

ARTIFICIAL INTELLIGENCE AND IPR – A ROAD AHEAD

Sahil Mahajan*

ABSTRACT

Artificial intelligence (AI) is a very advanced technology and rapidly growing. AI is taking a technology to another level which has its advantages and disadvantages. Many people and industries worldwide have started using this technology to make their work easier. However, the rapid growth of Artificial Intelligence (AI) technology in various industries has raised legal and ethical concerns, with intellectual property rights (IPR) as a primary concern. Intellectual Property (IP) Laws only talk about the work created by the human intellect, nothing is mentioned about the AI-generated work.

This research paper explores the challenges AI technology poses on the legal framework, specifically on Intellectual Property Rights (IPR). The AI has raised questions about inventorship and authorship of the AI-generated work. The paper will also highlight:

- How the different countries in the world, with India as a focal point, are dealing with AI-generated creations?
- Are there any specific laws made by the countries to deal with AI-generated substances?

The research method used in this paper is that we have taken the information from reliable sources and also utilized help from decided cases. In conclusion, this research paper adds to the ongoing discourse on the relationship between AI and IPR by employing a rigorous methodology that integrates data analysis from reliable sources and the examination of relevant legal cases. As AI technology is rapidly growing and continuously reshaping the ways of working for industries and individuals, our study focuses on the necessity of a flexible IPR framework that balances innovation incentives with the rights of creators, innovators, and society as a whole.

Keywords: Artificial Intelligence (AI), Intellectual property rights (IPR), Technology, Legal framework.

*BA LLB, FIRST YEAR, DHARMASHASTRA NATIONAL LAW UNIVERSITY, JABALPUR.

INTRODUCTION

In Today's rapidly evolving technological world, Artificial intelligence has emerged as a pivotal force reshaping industries, economies, and societies. AI will also greatly impact Intellectual property Rights (IPR). In simple words, IPR provides exclusive rights to humans for their creative or innovative work.

Let's talk about what is artificial intelligence. We all are aware of the fact that machines can learn and work faster than humans. Artificial intelligence (AI), means the intelligence of machines as opposed to the intelligence of humans. Artificial intelligence (AI), is not a new term and not a new technology. Artificial intelligence (AI), a term coined by Professor John McCarthy in 1955, was defined by him as "the science and engineering of making intelligent machines". In the year 1955, the Allen Newell and Herbert A. Simon created the "first artificial intelligence program" which was named as "Logic Theorist".¹ It was built to mimic the solving skills of human mathematicians, making it the genesis of heuristic programming.² It could prove mathematical theorems like the ones used in Russel and Whitehead's Principia Mathematica.³

There are generally two types of Artificial intelligence (AI), Weak AI and Strong AI. Weak AI also called Narrow AI or Artificial Narrow Intelligence (ANI)- is AI trained and focused to perform specific tasks.⁴ There are many examples of weak AI such as Apple's Siri, Amazon's Alexa, and Autonomous vehicles. Strong AI is made up of artificial general intelligence (AGI) and Artificial superintelligence (ASI).⁵ It is a theoretical form of AI where a machine would have an intelligence equal to humans; it would have a self-aware consciousness that has the ability to solve problems, learn, plan for the future, and can easily surpass the intelligence and ability of the human brain.⁶ So we can say that at this point of time, strong AI does not exist and is entirely theoretical.

¹ 'History of Artificial Intelligence - javapoint' (*javapoint.com*) <<https://www.javatpoint.com/history-of-artificial-intelligence>> accessed 9 August 2023

² 'Logic Theorist Explained – Everything You Need To Know' (*History-computer*, 31 July 2023) <<https://history-computer.com/logic-theorist/>> accessed 25 July 2023

³ *ibid*

⁴ 'What is artificial intelligence (AI)?' (*IBM*) <<https://www.ibm.com/topics/artificial-intelligence>> accessed 9 August 2023

⁵ *ibid*

⁶ *ibid*

Artificial intelligence is rapidly growing and has compelled us to think about our intellectual property laws. In 1883, Intellectual property (IP), laws came into existence through the Paris Convention including patents, trademarks, industrial designs, utility models, service marks, trade names, geographical indications, and the repression of unfair competition.⁷ Since then IP laws have become an important part of the legal framework and also keep on changing from time to time. With the emergence of AI, this study aims to explore the challenges that AI has brought for IPR and whether there are currently any laws available to address the confusion surrounding AI-created inventions.

IPR AND ARTIFICIAL INTELLIGENCE

IPR is a tool to protect the inventions of the human mind. Intellectual property rights (IPR) give the legal rights to the inventor or creator to protect his invention for a limited period of time. According to WIPO, Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names, and images used in commerce.⁸ IPR protects the symbols, artistic works, literary works, scientific creations, etc... IPR does not give protection to which is not created by human intellect. So, this raises the question What if something is created or invented by Artificial intelligence? Artificial intelligence has turned out to be a new area for intellectual property rights.

According to John McCarthy, “AI is the science and building of making shrewd machines, particularly clever PC programs.” Artificial intelligence is not a new concept, but now it is growing very fast. There have been a lot of developments made in the area of AI since its origin.

Sophia: It is a humanoid robot created by Hanson Robotics. It is one of the greatest achievements in the area of artificial intelligence. Sophia was also granted citizenship in Saudi Arabia in 2017, which made her the first robot to have citizenship in a country. Sophia personifies the dreams for the future of AI.⁹ As a unique combination of science, engineering, and artistry, Sophia is simultaneously a human-crafted science fiction character depicting the future of AI and robotics, and a platform for advanced robotics and AI research.¹⁰

⁷ ‘Paris Convention for the Protection of Industrial Property’ (WIPO) <<https://www.wipo.int/treaties/en/ip/paris/>> accessed 10 August 2023

⁸ ‘What is Intellectual Property (IP)?’ (WIPO) <<https://www.wipo.int/about-ip/en/>> accessed 12 August 2023

⁹ ‘Sophia’ (Hanson Robotics) <<https://www.hansonrobotics.com/sophia/>> accessed 13 August 2023

¹⁰ ibid

Sana: It is a humanoid robot and a recent development in the field of AI in India. She is India's first AI anchor introduced by the India Today group. She is bright, gorgeous, ageless, tireless, and speaks in multiple languages.¹¹

ChatGPT: ChatGPT was created by OpenAI, an AI and research company.¹² The company launched ChatGPT on November 30, 2022.¹³ It is an AI-driven technology and can assist in so many ways like research work, composing emails, coding, and more. Since its inception, it has shaken the entire technology world and gained popularity. However, people are debating whether ChatGPT can be cited as a co-author or not. In my opinion, ChatGPT is an artificial Intelligence (AI), not a person, hence cannot be cited as a co-author.

So there have been a lot of developments in the field of AI and it should be seen as the beginning of a new era. AI is growing very fast and has become one of the most promising features of technology but the question arises What if anything is created by AI, Will it be eligible for intellectual property rights (IPR) protection?

CURRENT SITUATION

Currently, there is no particular law in India or outside India, that can answer who will be the intellectual property rights (IP) holder for a substance made by AI. Many applications are emerging in which AI is cited as the inventor, and currently, this is being examined on a case-to-case basis. IP rights are granted to humans only, however, the definition of IP neither explicitly excludes nor includes AI.

USA: On April 22, 2020, the USPTO issued a pair of decisions denying petitions to name a device for autonomous bootstrapping of unified sentience (DABUS), an AI system, as the inventor.¹⁴ The USPTO's decision explained that under current U.S patent laws, inventorship is limited to a Natural person(s).¹⁵ Specifically, the federal circuit held that 35 U.S.C. 100(f)

¹¹ 'Conclave 2023: India Today Group's Vice Chairperson Kalli Purie launches Aaj Tak's first AI anchor Sana: WATCH' (*India Today*, 18 March 2023) <<https://www.indiatoday.in/india/video/conclave-2023-india-today-groups-vice-chairperson-kalli-purie-launches-aaj-taks-first-ai-anchor-sana-watch-2348518-2023-03-18>> accessed 13 August 2023

¹² Sabrina Ortiz, 'What is ChatGPT and why does it matter?' (*ZDNET*, 14 August 2023) <<https://www.zdnet.com/article/what-is-chatgpt-and-why-does-it-matter-heres-everything-you-need-to-know/>> accessed 15 August 2023

¹³ *ibid*

¹⁴ 'Request for Comments Regarding Artificial Intelligence and Inventorship' (*Federal Register*, 14 Feb 2023) <<https://www.federalregister.gov/documents/2023/02/14/2023-03066/request-for-comments-regarding-artificial-intelligence-and-inventorship>> accessed 15 August 2023

¹⁵ *ibid*

defines an inventor as “the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”¹⁶ At this point in time US does not consider AI as a legal person, hence it cannot be credited as an inventor.

UK: In the UK, copyright protection extends to types of creative endeavors that are recorded in some way, which includes original literary, dramatic, musical, or artistic works.¹⁷ Under the CDPA act, of 1988, if any substance is created by a machine, then that work is protected but the IP rights are held by the creator of the machine. A consultation ran from 20 October 2021 – 7 January 2022, where it was concluded that as the use of AI to generate creative content is still in its early stages, there is no need to change the existing protection for computer-generated works (CGWs).¹⁸ So the UK is still monitoring the situation and has not created any specific law in the context of AI-generated creations. Hence, under UK law, AI is not considered as the creator.

EU: In contrast to the UK, the EU does not offer copyright protection for AI-generated creative works.¹⁹ The Court of Justice of the European Union has not considered the copyrightability of computer-generated works but has confirmed that copyright protection requires some form of human input because it must reflect the author’s personality.²⁰ Further, on December 21, 2021, the legal board of appeals dismissed the appeal in which an artificial intelligence system called DABUS was designated as an inventor in the application.²¹ It can be said the European Union Patent Office (EPO) is not in Favor of considering AI as an inventor. As of now, the EU is of the opinion that anything that is solely generated by artificial intelligence without any human intervention cannot be acknowledged as a creation or invention.

¹⁶ *ibid*

¹⁷ Maria-Elena Cacace, ‘ChatGPT – Can The AI Generated Content Output Be Protected By Copyright In The UK?’ (2023) *Mondaq* <<https://www.mondaq.com/uk/copyright/1278498/chatgpt--can-the-ai-generated-content-output-be-protected-by-copyright-in-the-uk>> accessed 15 August 2023

¹⁸ ‘Artificial Intelligence and Intellectual Property: copyright and patents: Government response to consultation’ (GOV.UK, 28 June 2022) <<https://www.gov.uk/government/consultations/artificial-intelligence-and-ip-copyright-and-patents/outcome/artificial-intelligence-and-intellectual-property-copyright-and-patents-government-response-to-consultation#copyright-in-computer-generated-works>> accessed 16 August 2023

¹⁹ Arty Rajendra et al., ‘Generative AI: is its output protectable by intellectual property rights?’ (2023) *Lexology* <<https://www.lexology.com/library/detail.aspx?g=8f5bfa2e-4af0-4ec9-b08f-507ff5ec121a#:~:text=Patentability%3A%20the%20EU&text=An%20invention%20generated%20autonomously%20by,and%20will%20not%20be%20patentable.>> accessed 16 August 2023

²⁰ *ibid*

²¹ ‘Artificial Intelligence and IP’ (WIPO) <https://www.wipo.int/about-ip/en/artificial_intelligence/strategy-search.jsp?territory_id=&policy_id=2434> accessed 20 August 2023

Japan: Japan has been very advanced in regulating AI with IPR. The Japanese government recently released an intellectual property promotion strategy that indicates a policy change from supporting artificial intelligence to limiting technology.²² They also made changes in their copyright law article 30-4 which used to allow the authors to stop AI from using their work without authorization, however, the new blueprint relaxes the said protection for copyrighted works, and is meant to allow AI to learn at its development stage to use a copyrighted work without authorization from the author.²³ So we can say Japan is making a significant change in its laws in order to provide clarity on Artificial intelligence. However, there are many other areas in which change has to be made to remove the ambiguities.

South Africa: In 2021, South Africa granted a patent to the machine learning system ‘DABUS’, which has created an interlocking food container.²⁴ This decision was criticized globally as AI lacks the necessary legal standing to qualify as an inventor. In my opinion, South Africa still needs to amend or change its IPR policy in order to regulate AI inventions.

INDIA'S IPR POLICY ON AI

AI-generated inventions can create unique challenges in the area of intellectual property rights, as they raise questions about authorship, ownership, and the role of human creativity in the innovation process. Artificial intelligence is rapidly growing, due to which we need to create specific laws that can provide clarity on AI-generated inventions. As of now, there is no specific law in this regard in India.

One of the main IPR issues related to AI is patentability. Section 2(1)(j) of the Patent Act, 2005, defines the “invention” as a new product or as a process involving an inventive step and capable of industrial application.²⁵ AI-related inventions can be difficult to categorize, which causes some uncertainty around their patentability.

Section 3 of the Indian Patent Act 1970 defines “what are not inventions”. It means anything which falls under the ambit of section 3 cannot be considered an invention. According to

²² Excel Dyquiango, ‘Japan tackles copyright infringement linked to AI technology’ (*Asia IP*, 10 July 2023) <[²³ *ibid*](https://asiaiplaw.com/section/news-analysis/japan-tackles-copyright-infringement-linked-to-ai-technology#:~:text=Japan's%20AI%20restrictions%20are%20less,works%20without%20the%20owners'%20consent.> accessed 18 August 2023</p></div><div data-bbox=)

²⁴ Mesgandren Naidoo, ‘In a world first South Africa grants patent to an artificial intelligence system’ (*World Economic Forum*, 12 Aug 2021) <[²⁵ Indian Patent Act 2005, s 2\(1\)\(j\)](https://www.weforum.org/agenda/2021/08/south-africa-grants-patent-artificial-intelligence/> accessed 18 August 2023</p></div><div data-bbox=)

section 3(K) of the Indian Patent Act, 1970, any mathematical or business method or a computer program per se or algorithms are not patentable in India.²⁶ The office of the controller general of patents, designs, and trademarks issued the COMPUTER RELATED INVENTION (s) guidelines.²⁷ The aim of this document is to provide guidelines for the examination of patent applications in the field of CRIs by the Indian patent office so as to further foster uniformity and consistency in the examination of such applications.²⁸ So the objective of this document was to give clarity on what should be excluded under section 3(k) so that the computer-related invention's (CRIs) applications can be examined speedily.

Now if we talk about copyright issue in the area of AI-generated work, then as of now copyright law do not safeguard any creation wholly generated by artificial intelligence. Section 2(d)(iv) defines "author" which says in relation to any literary, dramatic, musical, or artistic work which is computer-generated, the person who causes the work to be created.²⁹ The problem in this definition is 'the person who causes the work to be created.' According to this definition, it means if a work is computer-generated, it will only be eligible for copyright when a person has worked on it closely. A work wholly generated by a computer will not be eligible for copyright. Thus, the current copyright law does not talk about AI.

The current IPR laws in India are not consistent with AI inventions. The world is changing, and so is technology. Today we all are surrounded by electronic gadgets or technology, whether it is mobile phones, computers, etc... It is a proven fact that today we all are dependent on technology in one way or another. The Supreme Court of India invited bids from experienced and reputed firms/organizations for the design, development, and implementation of artificial intelligence (AI) solutions; tools for transcribing arguments and court proceedings at the court.³⁰ AI has shaken the entire technology world and will keep on growing. We have many laws; all these laws only talk about the rights and liabilities of humans or persons. So, does this mean that the IPR (intellectual property rights) system or laws will need to be replaced?

²⁶ Indian Patent Act 1970, s 3(K)

²⁷ 'Guidelines for Examination of computer Related Inventions (CRI's)' (*ipindia.gov.in*) <https://ipindia.gov.in/writereaddata/Portal/IPOGuidelinesManuals/1_86_1_Revised_Guidelines_for_Examination_of_Computer-related_Inventions_CRI_.pdf> accessed 20 August 2023

²⁸ *ibid*

²⁹ The Copyright Act 1957, s 2(d)(iv)

³⁰ 'Supreme Court invites bids to implement AI to transcribe arguments and proceedings' (*SCC Blog*, 23 may 2023) <<https://www.scconline.com/blog/post/2023/05/23/sc-invites-bids-for-ai-tools-to-transcribe-arguments-and-proceedings-legal-news/>> accessed 21 August 2023

According to me, existing IPR laws may not be completely abolished, but yes, as technology advances, we will need to introduce some new laws in the field of IPR.

IMPLICATIONS OF GRANTING INTELLECTUAL PROPERTY RIGHTS TO AI

As we have discussed the current IPR scenario of different countries, now let's discuss the implications of granting intellectual property rights to Artificial intelligence-generated substances. The first question posed by the AI-generated substances is who should be considered as the author or creator of the work. Existing IPR laws are designed to regulate Human creations, so determining ownership or authorship becomes difficult when AI is involved. The second question posed by AI-generated substances is who will take the liability or accountability if any harm is caused by the creation of artificial intelligence. Thirdly, there are also ethical concerns regarding granting IPR to AI, especially in the medical sector. What if AI makes a wrong diagnosis or treatment recommendation, who is ultimately responsible? Fourthly, to get IPR protection the work should be inventive or original but following this criterion might be difficult in the case of AI-generated substances. AI generally uses data sets or existing work; it will be difficult to determine what is original and what is replica.

However, Artificial Intelligence technology has positive impacts as well. People are using AI technology to ease their work tasks. Artificial intelligence technology is also being employed in industries such as automobiles, healthcare, etc. Chatbots have emerged that are assisting companies in resolving customer queries. Auto-driven vehicles are also introduced in the market which aims to reduce road accidents and increase safety.

CONCLUSION

In conclusion, this study has successfully highlighted the current IPR position related to artificial intelligence (AI) generated work all over the world. As artificial intelligence (AI) is advancing, it has started to create implications for intellectual property rights (IPR). AI is bringing a revolution in the world, whether it's industries or people, everyone is using AI. Currently, AI is being used in many industries such as healthcare industries, manufacturing, retail, transportation, entertainment, and more.

Artificial Intelligence (AI) has also started making new inventions and is also creating new content including poetry, text, image caption, and more. The current IPR system is not competent to regulate the AI-generated inventions. Almost every country in the world is

conducting or holding meetings, seminars, and conferences to create new or amend existing intellectual property (IP) laws. Although Countries have started making progress towards regulating AI-generated work, till now, almost every country believes that AI cannot be granted ownership rights as it involves questions about authorship, creativity, and accountability. Artificial intelligence (AI) will likely to evolve in the future and no country has made a specific law that can explain the exact status of AI-generated inventions. However, South Africa became the first country that grant a patent to an invention created by the Artificial intelligence (AI) system. This decision of South Africa has faced criticism all over the world, as almost every country like India, the UK, the EU, etc. has denied IPR protection for a work that is solely created by artificial intelligence without any human intervention.

When you give a machine the capacity to learn styles from a large database of content, it will become even better at mimicking humans.³¹ And given enough computing power, soon we may not be able to distinguish between human-generated and machine-generated content.³² We are not yet in that stage but when we do, we need to be prepared for that as well. As of now, we can say that countries all over the world are struggling to decide the cases related to AI-generated substances.

In my opinion, it may happen in the future that AI-generated work will not be denied inventorship or authorship solely on the basis of an argument that AI is not a human creator or a legal person. We all are sure about one thing AI technology is going to be very advanced in the future so now is the time to take the necessary steps to regulate the AI-creations. We need to make some laws that can acknowledge the achievements of AI and at the same time can also ensure that the work of human creators should be acknowledged and protected. So, we need to make some laws that will strike the balance between Artificial intelligence (AI) and intellectual property (IP) laws.

³¹ Andres Guadamuz, 'Artificial intelligence and copyright' (2017) WIPO
<https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html> accessed 23 August 2023

³² ibid