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UK Supreme Court Judgment

[2023] UKSC 49

On appeal from: [2021] EWCA Civ 1374

Thaler (Appellant)

v

**Comptroller-General of Patents, Designs and Trade
Marks (Respondent)**

(The DABUS case)

REMARKS ON THE JUDGMENT

Introduction

Today, 20th December 2023, the UK Supreme Court has handed down its judgment in this case, dismissing the Appellant’s appeal. As a result, Supreme Court upheld the Comptroller’s decision that GB 1816909.4 and GB 1818161.0 are deemed to be withdrawn due to failure to meet the requirements of Sections 7 and 13 of the Patents Act 1977. The Supreme Court decided that DABUS is not and never was an “inventor” within the meaning of the Act because it is not a person. These remarks do not review the judgment, we plan to issue a broader discussion paper in due course.

These remarks are intended solely to point out the primary issues that arise from the judgment, how they affect the protection of AI generated inventions and the shortcomings in UK patent law that the Supreme Court has identified.

In our view, as we explain below, the judgment establishes that UK patent law is currently wholly unsuitable for protecting inventions generated autonomously by AI machines and as a consequence wholly inadequate in supporting any industry that relies on AI in the development of new technologies. While many people have questioned whether AI can or

does generate innovative technical advances, that view is by no means absolute. We address this in a short section below.

The primary points decided by the UK Supreme Court

While the judgment concerned “the much more focused question of the correct interpretation and application of the relevant provisions of the 1977 Act to the applications made by Dr Thaler” [para. 50], the principles set out in the judgment, having regard to the facts of the case, have much broader effect.

On the Issue of Patentability

Specifically, the UK Supreme Court held:

“Section 7 does not confer on any person a right to obtain a patent for any new product or process created or generated autonomously by a machine, such as DABUS, let alone a person who claims that right purely on the basis of ownership of the machine. This fundamental premise of the 1977 Act is made explicit in section 7(2)(b) on which Dr Thaler relies, as the references to “the invention” are necessarily references to an invention devised by a person.” [para. 79]

The UK Supreme Court agreed with the finding of Elisabeth Laing LJ at para 103 of the judgment of the Court of Appeal ([2021] EWCA Civ 1374):

"If patents are to be granted in respect of inventions made by machines, the 1977 Act will have to be amended."

This finding is in direct contrast to the findings of a number of other Patent Offices around the world, including those of the Legal Board of Appeal of the European Patent Office. The position taken by the European Patent Office is relevant because European Patents extend and cover the United Kingdom.

In its decision J08/20, the Legal Board of Appeal of the European Patent Office found:

“Firstly, under Article 52(1) EPC any invention which is novel, industrially applicable and involves an inventive step is patentable. The appellant has argued that the scope of this provision is not limited to human-made inventions. The Board agrees. How the invention was made apparently plays no role in the European patent system.” [para. 4.6.2]

And

“... the Board is not convinced that there is a problem of unequal treatment of specific applicants and categories of inventions which is in conflict with the objective purpose of the EPC and calls for an evolutive interpretation of the law. The Board is not aware of any case law which would prevent the user or the owner of a device involved in an inventive activity to designate himself as inventor under European patent law. The EPC, in turn, does not prevent the applicant from providing information in the application which is not relevant for carrying out the invention but may satisfy the fairness concerns identified by the appellant in the addendum of 24 July 2019 [which set out that the invention was conceived autonomously by an AI machine without human inventive input]. Secondly, it is the task of the lawmakers to amend the EPC and to assess whether a real problem exists. Different solutions may be conceivable to the issue raised by the appellant. It is not for the Board to select one of the possible approaches.” [para. 4.6.6]

The judgments of the UK Supreme Court and of the Legal Board of Appeal are markedly different. The UK Supreme Court has held that inventions made by AI systems are not patentable, while by contrast the European Patent Office has held that in principle they are because the core requirements for patentability set out in Article 52 EPC are not dependent on how the invention was made and that, the Legal Board of Appeal agreed, the provision is not limited to human-made inventions.

The Legal Board of Appeal offered a solution to address the formality requirement of the European Patent Convention, namely for the owner of the machine to name themselves as inventor and, should the owner so desire, to add a statement in the patent application papers to the effect that the invention was in fact conceived by an AI system.

The UK Supreme Court did not expressly address this possibility in its judgment, even though the Comptroller stated in oral submissions that he would have no objection to a UK applicant doing the same in the UK.

Whether as a consequence of the UK Supreme Court judgment that remains a possibility is questionable having regard to the above quoted passages of the judgment, together with the statement:

“...DABUS, a machine with no legal personality, is not and has never been an inventor within the meaning of the 1977 Act. This is more than a formal objection. It goes to the heart of the system for granting a monopoly for an invention.” [para. 75]

Unless and until there is further clarity of the UK Supreme Court judgment, it seems that the UK Patents Act 1977 does **not** allow the granting of patents for inventions made by AI systems. This is a significant disadvantage in UK patent law.

On The Issue of Entitlement

The UK Supreme Court also held that Dr Thaler is not entitled to any patents on the DABUS inventions:

“There was no inventor through whom Dr Thaler could claim the right to obtain a patent for any technical advance described in those applications.” [para. 84]

“For these reasons and those given by the Court of Appeal, I am satisfied that the doctrine upon which Dr Thaler relies here, that of accession, does not, as a matter of law, operate to confer on him the property in or the right to apply for and obtain a patent for any technical development made by DABUS.

It follows that, on the factual assumptions upon which this appeal is proceeding, Dr Thaler has never had any right to secure the grant to himself of patents under the 1977 Act in respect of anything described in the applications..” [para.s 89 & 90]

There is reason to believe on the basis of these passages that according to the Supreme Court the Patents Act does not provide any right to entitlement to an AI generated invention to a person, irrespective of how the patent application is framed. While the Legal Board of Appeal suggested a solution of the owner of the AI naming themselves as inventor (or presumably any natural person), and that this would address the formality requirements of the European Patent Convention, it is left unclear whether such an approach would be acceptable in UK patent law. The UK Supreme Court did not comment on this possibility, restricting itself to the narrow question of the facts of Dr Thaler’s application. Therefore, until there is clarity on this point, it cannot be assumed that naming a person as inventor on a patent application for an AI-generated invention will be deemed to meet the requirement of entitlement. Until this is clarified, either by a court or by the UK Parliament, it must be assumed that there is a risk that UK patent law does not confer ownership rights to AI-generated inventions. This is a serious and significant shortcoming in UK law.

It is worth pointing out that there are laws that do give the owner of an AI machine ownership rights to the output of that machine. Copyright and Design law expressly provide for this (Sections 9 and 214 of the Copyright Designs and Patents Act 1988, Section 2 of the Registered Designs Act 1949). In fact, an owner of an AI machine can be

reasonably confident they would own any output of the AI machine apart from inventive output. That puts inventive output at odds with all other outputs of the machine.

The Broader Issues and Changes to UK Patent Law

The UK Supreme Court made it clear that Dr Thaler's appeal does not concern broader questions of AI generated inventions.

“...this appeal is not concerned with the broader question whether technical advances generated by machines acting autonomously and powered by AI should be patentable. Nor is it concerned with the question whether the meaning of the term “inventor” ought to be expanded, so far as necessary, to include machines powered by AI which generate new and non-obvious products and processes which may be thought to offer benefits over products and processes which are already known.” [para. 48]

“These questions raise policy issues about the purpose of a patent system, the need to incentivise technical innovation and the provision of an appropriate monopoly in return for the making available to the public of new and non-obvious technical advances, and an explanation of how to put them into practice across the range of the monopoly sought. It may be thought that the rapid advances in AI technology in recent times render these questions even more important than they were when these applications were made.” [para. 49]

The judgment also expressly quoted from Elisabeth Laing LJ at para 103 of the judgment of the Court of Appeal ([2021] EWCA Civ 1374):

"If patents are to be granted in respect of inventions made by machines, the 1977 Act will have to be amended."

There therefore seems to be an acknowledgment that the issue of inventions generated autonomously by AI machines is becoming ever more relevant and that this should be addressed by changes in patent law. Given the shortcomings in UK patent law found by the UK Supreme Court, in our view this is a matter that needs to be addressed with urgency.

Can An AI Machine Invent?

There has been commentary on the DABUS cases and other suggestions of AI generated inventions as to whether AI systems currently have the mental capacity (sentience for want of a better descriptor) to be able actually to invent.

While the question of whether an AI system can “think”, and indeed of how humans “think” is fascinating and hopefully will continue to be debated for a long time to come, it is an irrelevance as far as patentability is concerned.

Patent law, in the UK and elsewhere, does not concern itself with how an invention was arrived at. What was in the mind of the inventor at the time of making the invention is irrelevant.

The test for inventive step is whether the alleged invention “is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art” [Section 3 of the Patents Act 1977]. In other words, the test for inventive step is determined in law not from the state of mind of the inventor but by someone else, that is the notional person skilled in the art.

If an alleged invention is not obvious to the notional person skilled in the art, the alleged invention possesses inventive step, that is, is an invention. Whether it was arrived at through a logical sequence of steps or by pure accident, for example, is irrelevant.

On the broader issue, there is growing, and urgent, debate on how to address the issue of the behaviour of AI systems in general and the need for regulation to control AI. Much of the need arises due to AI systems “doing their own thing”, rather than behaving precisely as programmed, in other words due to AI acting autonomously. Just as an AI system may behave in an autonomous or somewhat autonomous manner, it cannot be denied, we submit, that an AI system acting autonomously or somewhat autonomously may generate innovative new technology and as a consequence may create inventive subject matter.

Do AI Machines Invent?

On 29 October 2021 the UK government launched an Open Consultation on the issues, inter alia, of AI inventions. While the conclusions from that Consultation focused on the broader issues highlighted by the UK Supreme Court in its judgment and that therefore go beyond the ambit of this discussion, what is relevant is that a number of respondents did indicate that in their experience at that time AI systems were generating innovative new technologies.

It does not matter whether there were responses that suggested that in some fields or applications AI systems were being used only as sophisticated tools or whether in the normal course of events AI systems do not make inventions. The patent system does not exist for the normal; it exists to acknowledge and protect the extraordinary.

As one example only, the UK BioIndustry Association, in its response to the Open Consultation stated:

“Pharmaceutical and biotech companies have always relied heavily on patent protection for novel molecules and new uses of existing molecules. Increasingly, these are being identified and developed with the aid of AI.”

This is only one example of a respondent acknowledging the creation of innovative new technologies being developed by AI.

On 27 September 2019 Dr Beat Weibel, the Chief IP Counsel and Group Senior Vice President of Siemens, gave a presentation to the World Intellectual Property Office (WIPO), in which he showed a number of technical innovations relating to automotive vehicles and components which Siemens asserts were created by AI without any human inventive input. The problem, Dr Weibel explained, is that while an AI system created a novel, non-obvious device, there is a lack of a natural person as an inventor and if patent laws do not allow the AI created invention to be patented, this would discriminate an entire technology just because of the fact it has not been created by a natural inventor. (Reference: <https://c.connectedviews.com/05/SitePlayer/wipo?session=31245>)

It has been accepted in the DABUS proceedings that DABUS created the two patentable inventions. The Hearing Officer of the UKIPO went to far as to find:

“Given the clear statements provided by the applicant which indicate that the inventor is in fact an AI machine, it seems that it will be almost impossible to demonstrate that the actual devisor of the invention was in fact a person, as opposed to DABUS.” [para. 27 of BL O/741/19]

The DABUS inventions should not be seen as revolutionary in the field of AI but as being the first patent applications filed at the UK Intellectual Property Office (and elsewhere) in which it has been admitted that the inventions were created by an AI system.

Nobody should be under any doubt that AI systems are currently, and will become ever more, able to conceive of new and non-obvious innovations that meet the fundamental requirements of patentability in accordance with the law.

Conclusion

The UK Supreme Court judgment basically rules that patents cannot be legitimately obtained for inventions created by AI systems and that no person (legal person) can own those inventions. The judgment does not address the issue of an invention devised by both an AI and a natural person, of which there are likely to be an increasing number. Even so, the findings in the judgment must be taken into serious consideration even for those types of invention.

In the oral proceedings before the UK Supreme Court the Comptroller stated that to his knowledge there had been no other UK patent applications filed for inventions said to have been created by an AI system. That should not be taken that the DABUS cases are a one-off or that there is not demand for protection of AI generated inventions. As intimated by Dr Weibel of Siemens, if the patent system is going to refuse an application solely because the invention was created by an AI system and, furthermore, that the applicant (natural person or corporate entity) does not own the rights to the invention, it is hardly surprising no one else has filed any patent applications in the UK that openly declare an AI system as the inventor.

The UK government has time and again set itself the goal of making “the UK a global centre for the development, commercialisation and adoption of responsible AI”, in the hope of “securing the UK’s position among the global AI superpowers” (Introduction to the 29 October 2021 Open Consultation).

The UK government is also apparently very keen on maintaining the UK’s position as a leader in patent law.

However, the state of UK patent law as held by the UK Supreme Court in this judgment puts the UK at a substantial disadvantage in relation to supporting our industries that develop and use AI in the generation of new technologies. Simply put, UK patent law is unfit and unable to offer protection for AI generated inventions and, as a consequence, it can be expected this could have a detrimental impact on industry in the UK.

The result of the Consultation was that the law on protecting inventions generated by AI should be reviewed, but that this should be done on the basis of consensus across the nations. That is a laudable aim, however it does little to address the current void in protection for AI generated inventions in the UK. It is also beholden to at least a large group of nations coming to an agreement, which could take many years. For the entirety of that time, unless the situation is changed domestically, UK will be at the poorer end of protection of AI generated inventions. It is also a shame that the UK government did not decide to continue its proud history of establishing new legal principles, as it has in the past, and instead to fall back to being part of the crowd.

The position in the UK currently, therefore, is that the lack of patent protection for AI generated inventions, aside from potentially pushing pro-patent industries to look to set up elsewhere outside the UK, can be expected to act at best as a disincentive to disclose inventions created by AI systems. The patent system exists specifically to avoid this.

This is not just a personal view, the UKIPO set this out in its Open Consultation:

“Patents incentivise invention in two main ways. They encourage investment in research and development because, as exclusive rights, they give the owner the opportunity to secure a return. The publication

of the patent allows others to learn of technical advances, so an invention can be further developed or worked around.

The government wants to make the UK a global centre for AI and data-driven innovation. It aims to make sure that the UK has a best environment for developing and using AI.”

In a worst case scenario, the decision could mean that inventions devised by AI systems cannot presently be protected and controlled by patents in the UK.

The judgment of the UK Supreme Court, I suggest, shows how poorly current UK patent law supports the aim of making the UK a global centre for AI and data-driven innovation.

At the time of writing, Saudi Arabia and South Africa have accepted to prosecute applications which acknowledge DABUS as the creator of the inventions and in which no natural person is named as inventor.

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