Issues relating to Demystifying Rights of AI Generated Inventions with the support of DABUS in India- an analyse

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Abstract- Artificial intelligence (AI), known by some as the industrial revolution (IR) 4.0, is going to change not only the way we do things, how we relate to others, but also what we know about ourselves. This article will first examine what AI is, discuss its impact on industrial, social, and economic changes on humankind in the 21st century, and then propose a set of principles for AI bioethics. The IR1.0, the IR of the 18th century, impelled a huge social change without directly complicating human relationships. Modern AI, however, has a tremendous impact on how we do things and also the ways we relate to one another. Facing this challenge, new principles of AI bioethics must be considered and developed to provide guidelines for the AI technology to observe so that the world will be benefited by the progress of this new intelligence.

INTRODUCTION

The development of technology as well as permanently changing economic and social conditions pose various challenges for international, Indian and various national legislations. One such issue raised by the extremely rapid and unpredictable development is due to the swift development in technology related to artificial intelligence (AI). Technologies related to AI have implications on all areas of law. Hence, in order to ensure the changes brought about by these developments and prevent disruptions to the economy and social order, an appropriate ecosystem is the need of the hour. AI is increasingly present in all areas of the economy and our daily lives, for example, an open AI chat bot – ChatGPT or Google search engine. The broad use of AI can only be secure if it is founded on suitable legal regulation; capable of understanding and limiting its impact on daily life; and ensures suitable enforcement. Artificial Intelligence as an Inventor of Patents To start with, it is first worth defining what AI is.

Definition

AI is defined by two basic concepts: autonomy and adaptivity. Autonomy in AI means that the AI can perform tasks in complex environments without constantly following user instructions, whilst adaptivity in this context means that AI has the ability to improve performance by learning from experience. In general, artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and automatically taking some degree of actions to achieve specific goals. Basic requirements to qualify as an Inventor in India: One of the biggest challenges of AI innovation is that it has the potential to completely change the nature of innovation[1]. In this respect, there are several important aspects to consider while dealing with the issues related to inventorship of AI.

History of AI

The beginning of modern AI research can be traced back to John McCarthy, who coined the term "artificial intelligence (AI)," during at a conference at Dartmouth College in 1956. This symbolized the birth of the AI scientific field. Progress in the following years was astonishing. Many scientists and researchers focused on automated reasoning and applied AI for proving of mathematical theorems and solving of

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1.Nick B, Yudkowsky E. The Ethics of Artificial Intelligence. In: Keith Frankish, William Ramsey, editors. Cambridge Handbook of Artificial Intelligence. New York: Cambridge University Press; 2014.

algebraic problems. One of the famous examples is Logic Theorist, a computer program written by Allen Newell, Herbert A. Simon, and Cliff Shaw, which proves 38 of the first 52 theorems in "Principia Mathematica" and provides more elegant proofs for some[2]. These successes made many AI pioneers wildly optimistic, and underpinned the belief that fully intelligent machines would be built in the near future. However, they soon realized that there was still a long way to go before the end goals of human-equivalent intelligence in machines could come true. Many nontrivial problems could not be handled by the logic-based programs. Another challenge was the lack of computational resources to compute more and more complicated problems[3]. As a result, organizations and funders stopped supporting these under-delivering AI projects.

Evolution of AI

AI came back to popularity in the 1980s, as several research institutions and universities invented a type of AI systems that summarizes a series of basic rules from expert knowledge to help non-experts make specific decisions[4]. These systems are "expert systems." Examples are the XCON designed by Carnegie Mellon University and the MYCIN designed by Stanford University. The expert system derived logic rules from expert knowledge to solve problems in the real world for the first time[5]. The core of AI research during this period is the knowledge that made machines "smarter." However, the expert system gradually revealed several disadvantages, such as privacy technologies, lack of flexibility, poor versatility, expensive maintenance cost, and so on[6]. At the same time, the Fifth Generation Computer Project, heavily funded by the Japanese government, failed to meet most of its original goals. Once again, the funding for AI research ceased, and AI was at the

second lowest point of its life. In 2006, Geoffrey Hinton and coworkers made a breakthrough in AI by proposing an approach of building deeper neural networks, as well as a way to avoid gradient vanishing during training[7]. This reignited AI research, and DL algorithms have become one of the most active fields of AI research.

Indian Patent Act, 1970

According to Section 2 and Section 6 of the Indian Patent Act, 1970 elaborates the criteria for recognizing an inventor and the person as an applicant who can file for a patent in the Indian jurisdiction. In particular, Section 6 provides information regarding a person entitled to apply for a patent. Section 2(1)(s) provides information regarding who can be referred to as a 'Person', whilst Section 2(1)(y) discloses those who cannot be a true and first inventor while filing a patent application. Additionally, it is pertinent to note that Section 2(1)(s) of the Act clearly states that the person filing for a patent may be either a 'natural person'; or any 'Government' Organization. However, it is interesting to note that the term 'person' is not merely limited to any natural person and/or Government but also includes the reference to Government along with other entities that can claim to be the true and first inventor of the invention. It can also be construed that anybody or anything that is the first and true inventor of the invention qualifies as the 'person' for whom a patent application is being submitted. Although Section 2(1)(y) mentions who cannot be an inventor, is unclear who can be considered the actual and original inventor of the AI-generated invention. Thus, the below mentioned Indian case law with combination of the Patent Act specifies the basic requirement for being an inventor in India.

Ayyangar Committee Report of 1959

2. Joseph W. Computer Power and Human Reason from Judgement to Calculation. San Francisco: W H Freeman Publishing; 1976.
3. Kaplan A, Haenlein M. Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. Business Horizons. 2019;62:15–25.
4. Dina B. "Microsoft develops AI to help cancer doctors find the right treatment" in Bloomberg News. 2016

5. Nilsson JN. Principles of artificial intelligence. Palo California: Morgan Kaufmann Publishers; 1980.
6. Delcker J. Politico Europe's artificial intelligence correspondent told DW News in DW News on Black Box of Artificial Intelligence. 2018. [Last accessed on 2024 March 15]. Available from https://mdwcom/en/can-ai-be-
7 Nils N. Artificial Intelligence: A New Synthesis. Morgan Kaufmann; 1998.

Further, the Ayyangar Committee Report of 1959 discloses the legislative intent behind the Patent Act, where the report addresses the intent of mentioning an inventor as a matter of right of the inventor for a particular patent. The report emphasizes that any person who has a moral right to be named as an inventor, even though he might not have all the legal rights over the invention. According to the report, the idea of approaching an inventor about their creation is to help the inventors increase the financial value to which they are legally entitled, even if they may have given up their exclusive rights through contracts or agreements[8]. However, the AI can neither luxuriate in the benefits envisioned in the legislative intent, nor it can entitle the moral rights under prevailing Indian laws or enforce misuse.

Inventor must be a natural person

Although the current international, Indian and various national regulations clearly state that the inventor must be a natural person. In this regard, it is worth considering on the extent to which this provision will serve the primary purpose of the patent system in the social and economic conditions of the near future. The purpose of the patent system is to make inventions widely known and useful to society through compulsory publication, and to ensure that the knowledge becomes known to everyone and useful to society, so that the technology can further be developed[9]. The right holder acquires an exclusive right in the market for a limited period under certain conditions for such patented invention, and thus an economic interest attached to it is also created. Therefore, it is necessary to think what if in the future, inventions created by AI are removed from the scope of protection[10]. However, there is a high risk that a lot of knowledge can remain a trade secret for AI-generated invention, which could have the effect of slowing down the development of technology.

Ascertaining the "Inventor" in AI invention:

Patent Application naming AI as an Inventor - DABUS. More than a dozen nations, including the European Union, received two patent applications in 2019 with DABUS (Device for the Autonomous Bootstrapping of Unified Sentience) listed as the inventor. The applications listing DABUS as the inventor was claimed in the name of a natural person as an applicant –Dr. Stephen Thaler. It purportedly came up with two distinct inventions without any help from humans, and as a result, it was listed as an inventor on patent applications for both inventions[11]. The idea of assigning inventorship to an AI-machine not only created new legal challenges, but also raised global intellectual property (IP) concerns over whether an AI machine can be named as the inventor of its AI-related patents.

South African Patent Office

The South African Patent Office and the Federal Court of Australia are the two jurisdictions where the DABUS application was filed that have so far recognized and accepted DABUS as an inventor, whereas the European Patent Office (EPO), the United Kingdom Intellectual Property Office (UKIPO), the United States Patent & Trademark Office (USPTO), and other IP offices have not, by asserting that an inventor must be a natural person. The following segments gives a brief overview of the AI-inventorship related to the decision in various IP offices.

Europe and United Kingdom:

Unlike South Africa and Australia, the European Patent Office (EPO) and United Kingdom Intellectual Patent Office (UKIPO) have refused to grant inventorship rights to an AI machine. The EPO reasoned that the term "inventor" in European Patent Convention refers only to a natural person[12].

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8. Jerry K. Artificial Intelligence – what everyone needs to know. New York: Oxford University Press; 2016.

9. Scoping study on the emerging use of Artificial Intelligence (AI) and robotics in social care published by Skills for Care. [Last accessed on 2024 Februarry 25]. Available from: wwwskillsforcareorguk

10. Roger C. Schank.Where's the AI. AI Magazine. 1991;12:38.

11. Russell SJ, Norvig P. Artificial Intelligence: A Modern Approach. Upper Saddle River, New Jersey: Prentice Hall; 2009.

12. European Commission on Ethical Guidelines for Trustworthy AI. The High-Level Expert Group on AI

India:

In India, the Controller General of Patents recently recorded objections against AI-generated invention (DABUS) having patent application numbered 202017019068. The examination report cited objection to the DABUS patent application under Section 2 and Section 6 of the Patents Act 1970. The Controller General of Patents raised an objection in the Examination Report, stating that application lacks from passing formal and technical review under Sections 2 and 6 of the Patents Act, 1970 – as DABUS is not recognized as a person. The Controller General of Patents laid out objections in the Examination Report of Thaler's Indian patent application, stating that the application could not pass formal and technical examination under Section 2 and Section 6 of the Patents Act, 1970 – as DABUS is not recognized as a person. The same was supported by a number of legal precedents, such as in V.B. Mohammed Ibrahim v. Alfred Schafranek[13], where the Court ruled that neither a corporation nor a financing partner can be the sole inventor, and inter alia held that only a natural person who actually contributes their skill and knowledge to the innovation is able to legally claim the inventorship. The applicant responded to the aforementioned objections raised in FER regarding the inventorship of AI by asserting that DABUS is the true inventor/devisor of the invention and that, in accordance with the Indian Patent Act, the applicant have named the inventor/devisor of the invention at the time the application was filed. The definition of inventorship in various jurisdictional procedures is geared toward natural beings with the intention of preventing company invention, according to the the response's further explanation of the notion. It was not the outcome of a careful consideration of autonomous machine creation, hence it should not be prohibited from retaining intellectual property rights in cases where no normal person meets the requirements of an inventor[14].

CONCLUSION

AI is here to stay in our world and we must try to enforce the AI bioethics of beneficence, value upholding, lucidity and accountability. Since AI is without a soul as it is, its bioethics must be transcendental to bridge the shortcoming of AI's inability to empathize. AI is a reality of the world. It has to be taken note of what Joseph Weizenbaum, a pioneer of AI, said that we must not let computers make important decisions for us because AI as a machine will never possess human qualities such as compassion and wisdom to morally discern and judge. Bioethics is not a matter of calculation but a process of conscientization[15]. Although AI designers can up-load all information, data, and programmed to AI to function as a human being, it is still a machine and a tool. AI will always remain as AI without having authentic human feelings and the capacity to commiserate. Therefore, AI technology must be progressed with extreme caution. As Von der Leyen said in White Paper on AI – A European approach to excellence and trust: "AI must serve people, and therefore, AI must always comply with people's rights as High-risk AI. That potentially interferes with people's rights has to be tested and certified before it reaches our single market". Hence government also enacts legislations for the protection of society from the enhanced development of AI technology.

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presented this guideline which stated three requirements: lawful, ethical and robust.

13 AIR 1960 Kant 173: AIR 1960 Mys 173.

14. Rory CJ. Stephen Hawking warns artificial intelligence could end mankind BBC News Wikipedia, the Free Encyclopedia on Artificial Intelligence. 2014.

[Last accessed on 2024 March 23]. Available from: https://enwikipediaorg/wiki/

15. Joseph W. Computer Power and Human Reason from Judgement to Calculation. San Francisco: W H Freeman Publishing; 1976.