological ties and is subject to legal ties only by having consented to be bound by them, in accordance with well-understood self-interests."[82] Familiarly, in this "atomistic" view, all goods are in the last analysis the goods of individuals; it is the possessive individual who justifies it all. The dialectic has continued, however, to recognise that the sole individual becomes embodied in the conscious collective, the will of the people. It is thus the relation between the community and its welfare on the one hand, and the individual human being on the other, which constitutes the frame of the liberal narrative.[83]

We see it illustrated in two great relational contracts – the social contract and the patent bargain, each proving an aura of legitimacy, a liberal enchantment of reality, and placing the main characters of the narrative on two sides of the agreement. Indeed, as Mario Biagioli wrote, the "transition from patents as privileges to patents as intellectual property rights parallels the demise of political absolutism, the development of

---

AND INTELLECTUAL PROPERTY: CONCEPTS, ACTORS AND PRACTICES 109, 110 (Stathis Arapostathis & Graham Dutfield eds., 2013).

[82] Gustav Radbruch, *Law's Image of the Human*, 40 OXFORD J. LEGAL STUD. 667, 674-5 (2020).

[83] *Id.* at 680.

liberal economies, and the emergence of the modern political subject."[84] More prosaically, Christine Macleod adds, the heroic inventor was used to justify both the patent system and, if we go back far enough, to fight domestic political battles.[85] Indeed, the roots are manifold, further including the early 20th century liberal internationalist project, which wanted to secure the rights of scientists, in an effort guided by the modern human rights rhetoric,[86] and more distantly, the naturalist tradition.[87] The figure continues to inspire liberal virtues of scientism and entrepreneurship, but also "productive labour, mobility, health, cleanliness, attention, independence," all "essential to liberal subjectivity," and the government "of, by and through technology."[88]

As already observed, the figure of the individual is central to much of jurisprudence, legitimising the state and the distributions of wealth it effectuates, whether in real property or the overtly monopolistic patents.[89] Therefore, with the artificial inventor's attempted "dehumanization" of law, "patent system becomes nothing more than a business monopoly in

---

[84] Mario Biagioli, *Patent Republic: Representing inventions, Constructing Rights and Authors*, 73 SOCIAL RESEARCH 1129, 1129 (2006).
[85] *See generally* CHRISTINE MACLEOD, HEROES OF INVENTION: TECHNOLOGY, LIBERALISM AND BRITISH IDENTITY, 1750–1914 (2007). For a summary, see Christine MacLeod, '*The Invention of* Heroes, 460 NATURE 572 (2009)
[86] Dutfield, *supra* note 81, at 115-118.
[87] *See generally* Mossoff, *supra* note 64; Adam Mossoff, *Who Cares What Thomas Jefferson Thought About Patents? Reevaluating the Patent "Privilege" in Historical Context*, 92 CORNELL L. REV. 953 (2007).
[88] Chris Otter, *Making Liberal Objects*, 21 CULTURAL STUDIES 570, 570 (2007).
[89] Of course, the whole IP-property-monopoly distinction makes classical and liberal jurisprudential presuppositions and attaches consequent value judgements. It is rather trite to observe that all property, including that in land, is a monopoly allowing for rent-seeking, at least in a general sense. *See generally* Karl Marx, *The German Ideology*, *in* KARL MARX & FREDERICK ENGELS, V COLLECTED WORKS 209 (1975).

the eyes of the public."[90] From the internal legal perspective, upkeeping the fiction of the "inventive individual" "gives moral legitimacy to the system that it may otherwise lose, even when the companies employing them are the actual owners" but also gives "propaganda value" to the companies themselves.[91]

Therefore, the individual inventor is not a mere myth to dispel, as there are costs to doing so. Of course, today and historically, there are well acknowledged sins in the individual inventor narrative and its institutional embodiments, concerning the grounds of gender, race, and class.[92] At the same time, what some have apparently missed,[93] is that the artificial inventor does not remedy the perils of Western romanticism but, together with the displacement of the human individual, it gets rid of the human collective. After all, "it is not an exaggeration to say that AI outputs often represent the work of several villages of humans,"[94] a point which becomes resonant in today's copyright and AI debates. Although facially progressive, the lawsuits analysed above double down on contested notions of progress,[95] perhaps inadvertently aligning their

[90] Dutfield, *supra* note 81, at 122.
[91] *Id.* at 122-123. *See also* CATHERINE FISK, WORKING KNOWLEDGE: EMPLOYEE INVENTION AND THE RISE OF CORPORATE INTELLECTUAL PROPERTY, 1800–1930 252 (2009).
[92] *See generally* Dan L. Burk, *Patent Performativity*, 29 J. INTELL. PROP. L. 280 (2022).
[93] *See* Jordana Goodman, *Homography of Inventorship: DABUS and Valuing Inventors*, 20 DUKE L. & TECH. REV. 1, 2 (2022).
[94] Carys Craig & Ian Kerr, *The Death of the AI Author*, 52 OTTAWA L. REV. 33, 69 (2021).
[95] *See e.g.,* JESSICA SILBEY, AGAINST PROGRESS (2022); JESSICA SILBEY, THE EUREKA MYTH (2014).

rhetoric with the goals of intellectual monopoly capitalism.[96] After all, corporations are not only "unnatural" persons, too, but also rely on AI methods and outputs, combining "data-driven innovation rents with legal monopoly rents";[97] as some may add, at the cost of the society. The romanticized machine is, in fact, the embodiment of alienation that some Marxist scholars have written about: it does not take much to see that through elevation of the commodity to the status of the human, human is also reduced to the status of commodity. It is noteworthy, in this respect, that Thaler has never called to abolish our unjustly anthropocentric IP system, but only to extend its logic further, together with abandoning the pretenses of modern moralism for a post-modern one. And here lies the question – what is all of this about?

E. Patents, Myth, and Meaning

Fundamentally, patents like all law, are a creature and creator of a particular culture, shaped through juristic images of inventive individuals, community, and empire; that is, by law's ideology and the underlying power structures.[98] It is one feature of law to provide a heuristic through

---

[96] *See* Ezinne Mirian Igbokwe, *Human to machine innovation: Does legal personhood and inventorship threshold offer any leeway?*, J. WORLD INTELL. PROP. 1, 14 (2024) (describing an argument that "AI autonomous invention becomes patentable, it will enable the creation of private fortunes for the privileged few that can afford inventing technologies…this will result to exclusivity over public enjoyment and to avoid this situation, he argued that AI autonomous invention should remain unpatentable").

[97] *See* Cecilia Rikap & Bengt-Åke Lundvall, *Big tech, knowledge predation and the implications for development*, 12 INNOVATION AND DEVELOPMENT 1, 15 (2020).

[98] Roger Cotterrell, *Culture, Power and the Human Animal: A Reply*, 4 INT'L J.L. CONTEXT 407, 408-409 (2009). For a popular argument that denial of physical reality is

which we understand the world and inscribe our lives with meaning. And so, Jessica Sibley writes, patents begin with myth: a mystical underpinning giving rise to the inventive genius of an individual, and in turn legitimising the system patents create. This is, she rightly observed, the very nature of the legal and the political – seen as much in Plato as in modern social contract theory.[99] This is the existential, world-creating aspect of law which, at times, seems uncomfortable to invoke at times: it protests against man's alienation, "his loss of himself and his transformation into a thing"[100] and since Enlightenment, it does so by ascribing humans with sovereignty, ownership, and mastery over the world. As John Tasioulas wrote, our basic assumptions and the foundation of equal rights depend on the generation of a categorical difference between humans and non-humans and on the recognition of moral superiority of the former.[101]

In this way, the modern rationalist project has deeply non-rationalist roots: this concerns the theological language of Locke's pronouncements of human equality, later transplanted by the founders of the US into constitutional language;[102] but also "all core concepts of the

---

the basis of not just law, but of culture and human psychology, see ERNEST BECKER, THE DENIAL OF DEATH (1973).

[99] Jessica Silbey, *The Mythical Beginnings of Intellectual Property*, 15 GEO. MASON L. REV. 319, 326-8 (2008).

[100] ERICH FROMM, MARX'S CONCEPT OF MAN 52 (2004).

[101] John Tasioulas, *Justice, Equality, and Rights*, *in* THE OXFORD HANDBOOK OF THE HISTORY OF ETHICS 768, 768 (Roger Crisp ed., 2013).

[102] *See generally* JEREMY WALDRON, GOD, LOCKE, AND EQUALITY 44-82 (2002); JOHN DUNN, THE POLITICAL THOUGHT OF JOHN LOCKE 96-104 (1969).

conceptual inventory of the modern age – autonomy, personality, reason, community, history and progress," including the language of rights.[103] This, the critically inclined call the Enlightenment dialectic.[104] We also see this explicitly in the ontology of IP law. With the rise of modern patents:

> [the] invention becomes neither the abstract idea of the philosopher nor the immanent material device of the early modern engineer but rather a principle with various possible embodiments … The same split enabled the transformation of the producer of material devices to thinker and author – the creator of the idea and the author of the specification. In some important ways … separation is comparable to the one transition from printing privileges to copyright. Writers were recast from producers of material texts to authors of the "personal expression" embodied in the work.[105]

And so, the conceptualization of "invention" not as a product itself, but as an inventive idea, gave rise to inventors' rights, and ensured the centrality of the individual in the grand scheme.[106] It legitimized the special grant of the monopoly right while, at the same time as it transformed from privilege into property, necessitating a commitment to

---

[103] Christoph Kletzer, *Kelsen and Blumenberg: The Legitimacy of the Modern Age*, 25 KING'S L. J. 1, 29-33 (2014). *See also* CARL SCHMITT, POLITICAL THEOLOGY 36 (1985) ("[A]ll significant concepts of the modem theory of the state are secularized theological concepts not only because of their historical development"); G. E. M. Anscombe, *Modern Moral Philosophy*, 33 PHILOSOPHY 1 (1958).

[104] *See generally* MAX HORKHEIMER & THEODOR W ADORNO, DIALECTIC OF ENLIGHTENMENT 5 (Gunzelin Shmid Noerr ed., 2002) ("[T]he myths which fell victim to the Enlightenment were themselves its products"); JOHN GRAYM, SEVEN TYPES OF ATHEISM 72 (2019) ("[S]ecular thought is mostly composed of repressed religion").

[105] Biagioli, *supra* note 84, at 1143-4.

[106] *Id.* at 1143-144. *See also* Dan L. Burk, *Causation and Conception in American Inventorship*, 20 DUKE L. & TECH. REV. 116, 122 (2021) ("American patent doctrine has almost entirely separated the act of invention from the act or acts of material instantiation of the invention. Under US law, the act of invention is entirely mental work, dubbed 'conception,' which is bifurcated from the invention's 'reduction to practice' as a material object.").

justify such rights with desert within the law, that is satisfying the subsistence requirements, including the causal link between the inventor and the invention.[107] As analysed above, this is ensured by the legal requirement of "conception."[108]

Perhaps it is unsurprising then that philosophers argue that "our focus must be on properly integrating AI technology into a culture that respects and advances the dignity and well-being of humans, and the nonhuman animals with whom we share the world, rather than on the highly speculative endeavor of integrating the dignity of intelligent machines" into our frameworks.[109] It is similarly understandable that the legal institutional responses have not been eager to abandon the basic assumption of the modern age and, as a matter of patent law, it seems the doctrine will continue to place the "human causer" in the center, as authors such as Daniel Gervais advocate:

> intellectual property law should create incentives only for human … creativity and inventiveness and that, despite the progressive conflation between natural and artificial creativity and inventiveness, one must endeavour to separate them.[110]

It is the human cognitive process which allows for law's magic to operate – granting property in the immaterial – and it is both the human cognitive

---

[107] *See* Fritz Machlup & Edith Penrose, *The Patent Controversy in the Nineteenth Century*, 10 J. ECON. HIST. 1, 16 (1950).
[108] *Cf.* X ZB 5/22, *supra* note 116.
[109] John Tasioulas, A*rtificial Intelligence, Humanistic Ethics*, 151 DAEDALUS 232, 240 (2022).
[110] Daniel J. Gervais, *The Human Cause*, *in* THE RESEARCH HANDBOOK ON INTELLECTUAL PROPERTY AND ARTIFICIAL INTELLIGENCE 22, 23 (Ryan Abbott ed., 2022).

process, and human progress, which justify this whole endeavor.[111] It is also still the case that machines need no economic incentives, that they are participants neither in the society nor in the patent bargain, that despite invention being, as a matter of law, a human activity, investment in new technologies is proliferating.[112]

Therefore, perhaps there simply is no reason to undermine the human common good and the goals of patent law for the cause of the artificial inventor. This is what Johanna Gibson recently said: the "qualifying ownership in the doctrine of accession is not merely that of title, it is one of contribution and connection. And the fundamental principles of intellectual property cannot be ruined in order to resolve the financial management of the potential income from AI."[113]

---

[111] Andreas Rahmatian, *Copyright and artificial intelligence - is there anything new to say?*, 36 EUR. INTELL. PROP. REV. 25, 29 (2024).

[112] Daniel J. Gervais, *Artificial Inventors*, at *3 (Vanderbilt Law Research Paper No. 23-28, June 2023), https://ssrn.com/abstract=4410992.

[113] Johanna Gibson, *People or Patents, Inventors or Owners: Why the Supreme Court Decision on Artificial Intelligence and Invention in Thaler is Significant for all Intellectual Property*, 14 QUEEN MARY J. INTELL. PROP. 1, 5 (2024); *see* Haochen Sun, *Artificial Intelligence Inventions*, 50 FLA. ST. U. L. REV. 61 (2022). As Sun wrote:

> If AI systems are not in a legal position to own patent rights over their inventions, then we should not recognize their inventorship status. As responsibility is central to human society, AI systems must be evaluated by whether they have the capacity to behave responsibly … human inventors and AI systems must protect the public domain. Without a robust public domain, science and technology will perish, with deadly consequences for both humankind and AI systems.

Id. at 122. *See also* Pressley Nietering, *Why Artificial Intelligence Shouldn't Be a Patent Inventor*, 5 ARIZ. L. J. EMERGING TECH. 1 (2022); *but see* Arjun Padmanabhan & Tanner J. Wadsworth, *A Common Law Theory of Ownership for AI-Created Properties*, 104 J. PAT. & TRADEMARK OFF. SOC'Y 155 (2024) (arguing for the opposite view).

IV. WHITHER WILL POSTHUMAN IP GO?

The whole post-humanist line of argumentation rings rather outré. If Thaler believes in the moral status and metaphysical personhood of machines, and attempts to rid the law of its anthropocentrism, then why is he also attempting to "deprive" robots of the fruits of "their labour"? If the revolution comes down to one obtaining a monopoly in what he did not create or invent, now without a philosophically based justification, it is less than convincing. In fact, there is a deep irony in simultaneously arguing for recognition of a machine as a person and then claiming it must do involuntary and uncompensated work for the benefit of its owner, who should obtain the patents or copyrights. Perhaps, this was the goal all along – to make us realize that our relationship with machines and commodities has been coercive all along, and thus plant a seed of nihilistic doubt in our minds; and consequently, to procure an entropy of the doctrinal architecture through an amoral argument.

There are several issues with Thaler's approach. One is that the courts, as theologians of the legal system, are a naturally averse forum. They strive at systemic coherence of the law and rational reasoning, deriving one norm from another until the most fundamental one, the Grundnorm, never questioning the validity of this after all socially constructed foundation.[114] The second is that, perhaps, there are

[114] In this way, of course, jurisprudence and philosophy have different goals and reference separate normative systems. *See generally* Leslie Green & Thomas Adams, *Legal Positivism*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2019) https://plato.stanford.edu/archives/win2019/entries/legal-positivism.

arguments which should not be made, even in a supposedly just cause; I leave that for others to discuss. The third is this: if Thaler's argument is ultimately aimed at anthropocentric foundations of patents and copyrights and at the central legitimising role of the human being, it is by implication aimed at all of modern legal and political institutions. In this respect, is pointing out the "ideological" nature of law, and its supposedly perfidious character of serving the goal of human creators and inventors enough to render the old gods dead? In other words, in addition to knowing that the legal system is ultimately based on humanistic fictions and constructs, perhaps it would be best to know the direction, too, before having our ships set out across the open sea.[115] After all, deconstruction is old news and yet we still have not cut off the King's head.[116]

Further, we have all heard the contention that there is something philosophically arbitrary in giving patents to humans, not robots, or copyrights to artists, and not animals. And, in a sense, this is true. Without entering the philosophical terrain too far, it is clear that all defenses of IP, including the consequentialist ones, are faith based, to an extent.[117] In a narrow sense, readers may remember that already in the 1950s Fritz Machlup noted that if we didn't have patent system, it would be irresponsible to recommend instituting one; but since we do, it would be

[115] *See* FRIEDRICH NIETZSCHE, GAY SCIENCE 199 (1882) (Bernard Williams ed., 2001).
[116] *See* MICHEL FOUCAULT, 1 THE HISTORY OF SEXUALITY: AN INTRODUCTION 88-89 (1978).
[117] Brian L Frye, *Machiavellian Intellectual Property*, 78 U. PITT. L. REV. 1, 4-5 (2016).

irresponsible to abolish them.[118] Countless others have made a similar point since.[119] For example, we know that the most innovative, fastest-developing industries, "by and large hate patents."[120] But there is a more fundamental point here, too. Utilitarianism in general, including that of John Stuart Mill, has a "deontological cast"[121] taking the "quality" of particular pleasures into calculus.[122] It should not come as a surprise that law and economics is not value neutral, either.[123] Finally, then, we may cogently ask "whose progress," "what causal contributions," "for whom" legal personality and intellectual monopolies, without committing a fallacy, or at least no greater than elsewhere.

In any case, when approaching law's normative perspective, we operate within the bounds of an institutional ontology, not a natural one. Underlying the legal reality is law's eye – it is the law or the state, which decide what entitlements are just, who should be ascribed with rights, and

---

[118] Fritz Machlup, *An Economic review of the Patent System* (Study no. 15 of the Subcommittee on Patents, Trademarks, and Copyright of the Committee of the Judiciary of the United States Senate, 1958).
[119] *See e.g.,* Peter Stuart Harrison, *A Good Idea Gone Bad. Can We Still Justify Patent Monopolies?*, *in* GREAT DEBATES IN COMMERCIAL AND CORPORATE LAW 62 (Andrew Johnston & Lorraine Talbot eds., 2020); Daniel Hemel & Lisa Larrimore Ouellette, *Innovation Policy Pluralism*, 128 YALE L. J. 544 (2019); Lisa Larrimore Ouellette, *Patent Experimentalism*, 101 VA. L. REV. 65, 66-84 (2015) (overviewing the literature).
[120] Mark A Lemley, *The Regulatory Turn in IP*, 36 HARV. J.L. & PUB. POL'Y 109, 113 (2012).
[121] Michael S Moore, *A Tale of Two Theories*, 28 CRIM. JUST. ETHICS 27, 30 (2009).
[122] *See* JOHN STUART MILL, UTILITARIANISM AND ON LIBERTY (Mary Warnock ed., 2nd ed, 2003). Mill famously wrote that "[i]t is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied." *Id.* at 188. Similarly, that "it is mostly considered unjust to deprive any one of his personal liberty, his property." *Id.* at 217.
[123] *See e.g.,* Craig & Kerr, *supra* note 94; *see generally* MADHAVI SUNDER, FROM GOODS TO A GOOD LIFE (2012).

who should not.[124] Patents are, after all, legal rights, a part of the general regime of legal norms and procedures, which designate through statute (and to a lesser extent, common law) the standard criteria of patentability, the kind of person that may become a patentee, the possible subject matter of the patent, what substantive and procedural conditions must first be satisfied, et cetera.[125] Robots are not on that list. The deconstructionist contention there is no heavens-given reason why they should not be included, since all that is needed is the sovereign act, has a reverse – the sovereign may have no reason to include them too, as the next section demonstrates. The quest for post-humanist patent law is thus rather quixotic.[126]

At the same time, there are courts which supported Thaler's reasoning. For example, in Germany, generally "[t]he inventor principle holds that patent law is aimed exclusively at a human inventor. Thus, an invention created by AI cannot be protected by a patent."[127] At the same time, in the course of affirming that only a natural person can be an inventor, the 11th Senate German Federal Patent Court deemed Thaler

---

[124] *See* Bernard Edelman, *The Law's Eye: Nature and Copyright*, *in* OF AUTHORS AND ORIGINS: ESSAYS ON COPYRIGHT LAW 79 (Brad Sherman & Alain Strowel eds., 1994). *See also e.g.,* Angela Condello & John R. Searle, *Some Remarks about Social Ontology and Law: An Interview with John R. Searle,* 30 RATIO JURIS 226 (2017).
[125] Bracha, *supra* note 64, at 181-2.
[126] *See e.g.,* Abeba Birhane, Jelle van Dijk, & Frank Pasquale, *Debunking Robot Rights Metaphysically, Ethically, and Legally*, 29 FIRST MONDAY (2024).
[127] Thomas Heinz Meitinger, *Artificial intelligence as an authority for testing the inventive step of an invention – a view from Germany*, 18 J. INTELL. PROP. L. & PRAC. 482, 484 (2023); *see also e.g.,* Stanková, *supra* note 39.

to be the inventor, despite his factual specifications otherwise.[128] This has been described as "paradoxical": to affirm the place of the human individual, the court contradicted the foundation of that principle, i.e., the contribution of human creative activity by the putative inventor.[129] Consequently, "[b]way of the same principle by which the Board rejected the designation of DABUS as the inventor, it should have prevented the outcome where Thaler was designated as the inventor and could be entitled to the inventor's rights."[130] In a later decision, the 18th Senate Federal Patent Court rejected this theory, rectifying the "paradoxical" turn in IP causation.[131] Most recently, the Bundesgerichtshof (BGH) reaffirmed that an inventor must be a natural person.[132] The Federal Court of Justice found that since inventions without any human preparation or influence do not exist,[133] a human contribution which significantly influenced the overall success will be sufficient, even if it was AI which made the main contribution. The BGH concluded that a human, to be considered an inventor, does not need to contribute to the conception.[134]

---

[128] *See* Federal Patent Court, Case 11 W (pat) 5/21, decision of 11 November 2021, ECLI:DE:BPatG:2021:111121B11Wpat5.21.0 – Food container.
[129] Daria Kim, *The Paradox of the DABUS Judgment of the German Federal Patent Court*, 71 GRUR INT'L 1162, 1164 (2022); *see also* Daria Kim, *'AI-Generated Inventions': Time to Get the Record Straight?*, 69 GRUR INT'L 443 (2020).
[130] *Id.*
[131] *See* Decision of 21 June 2023 – 18 W (pat) 28/20a; *see also* Richard M Assmus et al., *Can AI Be an Inventor? The US, UK, EPO and German Approach*, MAYER BROWN (Jan 9, 2024), https://www.mayerbrown.com/en/insights/publications/2024/01/can-ai-be-an-inventor-the-us-uk-epo-and-german-approach.
[132] President of the German Patent and Trademark Office v. Thaler, X ZB 5/22 (11 June 2024).
[133] *Id.* ¶ 40.
[134] *Id.* ¶ 44.

Thus, the Court defended the patent doctrine from the posthumanist critique – at a regrettable cost.

A similar development took place in Australia, where Thaler had, initially, successfully appealed the decision Delegate of the Commissioner of Patents in the Federal Court of Australia. There, in *Thaler v Commissioner of Patents*,[135] Beach J found no specific provision in the statutory framework to exclude an inventor from being a non-human artificial intelligence system, asking "we are both created and create. Why cannot our own creations also create?" This was a rather curious outcome since even commentators sympathetic to artificial inventors found a need for law reform, while the undefined notion of the inventor, in vis-à-vis the "purpose of the Act and its common law application suggest[ed]" a human being."[136] Yet, Beach J eventually held:

> An inventor as recognised under the Act can be an artificial intelligence system or device. But such a non-human inventor can neither be an applicant for a patent nor a grantee of a patent. So to hold is consistent with the reality of the current technology. It is consistent with the Act. And it is consistent with promoting innovation.

While the decision had been criticized on several grounds,[137] it proved rather short-lived, as the Full Court of the Federal Court[138] later found

---

[135] Thaler v Commissioner of Patents (2021) 160 IPR 72.
[136] Nick Li & Tzeyi Koay, *Artificial intelligence and inventorship: an Australian perspective*, 15 J. INTELL. PROP. L. & PRAC. 399, 401 (2020).
[137] *See* Joseph Straus, *Artificial intelligence and patenting: some lessons from "DABUS" patent applications*, 44 EUR. INTELL. PROP. REV. 348 (2022); Rita Matulionyte, *AI as an Inventor: Has the Federal Court of Australia Erred in DABUS?*, 13 J. INTELL. PROP. INFO. TECH. & ELEC. COM. L. 99 (2022).
[138] Commissioner of Patents v Thaler (2022) 401 ALR 551.

that the "inventor" within the meaning of the statute is "the person who is responsible for the 'inventive concept' ... the person, or one of the people, who materially contributes to the inventive concept as described in the specification and the subject of the claims."[139] The Full Court went on to say that the law "relating to the entitlement of a person to the grant of a patent is premised upon an invention… arising from the mind of a natural person or persons." [140] Thus, those "who contribute to, or supply, the inventive concept are entitled to the grant. The grant of a patent for an invention rewards their ingenuity."[141] Finally, the Full Court concluded that "[o]nly a natural person can be an inventor for the purposes of the ... Act and Regulations."[142] Further decisions arriving at essentially the same conclusion come from the European Patent Office,[143] New Zealand,[144] South Korea, and others. The doctrinal exclusion of artificial inventors is near uniform;[145] which is a good result as a matter of legal interpretation, the doctrinal consistency of law, but also law's normative coherence.

---

[139] *Id.* ¶ 101.
[140] *Id.* ¶ 105.
[141] *Id.* ¶ 105.
[142] *Id.* ¶ 113. On 11 November 2022, the High Court of Australia denied Dr Thaler's application for special leave to appeal the Full Court of the Federal Court of Australia's decision. Thaler v Commissioner of Patents, [2022] HCATrans 199.
[143] European Patent Office (EPO) J 0008/20 (Designation of inventor/DABUS) of 21.12.2021
[144] *See* Thaler v Commissioner of Patents [2023] NZHC 554 ¶ 33.
[145] It is worth noting that South Africa is the outlier, where artificial inventorship has been recognised, though for procedural reasons only. *See* Desmond Osaretin Oriakhogba, *Dabus Gains Territory In South Africa And Australia: Revisiting The AI-Inventorship Question*, 9 S. AF. INTELL. PROP. L. J. 87 (2021); Christopher Mhangwane & David Cochrane, *South Africa was wrong to patent an AI's 'invention'*, TECHCENTRAL (Dec. 8 2022), https://techcentral.co.za/south-africa-was-wrong-to-patent-an-ais-invention/218389.

V. CONCLUSION

Dan Burk once called artificial inventorship a "bizarre and counterproductive" idea decisively precluded by the US law.[146] He was right, and the same proves true in the UK, the EU, Australia, and others. This is not just a doctrinal insight. The attempts to get rid of the human inventor's notionally central place undermine the theoretical foundations of patent law, but also strike at modern law more broadly, and it is unsurprising they have been rejected in the dicta examined above. Indeed, this is, generally, where jurisprudence ends, and philosophy begins. In this respect, artificial inventorship is at the same time a radical and corrosive idea, wreaking havoc within the legal system, but also a seemingly moderate one, which does not offer any radical alternatives to IP or the modern state, but doubles down on their most problematic features. Indeed, it does not even try to liberate the robots, but merely to remove causative obstacles to obtaining monopolies – ultimately, at the cost of the common good.[147]

---

[146] Burk, *supra* note 106, at 116.

[147] Some worry that faced with superintelligence, "humanity's greatest hope may not be to be treated as peers, but at least to be seen as more than things." Simon Chesterman, *Artificial Intelligence and the Limits of Legal Personality*, 69 INT'L & COMPAR. L.Q. 819, 843 (2020). Be that as it may, it does seem reasonable that the law should attempt to prevent such course of history, or at least not give it further force. *See also e.g.,* Simon Chesterman, *Good Models Borrow, Great Models Steal: Intellectual Property Rights and Generative AI*, POL'Y & SOC'Y 1 (2024).