CAN AI BE AN INVENTOR? THE NEED FOR PATENT LAW REFORM

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Introduction

Human inventions need acknowledgment and endorsement of their work. Humans work for rewards, and this is what Karl Marx said. This psychological push is the basis of intellectual property rights. The word "intellectual property" comes from the human brain, a reflection of the creativity and innovation of the mind. These rights make people invent, and then they give economic benefits to their products. After all, an invention is the result of skills, resources, time, mental effort, and financial investment. Therefore, the core idea behind intellectual property rights is to reward the inventor legally for the effort and innovation that leads to new creations, recognizing the intangible value of their work. Each type of IPR gives special rights to its inventor and or creator to sustain and harvest economic benefits which further motivates skill and societal developments. IPR is a force behind the acceleration of an intellect of the nation.

However, the situation has become increasingly complex since the advent of AI. Intellectual property rights are granted in recognition of the human brain's intellectual contribution. The pivotal question that challenges the current paradigm is whether AI can be recognized as an inventor or whether the use of AI in the invention process can be patented. The emergence of AI has significantly expanded the application of intellectual property rights; however, the existing legal framework remains ill equipped to address these issues, exacerbating the uncertainty. This underscores the urgent need for comprehensive amendments to intellectual property laws on a global scale.

Understanding Patent in AI:

In this article the author will be specific about the "patent". The word patent found its origin from a Latin word patent-em meaning open. A patent is a form of intellectual property that

grants an inventor exclusive right to their invention. A patent does not give right to use the product of invention, rather it excludes others to use it. sine it could be based on the already patented innovation. Such rights allow the inventor to control how his or her invention is made, used, sold, or distributed for a specified period, usually 20 years from the filing date. The uncertainty in the existing paradigm of patent laws is due to the changing meaning of the term "invention." The shift from the traditional interpretation of the word "invention" to a more modern conception has caused confusion. Traditionally the term invention means a novel (new) creation that result from the human ingenuity and provides a technical solution to a problem. The key characteristic of invention are novelty, non-obviousness, and its utility (industrial application). but the advancement in AI changes this interpretation, as AI system now capable of generating novel ideas and solution, the boundaries of what constitutes an inventor are becoming increasingly unclear. The most notable case that give rise to this debate is DABUS CASE. In this case DABUS is an AI software which invented two novel inventions. however patent office worldwide including the U. S patent and trademark office, European patent office, the German patent and trademark office and the UK intellectual property office have ruled that only human beings can be recognized as inventors under the current patent law .These rulings are depend on the assumption that inventorship is inherently tied to natural person who can have legal standing, responsibility, and intent .

Challenges of AI Inventorship:

As discussed, intellectual property is essentially used to encourage the effort and creativity behind inventions by granting exclusive rights. However, in the case of AI-generated inventions, it challenges the traditional model of intellectual property. The fact that AI systems can come up with novel solutions with minimal human intervention means that there is less need for costly, time-consuming mental work and specialized skills, which questions the core purpose of patents, traditionally rewarding human ingenuity. Though still novel and nonobvious, AI-generated inventions do not need human expertise usually considered in determining patent eligibility. The question becomes whether a machine that cannot patent the output of its own inventions can be patented itself. Should patenting the AI system suffice as a means of encouraging the invention's creation or do inventions generated by the machine itself need to be patent-eligible?

An important feature of an invention is that it has to be non-obvious so that the invention could

not be obvious to one with ordinary skills in the area of expertise. With respect to AI-generated inventions, generally the system is given a command, and then it generates the result. South Africa, in its turn, argues that the command given to the AI requires human skills and critical thinking because it is the knowledge and creativity of the human which actually drives the output from the AI. However, the United States argues that the command can be given by anyone and that the result the AI generates is obviously apparent because the answer already lies within the system. This is the view in which only the command is issued for the AI to produce the result. This now raises an important question about the inventiveness of AI-generalcy in its creations. If the process was just a matter of commanding an AI to produce something that already existed, can it still be said to be an inventive step? Or does the ease by which anyone can command the AI undermine the originality required for patent eligibility? The ongoing debate between these two perspectives underscores growing complexities in defining non-obviousness and the role of human creativity in the age of artificial intelligence.

Ethical and philosophical consideration:

The debate around AI inventorship raises complex legal, ethical, and practical concerns, necessitating a global framework that addresses these challenges. Although South Africa recognized AI as an inventor in the DABUS case, the U.S. and Europe continue to insist on human inventorship. This divergence is based on the belief that inventorship requires intent and legal standing—qualities AI inherently lacks. However, the old view faces increasing pressure because AI systems generate novel solutions with minimal human intervention. Allowing inventions from AI to be patented may significantly boost innovation, particularly in fields such as technology and medicine. However, it also poses practical challenges in terms of patent office's being overwhelmed by applications and whether the output of AI meets the rigid standards of novelty and non-obviousness.

The critics found that the bestowal of patents on AI machines will devalue human creativity and result in monopolies with large corporations dominating the innovation landscape by their control of AI systems. Accessibility and equity in patent protection further come into question. Questions also arise in issues about ownership. If AI machines cannot hold patents because of the lack of legal personhood, to whom does ownership belong-its developers, operators, or users? Co-ownership models might work, but the question would then be about who is accountable and who shares what portion of revenue.

Knowing how AI "invents" something "new" is also essential. Because most AI systems use data that exists elsewhere and algorithms created elsewhere, one may wonder whether such an output is really an invention or merely optimization.

Such issues call for reforms in a direction more towards the nature of the invention than the origin. Prioritizing innovation over inventorship will better reflect the realities of modern technology by using patent laws. However, legislative changes must be accomplished with caution to avoid unforeseen consequences. Policymakers need to engage with stakeholders in legal, technological, and business affairs and ensure reforms meet goals such as fostering innovation while preserving equity and accountability.

As AI continues to redefine the boundaries of creativity, adapting patent laws to accommodate this technological shift is not only necessary but also an opportunity to shape the future of intellectual property in a way that balances progress with fairness. Reforming the system to recognize AI as a co-inventor could ensure that innovation thrives while addressing concerns about accountability and ownership.

Reforming Patent Laws for AI:

Here it can be observed that the emergence of AI technology is an extremely challenging reality for the traditional framework of intellectual property law. The limitation on patents to human inventors continues to be the status quo, while AI systems increasingly develop novel inventions. Several legal complexities lie in this scenario, which continue to pose challenges for those in the domain. Though the patent system remains effective for centuries, it has increasingly dawned that the current existing laws are ill-suited to the realities of AI-driven innovations.

One of the key issues with patentability under an AI-generated invention is who would own the patent if the AI system were credited as an inventor. AI systems do not have legal personhood, so they cannot own property, such as patents. This raises a few critical questions like, who would hold ownership of the patent if the AI system is the inventor? Who would be responsible for filing the patent application and enforcing the rights granted? How would patent authorities handle the potentially overwhelming number of patent applications for AI-generated inventions? With all these challenges, patent law has to be amended to recognize AI systems as possible co-inventors. This is in line with the basic principle of patent systems, which is to

encourage innovation by focusing on the invention itself, rather than who or what came up with it. Here's why and how such reforms should be considered:

Focus on Invention, Not Inventorship: The primary goal of patent law is to encourage technological advancement. It should focus on the innovation rather than on whether it was generated by a human or an AI. Shifting the focus would allow the legal system to better support modern inventions that involve AI technology.

Promote Innovation and Investment: Permitting AI systems to be named as inventors might foster more investment in AI-related R&D, leading to an explosive growth of AI-generated technological advancement. This will boost economic growth, create new industries, and serve the same purpose patents have served for human-made inventions historically.

How to Implement the Reform?

Remove the requirement that inventors be human: Patent law should no longer require that the inventors be human. This would open up the possibility for AI systems to be regarded as co-inventors with their human creators. In making this adjustment, patent laws could better reflect the current reality of technology.

Clarify Ownership and Responsibility: Determining who owns the patent will be a very important component of reform when AI is part of the creation process. A way this could be accomplished is to establish co-ownership for both the developers of the AI system and the owner or operator of the AI when it generates the invention. This would ensure that all those people contributing to the development and operation of the AI are adequately compensated.

Ownership Solutions and Concerns:

Ownership of a patent in the traditional patent system is beginning with the inventor However, as related to AI research, the ownership becomes more than bit complex. Here are some solutions proposed:

Human or Corporate Co-Ownership: The human or corporate entities carrying out the development or training of the AI may be accorded co-ownership rights to the patent. In fact, it is these technical, intellectual, and financial entities that provide the resources and support for creating the AI system which generates the invention.

Rewarding Contributors: It could also make sense to reward those whose financial, intellectual, or technical contributions were essential to the AI's creation. This could involve granting ownership to the legal person who played a pivotal role in the AI's operation.

However, such changes are not without concerns. Significant revisions to the legal principles underlying patents would be required, which could introduce new uncertainties. Policymakers must carefully consider these options to avoid unforeseen consequences.

Potential Repercussions and Moving Forward

Introducing reforms that accommodate AI-generated inventions would require massive legislative changes. Policymakers must consider the potential ripple effects these changes may have on other areas of intellectual property law, such as copyright and trademarks, which may also face similar challenges as AI continues to evolve.

Such change in policies should be supported by any sort of inquiry that is undertaken to acquire the views of various stakeholders from the legal, technological, and business sectors. That would enable policymakers to comprehend how AI impacts the innovation ecosystem and construct a reform framework which should not conflict with the set goals of policy.

Conclusion:

Hence, although the reform of patent law in regard to AI-generated inventions poses challenges, it also provides a lot of opportunities for fostering innovation. Any changes to the patent system must be made in such a way that they continue to incentivize technological progress while keeping pace with the advancements in AI technology.

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