Innovating the Law

Adapting Patent Policies for AI-Driven Futures

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In the ever-evolving landscape of technological advancements, the question of artificial intelligence (**AI**) as a potential inventor has emerged as a pivotal issue in patent law globally. It is evident that the number of patent filings in the AI domain of India has shown continuous growth year on year. The recent decision by the UK Supreme Court (**UKSC***)* regarding Dr. Stephen Thaler's AI creation, Device for the Autonomous Bootstrapping of Unified Sentience (**DABUS**), has added a significant chapter to this discourse. The ruling, denying patent rights to autonomously generated inventions, raises pertinent questions about the recognition of AI as inventors in legal frameworks.

As AI systems continue to disrupt and revolutionize industries, their capacity to independently conceive inventions underscores the need for a nuanced understanding within patent law. The debate intensifies as AI-generated innovations, such as the fractal container and neural flame developed by DABUS, grapple with the limitations of existing legal structures. The current lacuna in Indian patent law, where AI-generated inventions remain ineligible for patent protection, begs a critical examination in the wake of technological progress.

Against this backdrop, the 161st Parliamentary Standing Committee Report under the Department of Commerce has recommended revisions to existing legislation, emphasizing the incorporation of emerging AI technologies within the ambit of The Patents Act, 1970. The report recognizes the imperative to adapt legislation to the accelerating pace of innovation, urging the Department to embark on a comprehensive review. The recent statement made by the Union Minister of State for Commerce and Industry, in which he emphasized that the current IP laws are sufficient to encompass AI, represents a positive step in this regard. However, the statement lacks the necessary clarification regarding enforcement and also fails to address the numerous objections previously raised by criticsTop of Form

This blog aims to navigate the intricacies of the AI inventorship debate, shedding light on its contemporary relevance following the UK Supreme Court decision. It explores the Indian and international legal frameworks surrounding the inclusion of AI as an inventor of a patent. Furthermore, the blog delves into the compelling arguments advocating for the inclusion of AI as an inventor in the Indian as well as global Patent Law regime.

The Recent Decision

The UK Supreme Court reached a unanimous decision affirming that the Patents Act of 1977 allows only natural persons to be identified as inventors in a patent application. This stance mirrors the opinions put forth by the lower court and the UK Intellectual Property Office, emphasizing that an invention is eligible for patenting only when attributed to a "natural person". The court provided additional clarification, asserting that Dr. Stephen Thaler is not permitted to submit a patent application for innovations created by DABUS. The case at hand originated when Dr. Stephen Thaler, the mind behind DABUS, submitted two patent applications seeking grant for a novel food and beverage container. In these applications, he

attributed the role of inventor to DABUS. However, the Hearing Officer for the Comptroller-General of Patents dismissed the applications, contending that DABUS, being an artificial intelligence entity, does not meet the criteria for an inventor outlined in Section 7 of The Patents Act, 1977. The Court of Appeal concurred with the Hearing Officer's decision, asserting that, according to the act, an 'inventor' must be a natural person, and a machine does not qualify as such. The Court of Appeal also relied on Yeda Research case wherein the scope of *inventor* was defined to mean a natural person. Hence the appeal was dismissed.

Following this, the case was brought before the UK Supreme Court, where three main issues were at the heart of the dispute. Firstly, there was a disagreement over the extent and interpretation of the term "inventor." Secondly, the question arose as to whether Dr. Thaler had the right to submit and acquire a patent for the invention attributed to DABUS. Lastly, there was a debate about whether the Hearing Officer had the authority to reject the application put forth by Dr. Thaler. The scope of this article is confined to the examination of the first issue.

The first issue holds relevance in this context wherein the Court opined that DABUS does not qualify as an inventor for the purpose of Section 7 of the 1977 Act. The court relied on the views expressed by Lord Hoffmann in the Yeda Research on which the Court of Appeal previously relied. The court also referred to University of Southampton's Applications. In conclusion, the court held that "inventor" as per section 7 and 13 of The Patent Act, 1977 only limits itself to include natural persons and not machines. Hence, DABUS was not considered as an *inventor* under this section.

Among this confusion, the UK Intellectual Property Office in a public consultation conducted in 2021 reported that majority of the replies were of the view that the UK Patents Act should not be amended instantly and international harmonisation should play a pivotal role for the easy inclusion of AI in the Patent Law framework. The result of the consultation was clear on the view that inventions made by AI should be patentable, however, this inclusion of AI as an inventor should take an international consensus. Understanding the international and domestic legal framework in relation to inclusion of AI as an inventor under the patent law framework holds significance in this regard.

International and Domestic Framework

The case for inclusion of DABUS as an *inventor* in the patent law framework is part of a project involving parallel applications by Dr Thaler to patent offices around the world. The international jurisprudence, except Saudi Arabia and South Africa, has been consistent in this regard that DABUS which is not a natural person cannot be termed as an *inventor* in the present law. However, as AI continues to expand its reach and innovations, many countries, such as the US, have recognized the need to revamp their patent laws to include AI within its ambit.

The United States Patent and Trademark Office (**USPTO**) refused to acknowledge DABUS as an inventor, asserting that a direct interpretation of statutory provisions in the United States Code (U.S.C.) unequivocally identifies inventors as individuals and not artificial entities. The USPTO specifically cited 35 U.S.C. Section 100(f)-(g) and Section 101, wherein terms such as "individual" and "whoever" are employed in relation to inventorship, emphasizing the stipulation that inventors must be natural persons. In accordance with 35 U.S.C. Section 115(b), an individual who considers "*himself or herself*" the inventor of the claimed invention is required to sign an oath or declaration.

Furthermore, the USPTO cited various decisions from the Federal Circuit that reinforced the notion that only natural persons meet the criteria for being recognized as inventors. One notable case, University of Utah v. Max Planck Gesellschaft zur Forderung der Wissenschaften E.V, 734 F.3d 1315, 1323 (Fed. Cir. 2013), saw the Federal Circuit refusing to attribute inventorship to state or a company. This decision aligned with the stance of the USPTO, affirming that an artificial intelligence system cannot be

acknowledged as an inventor, given the statutory restrictions that confine inventorship. The European Patent Office, Australia, New Zealand, Israel, Germany, South Korea, TaiwanBrazil, Canada reached the same conclusion while rejecting Dr. Thaler's application.

In India, Sections 2 and 6 of the Indian Patent Act, 1970 detail the criteria for recognizing inventors and applicants within the Indian jurisdiction, specifically focusing on who is entitled to file for a patent. Section 6 delineates the qualifications necessary for an applicant, whereas Section 2(1)(s) clarifies the definition of a 'Person' eligible to apply for a patent, and Section 2(1)(y) addresses the exclusions from being considered the true and first inventor in a patent application. Crucially, Section 2(1)(s) of the Act explicitly states that the entity applying for a patent can be either a 'natural person' or a 'Government' Organization, broadening the conventional definition of a 'person'. The Ayyangar Committee Report of 1959 elucidates the legislative intent behind the Patent Act, emphasizing the recognition of an inventor's right to be mentioned in a patent. The report underscores that moral rights extend to individuals deserving acknowledgment as inventors, even if they lack complete legal rights to the invention. According to the report, engaging with inventors aims to enhance their financial entitlements, even if exclusive rights have been relinquished through contracts. However, AI cannot enjoy the envisioned benefits or claim moral rights as per existing Indian laws, and it lacks recourse for misuse enforcement. Indian Patent Office has not issued specific guidelines for examining AI-related inventions. In a manner consistent with international practices, the Controller General of Patents in India has voiced reservations regarding the recognition of DABUS as a legal entity under Sections 2 and 6.

AI as an Inventor: An Analysis

"We are both created and create. Why cannot our own inventions create?"

The statement above was made by Justice Beach, expressing his opinion that AI should be considered an *inventor* within the global patent law framework. Further, in the landmark case of *Ferid Allani v. Union of India &Ors.*, Justice Pratibha M. Singh observed that in the modern-day digital era, where most innovations are based on computer programming, it is imperative to include these innovations within the patent law framework. Additionally, the 161st Parliamentary Standing Committee Report on the IPR Regime in India recommended revisions within the patent law framework to incorporate AI within its ambit. The committee report acknowledged the escalating popularity of AI and the subsequent increase in patent law-related applications related to AI in India. Thus, it is apparent that governments and courts worldwide, including in India, acknowledge the imperative to integrate AI into the patent law framework.

The primary goal of Indian patent law is to foster innovation and promote progress by providing incentives. Presently, the law does not acknowledge AI as an inventor, giving rise to several challenges. This includes the insufficient motivation for the development of AI and the potential for inaccurately attributing inventorship on a patent application to secure a patent. The absence of robust intellectual property rights to safeguard these AI-generated inventions may discourage their pursuit, thereby withholding potential benefits from the world. Moreover, the denial of patents for AI-created innovations could result in decreased investment in the foundational AI technology, impeding or halting its advancement. Without this motivating factor, investments in the underlying technologies may decline, causing delays in development that might have been avoided if AI inventorship were adequately protected through patents.

In a speculative future scenario, there exists a potential for major corporations and early AI adopters to dominate most ensuing innovations. This scenario is plausible because patent protection holds particular importance for smaller entities or individuals who may face greater obstacles when seeking safeguarding for their developments through trade secrecy. Theoretically, the significance of patent

protection becomes even more pronounced for smaller companies, innovators, or individuals employing AI in their inventive pursuits.

The emergence and ongoing evolution of AI could lead to the concentration of industries based on the timely implementation of effective AI technology. Considering the relative costs associated with the development and upkeep of AI, it is not improbable that initial adopters would be established corporations. In a hypothetical scenario, early adopters with the capability to license their AI technology to others might include terms in the licensing agreements asserting ownership of any intellectual property resulting from the utilization of the AI technology. This could further contribute to the potential monopolization of inventions and the consequent consolidation of industries. In this context, the absence of patents for AI-generated inventions increases the likelihood that established corporations would enjoy the advantages of AI while limiting the prospect of individual ownership due to the substantial costs associated with developing AI technology.

Looking ahead, to address the recognition of AI as an inventor, the potential for monopolization, and the dual goals of incentivizing innovation and advancing research, a proposal is put forth to incorporate compulsory licensing into the patent law framework when acknowledging AI. The grounds for such a license should be similar to that as are prescribed under Section 84 of the Indian Patents Act, 1970. The introduction of compulsory licensing aims to facilitate the effective utilization of AI after a certain prescribed time period, while ensuring fair compensation for those who initially pursue the invention.

Various pricing models can be considered for a compulsory license, including the assignment of a flat royalty rate, the imposition of a flat fee, or the application of licensing terms based on FRAND (Fair, Reasonable, and Non-Discriminatory) principles. Mandating reasonable licensing terms would enable companies or individuals holding patents arising from AI inventorship to guarantee that the value of their invention is duly acknowledged within the licensing arrangements. This approach seeks to strike a balance between fostering AI innovation, preventing monopolistic control, and ensuring fair compensation for inventors in the evolving landscape of artificial intelligence.

Conclusion The contemporary discourse within the realm of patent law revolves around a central and contentious issue: the acknowledgment of AI as a prospective inventor. The recent adjudication by the UK Supreme Court and its consequent denial of patent rights to autonomously generated inventions serve as a focal point, emphasizing the exigency for a nuanced comprehension of AI's role in patent law amid its transformative impact on diverse industries.

The international dialogue surrounding AI inventorship, exemplified notably by the UKSC decision, underscores the intricate challenges associated with harmonizing legal frameworks to accommodate the dynamic capacities of AI. The adjudication, asserting that only a natural person qualifies as an inventor, resonates with analogous sentiments expressed by patent office's globally. This quandary similarly prompts critical scrutiny within the Indian legal landscape, where extant deficiencies in patent law prompt deliberations on the eligibility of AI-generated inventions for legal protection.

In cognizance of the imperative to adapt to the swiftly accelerating pace of AI innovation, the 161st Parliamentary Standing Committee Report in India proffers recommendations for legislative amendments, emphasizing the integration of emergent AI technologies within the purview of The Patents Act, 1970. This aligns with a global paradigm wherein nations contemplate legal revisions to accommodate the burgeoning influence of AI within their patent laws.

The imperative to recognise AI as an inventor is not merely articulated by legal authorities but resonates within the spheres of justice and innovation. The statements proffered by Justice Beach and Justice Pratibha M. Singh underscore the necessity of acknowledging AI's inventive capacity within the contours of patent law. Furthermore, the proposition to institute compulsory licensing concurrently

with the acknowledgment of AI as an inventor reflects a strategic endeavour to balance incentivization for innovation, mitigate monopolization concerns, and sustain continued research and development within the AI domain.

In essence, the assimilation of AI into the fabric of patent law transcends the confines of legal norms; it constitutes a pivotal stride toward ensuring that the dividends of AI innovation are realized, while concurrently fostering a milieu that is equitable, competitive, and conducive to innovation, whether it emanates from human or artificial origins. As the global community contends with these intricate challenges, achieving a nuanced equilibrium stands imperative—one that not only catalyses innovation but also safeguards intellectual property and ensures equitable access to the advances ushered in by the era of artificial intelligence.

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