Cambridge Law Journal, **83(2)**, July 2024, pp. 226–229 © The Author(s), 2024. Published by Cambridge University Press on behalf of The Faculty of Law, University of Cambridge.
doi:10.1017/S0008197324000321

TOMORROW YOU SHALL CEASE TO BE A MARIONETTE, AND YOU SHALL BECOME AN INVENTOR

IT is of central importance to the plot of Pinocchio that, although he is not a real boy, this does not stop him from doing things that real boys do. As such, we laugh with him; we cry with him; we develop a bond with him to the point where we might ask ourselves whether it matters that he is a marionette. Yet he is aware that this point *does* matter and prevents him from achieving certain things that real boys can. So, when the blue fairy tells him that tomorrow he shall cease to be a marionette and shall become a real boy, we are pleased with this recognition.

Though the journey is perhaps not as emotive, the case of *Thaler v Comptroller-General of Patents, Designs and Trade Marks* [2023] UKSC 49 covers similar ground. The legal question asked of the Supreme Court was whether an artificial intelligence (AI) system known as the Device for the Autonomous Bootstrapping of Unified Sentience (or DABUS to its friends) could be an inventor for the purposes of sections 7 and 13 of the Patents Act 1977 ("the Act"). Lord Kitchin, writing a judgment with which the whole court agreed, laid out his conclusion at [73]:

> "DABUS is not and was not an inventor of any new product or process described in the patent applications. It is not a person, let alone a natural person and did not devise any relevant invention. Accordingly, it is not and never was an "inventor" for the purposes of section 7 or 13 of the 1977 Act."

He is at pains to stress the case is concerned with interpretation of the specific statutory regime before him, and not with speculative questions of whether "technical advances generated by machines acting autonomously and powered by AI should be patentable" nor whether "the term 'inventor' ought, so far as necessary, to include machines powered by AI" (at [48]). Such questions are, he notes, policy questions that go to the heart of the very purpose of a patent system (at [50]). The primary purpose of this note is to consider whether avoiding these questions in their entirety is desirable.

Lord Kitchin begins his reasoning with section 7(3) of the Act, "[i]n this Act 'inventor' in relation to an invention means the actual deviser of the invention and 'joint inventor' shall be construed accordingly" (at [24]). Here we encounter a problem: the purpose of this subsection is to define the term "inventor", but the word "person" – central to Lord Kitchin's conclusion quoted above – is not used. At [34] the judgment moves to section 13(2)(a), which places an obligation on the person applying for a patent to identify "the person or persons whom he believes to be the inventor or inventors". It seems reasonable to infer from this that the inventor must be a person – but the statute is silent as to whether this refers to natural or legal personhood.

However, paragraph [73] implies that only natural persons can be inventors. Lord Kitchin establishes this (at [57]) by focussing not on the word "inventor" in section 7(3), but on "deviser": "There is no suggestion that 'deviser' here has anything other than its ordinary meaning, that is to say, a person who devises a new and non-obvious product or process (the invention) which is capable of industrial application and may be protected under the patent system."

He supports this reading in paragraphs [61]–[63] by referring to precedent in *Rhone-Poulenc Rorer International Holdings Inc v Yeda Research and Development Co. Ltd.* [2007] UKHL 43. At [20] of that case, Lord Hoffmann endorses Laddie J.'s decision in *University of Southampton's Applications* [2004] EWHC 2107 (Pat), [2005] R.P.C. 11, which he reads as holding that "inventor" means "the natural person who 'came up with the inventive concept'".

However, Lord Kitchin encounters another problem here: at no point in *University of Southampton's Applications* did Laddie J. suggest that an inventor must be a person, let alone a natural person. We could perhaps argue that Lord Hoffmann felt this limitation was implicit in Laddie J.'s use of gendered pronouns within his reasoning, yet to imply natural personhood from no more than the use of gendered pronouns seems to be quite a jump. Ships are commonly referred to as "she" but are not natural persons. The opening of this note referred to Pinocchio as "he" but was equally clear that he is not a natural person. If a reader were to reach the opposite conclusion, this cannot be a result of the ordinary meaning of the words used.

Lord Hoffmann similarly exercised a choice to limit the meaning of "inventor" in *Yeda Research*; thus, we cannot pretend he identified the only, let alone the natural or ordinary reading of the word. An alternative and equally plausible approach to discerning the meaning of the word can be found in the Australian case of *Thaler v Commissioner of Patents* [2021] FCA 879. Though a different statutory regime, this litigation concerned the same facts and was brought by the same litigant. At [120], Beach J. held:

> [A]s the word "inventor" is not defined in the Act or the Regulations, it has its ordinary meaning. In this respect then, the word "inventor" is an agent noun. In agent nouns, the suffix "or" or "er" indicates that the noun describes the agent that does the act referred to by the verb to which the suffix is attached. "Computer", "controller", "regulator", "distributor", "collector", "lawnmower" and "dishwasher" are all agent nouns. As each example demonstrates, the agent can be a person or a thing. Accordingly, if an artificial intelligence system is the agent which invents, it can be described as an "inventor".

He concluded at paragraph [222] that Australian law thus permitted non-human inventorship, and that to get bogged down in issues of

personhood was an irrelevancy. Now it ought to be acknowledged at this point that this decision was overturned by *Commissioner of Patents v Thaler* [2022] FCAFC 62, where it was held that an inventor must be a person for the policy objective of ensuring that those who invent can receive "rewards for their ingenuity" (at [105]). The Australian courts then could only conclude their statute required a connection between personhood and inventorship by explicitly drawing on policy reasons.

This example further demonstrates that the word "inventor" does not possess the clear and obvious connection to personhood that Lord Hoffmann, and by extension Lord Kitchin, hold it to have. The word, like many if not all words, possesses what H.L.A. Hart would have called an "open texture", and judges must look beyond the statute to determine the extent to which it relies on a particular understanding of, or connection with, personhood. By drawing on policy considerations however, the Australian courts appear to be straying into the two conceptual questions that Lord Kitchin stated (at [50]) that he wanted to avoid. The present writer is not unsympathetic to this desire, but by confronting the word's open texture head on and asking what policy assumptions underpinned their current statutory regime, the Australian courts were able to support more clearly their conclusion on the narrow question of whether AI can be an "inventor" under the current statutory regime. It is regrettable that our Supreme Court declined to ask similar questions here.

Two benefits would arise from their choosing to incorporate policy questions into their reasoning. First, avoiding an artificially narrow reading from the outset would future-proof the law and create a more stable regime. This is important given the pace of technological advancement in this arena. We are regularly confronted with examples of things generative AI can achieve that would have been unthinkable just a year ago, and though today we appear to be dealing with a clumsy marionette, a more tangible AI invention scenario may present itself in the future. The issue of whether AI can invent will not go away, and the courts should acknowledge the policy dimensions of the problem before them to ensure the law is awake to, and can keep pace with, this issue.

Second, identifying the issue as one that requires policy input would be a strong signal from the courts that this question deserves legislative attention. This is true both for narrow questions of under what circumstances AI might be considered an inventor, but also for the larger conceptual question of whether AI ought to be recognised as possessing some form of legal personhood. This question is one that Birss L.J. felt counsel were driving him towards when this case was before him in the Court of Appeal in *Thaler v Comptroller General of Patents Trade Marks and Designs* [2021] EWCA Civ 1374 (at [1]). Other legislatures are already confronting and answering the question. Most recent at the time of

writing was Utah, where House Bill 0249 denying legal personhood to AI entered into law on 20 March 2024. This is a question our jurisdiction will need to confront eventually, and the courts have a role to play both in flagging the question and using their expertise to help shape how we answer it.

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