



INTELLECTUAL PROPERTY LAWS FOR INVENTIONS BY ARTIFICIAL INTELLIGENCE

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ABSTRACT

The speedy technological advancement in today's era is a major result of the artificial intelligence system. With the gradual advance in technologies adopted globally, more and more creative inventions take place. The more inventions, the more important it is to consider Intellectual Property Rights (IPR). With the advent of these changes, the traditional way of IPR approach is in question. Earlier artificial intelligence seemed very unachievable and something that can only be relied upon in science fiction movies. But it is nothing as such. No field is left untouched by artificial intelligence. Innovation and creativity are the hard-core basis of intellectual property. AI might prove to be a boon or a bane to the same.

This paper entails expanding the scope of artificial intelligence inventions and Intellectual Property Rights associated with it. The author has covered exhaustively the terms like copyright, patent, trademark, etc., associated with artificial intelligence and how the traditional approach has been affected by the same. It also discusses the changes that can be brought once IPR is restructured for AI. All the thought process is backed by suggestions and statistics leading to concrete solutions for the same. The pros and cons of artificial intelligence in IPR have also been discussed exhaustively.

Key Words: Artificial Intelligence, Intellectual Property, Copyright, Trademarks, Patent.

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INTRODUCTION

In this fast-paced world everyone expects the jobs to be done as quickly and efficiently as possible, this is where artificial intelligence comes in handy. The traditional way humans used to perform any job is lost somewhere and has been replaced by artificial intelligence systems. The system depends on an algorithm which is a process that directs how machines should work. The algorithm involves heavy and complex calculations but once it is processed new algorithms can be made.

Now, with the advent of new technology, processing, and automation tools, businesses are becoming heavily dependent on technology and knowledge.³ This process and innovation take a lot of effort to develop but once developed others can also benefit from them. It is crucial for innovators, technology or process creators, and businesses to prevent others from deriving any benefit from unjust exploitation of these innovations and to be rewarded for the efforts of someone else.⁴

This is where intellectual property protection comes into play. From the IP creators' perspective and understanding of intellectual property and mechanism, its protection is useful to enable customers to identify the product and its creators and therefore capture any Goodwill associated with the product. IPR is generally divided into copyright, industrial properties, and traditional rights. Industrial properties are further classified into trademarks, patents, industrial design, and geographical indications. Therefore, the freedom to create new algorithms in AI requires governing laws in IPR so that it does not become a subject of dispute in the near future.

Artificial intelligence as we all know is growing at a tremendous rate nowadays which attracts the question of the role that Intellectual Property (IP) laws play in Artificial Intelligence (AI). There have been many discussions on the importance of IP laws in inventions but there is still no conclusive clarification on this subject matter. There are many irregularities in the implementation of IPR laws in AI. It is not only within the jurisdiction of India that advanced technology has no clarity of the law involved, it is the same even in the international jurisdictions. There have been continuous efforts from the jurisdictions of the USA and UK to

³ Sanders K., The Future of AI in Law: Changing the Legal Landscape, (Feb. 16 ,2022, 12:13 pm), <https://www.natlawreview.com/article/future-ai-law-changing-legal-landscape>

⁴ Prof. A. Lakshminath & Dr. Mukund Sarda, Digital Revolution and Artificial Intelligence- Challenges to Legal Education and Legal Research, CNLU LJ (2) (2011-2012).

govern AI inventions through landmark cases like the selfie-taking monkey⁵ and infopaq⁶ case. But no proper laws have been placed when it comes to governing AI inventions.⁷ Therefore, this paper entails the concept of Artificial Intelligence and its inventors, relating it to Intellectual Property Laws and understanding why the umbrella of IP law in India does not cover AI systems. For this purpose, the author has also dealt with the Copyright Act 1957⁸ and Patents Act 1970.⁹ According to current changes in systems, it is important to amend the legislative frameworks governing this system as well. Hence, this paper suggests the importance of amendment in the field of IP laws and other relevant provisions with changes in technology. It also discusses a plethora of anomalies encompassing AI and IP.

AI AND IPR IN INDIA

In India Patents Act 1970 and the Copyrights Act 1957 governs the main IPR system. There are some regulations in these Acts that do not encourage the growth of a system by not recognizing IP protection to AI inventors. Therefore, it is time that amendments should be made for such inventions and their protection. Intellectual property rights protect the creativity of people thus encouraging more creations. It gives the owner of the work the right to claim his invention. With growth and development in technology, inventions are growing at a tremendous rate too. Therefore, governing these technological developments in AI with IP will lead to transparency and accountability.

India has witnessed an immense number of technological developments including AI. AI being used in social media, entertainment industry, online shopping services, car renting services, a developing country like India has seen all. This puts a question on the current legislative framework of India and makes it all the way more important to revise such a framework according to the technological developments. No doubt India has very well established IPR laws but nothing is constant.¹⁰

The existing legislation is definitely not in sync with the advancing technology. This too must be revised according to the needs of the country. Therefore, a country like India being the

⁵ Naruto v. Slater, No. 16-15469 (9th Cir. 2018)

⁶ Infopaq International A/S v Danske Dagblades Forening (C-5/08) EU:C:2009:465 (16 July 2009)

⁷ Karthiayani A, Artificial Intelligence And Intellectual Property Laws In India: Is It Time For Renaissance?, Volume 1, Issue 2 (IJLMH) 1,3 (2018), <https://www.ijlmh.com/wp-content/uploads/2019/03/Artificial-Intelligence-And-Intellectual-Property-Laws-In-India-Is-It-Time-For-Renaissance.pdf>.

⁸ Copyrights Act, 1957, Acts of Parliament, (India).

⁹ Patents Act, 1970, Acts of Parliament, (India)

¹⁰ Chakraborty M. ARTIFICIAL INTELLIGENCE: GROWTH AND DEVELOPMENT IN INDIA (Feb. 27, 2022, 4:32 pm), <https://www.analyticsinsight.net/artificial-intelligence-growth-and-development-in-india/>

second largest populated country, where social media and other technological advancements are being utilized on a mass level needs to recheck its laws associated with such usage. There needs to exist a new structure all together for governing such strong and impactful discoveries of AI. Examples of such inventions and discoveries are the AI product of Amazon Alexa, Apple product- Siri, Google's product- Google.

AI has enabled systems to make many such creative pieces that would require copyright protection incase humans created them. This requires redefining IPR laws for AI globally. If there's no revisions made in the existing regulatory framework governing IPR, many important questions come into play like in case of mishappening or misunderstanding, who will be held accountable? Can such accountability be transferred to the user? Also, any new discovery based on the same algorithm leads to a question that harms the right of the original inventor. Therefore, it is a very important topic that needs attention immediately. It is not only disincentivizing the startup of inventors but also harming the original intention of IPR making it a chaotic chapter altogether.

Effect of Artificial Intelligence In Intellectual Property Work distribution

Analytical work like due diligence search of trademark patent and intellectual property profile management can be easily handled by artificial intelligence. The nature of this work is quite simple. Algorithms of AI perform all the time consuming long and productive work and make them relatively simple. Functions of complex nature such as drafting agreements filing trademark copyright and patent can easily be performed by AI systems. However, there is some work that AI is not yet permitted to perform which might arise in the future.¹¹ Examples of such work can be involvement in court proceedings, collection of data and evidence, and preparing arguments against the opposition party. These functions require a human touch and cannot be generated simply by relying on AI systems.

Laws

If AI is being recognized by the IP laws in the future it would require restructuring of legislations and redefining concepts like invention ownership creator etc. These changes will bring along many uncertainties which countries like India, North America, Australia will contend with as these countries follow proper procedure before granting intellectual property

¹¹ Pratyusha Ganesh and Vishruti Chauhan, Artificial Intelligence in IPR – a door to future, Ipleaders (Jan. 27,2022, 4:10 pm), <https://blog.ipleaders.in/artificial-intelligence-ipr-door-future/> .

rights.

Job segment

With the development of AI anyhow how many human interventions are reduced and once proper legislation is framed for governing, please AI mechanism it would eat up the job of the human market and will affect them largely.

Future

AI is definitely going to make an impact in the intellectual property world; therefore, it is important to realize the worth of AI as soon as possible. Many regional offices have already started researching and considering AI in their day-to-day transactions. WIPO World intellectual property organization has begun to install a system in their daily formalities like WIPO translate and WIPO brand image to understand the impact of AI in the future.¹²

Can AI own IPR

AI, a powerful tool, has become a crucial and essential part of our growth curve. If you look at it carefully, we are surrounded by it all around us and in our day-to-day activities, all credits to technological advancement. Starting right from painting, literature, film, music, defense nothing is left without the intervention of AI. The predicament here is whether it is only acting as an assistant or does everything on its own. Even if the answer is that AI is acting as assistance it will soon be the other way around in the future.

Another issue that lies here is whether a thing can be owned by AI or AI can be referred to as an inventor of a particular thing. This question is a topic of debate and is still continuing even after a plethora of research available on the internet.¹³

To have a look at this question it is important to start with the difference between owner and inventor. For example, if AI invents something will it be termed as an inventor of the thing or owner? Being an inventor of creation means a set of individuals who helped in the invention of that thing whereas ownership means an individual holding the proprietary right of the invention. Now the question of whether AI can be termed as the owner or inventor lies on many

¹² https://www.wipo.int/about-ip/en/frontier_technologies/ai_and_ip.html#:~:text=Read%20more-,AI%20and%20IP%20Policy,characteristics%20of%20the%20human%20species.

¹³ Archer P, AI inventors: can AI own intellectual property rights? (Feb 20th, 1:40 pm) <https://www.raconteur.net/technology/ai-intellectual-property-rights/>

factors. The owner can only be a person with a legal identity and further discussions on this can be based on the case of Sophia as discussed in this paper.¹⁴

If AI owns IP

Even if AI is granted protection under IP laws, a variety of questions arise in case of its infringement. Firstly, if the work produced by AI invention is treated equally as the work produced by human invention, the impact of its infringement must also be the same as in the case of humans. If the infringement of IP rights occurs then the system must be held for such infringement and must be able to enter into legal contracts which are obviously not possible. This raises the question of considering AI as a legal entity. Secondly, in cases where the invention of AI infringes the third party, who should be held accountable? Lastly, in cases where AI machines hold IP rights, the problem of transparency arises a lot. Therefore, such questions must be kept in mind along with revising the structure of Intellectual Property Rights as per AI.¹⁵

AI And IPR: Conflict or Complement?

The world is surrounded by AI today, a system that advertises intelligent human behavior. This invites intellectual property towards AI. This overlap between AI and IP can either be a conflict or a compliment. No one can deny the fact that AI has been a helpful system in managing intellectual property rights. The example of WIPO can be taken in this regard that is discussed in the article further. Also, AI has a considerable amount of impact on creation, production, and distribution that again opens the door for the intervention of intellectual property.

Growth and current status of AI in IPR

Artificial intelligence is basically a concept of developing clever computer programs. AI is not a very new concept, in fact, it traces its history back to three decades. The concept started with developing robots and artificial humans. In 2017 a human robot named Sophia was recognized as a citizen of Saudi Arabia. Based on this, the question of recognizing artificial intelligence as humans and giving them and their inventions intellectual property rights became a topic of discussion. AI is growing at a tremendous rate since then adding to upgrades in technology and

¹⁴ Karthiayani A, Artificial Intelligence And Intellectual Property Laws In India: Is It Time For Renaissance?, Volume 1, Issue 2 (IJLMH) 1,6 (2018), <https://www.ijlmh.com/wp-content/uploads/2019/03/Artificial-Intelligence-And-Intellectual-Property-Laws-In-India-Is-It-Time-For-Renaissance.pdf>.

¹⁵ Intellectual Property Rights in an Age of Electronics and Information, U.S. OFFICE OF TECHNOLOGICAL ASSESSMENT (1986), <https://www.princeton.edu/~ota/disk2/1986/8610/8610.PDF>.

the economy.

At present no law governs AI, no protection is provided to AI inventions under IPR. With the situation, there arises a very important question of possession of the rights of inventions in AI. The current status of IPR laws only recognizes humans as inventors and creators. This questions the status of AI in the future as it is not considered human. It also creates tension among the inventors of AI as their interests are not safeguarded by the current laws.

Patent and AI

AI is a bit complex topic in nature, and it requires separate legislation to be governed. Currently, there is none as such. The only laws that exist cover copyright and patent laws related to books, creative writing, and other such inventions. The scope of artificial intelligence is very extensive and complex in nature and needs to be dealt with in a particular manner that will be far better and different from the current legislation. In fact, the ambit of the Patent Act of 1970 does not consider AI inventions as patentable inventions.¹⁶

AI inventions are creating outputs that are beyond the understanding of the creator itself and are therefore to be considered for protection under patent law. A patent is a special right that the government gives to the person who came up with an idea for a short time in exchange for them telling everyone about it. So, the inventions made by machines are so popular that they can be protected by patent law.

Section 2 (p) of Patents Act 1970¹⁷ explains patentee which means a person for the time being entered on the register as the guarantee of the proprietor of the patent and the term person interested includes any person that is engaged in the same field as that to which the invention relates. Similarly, Section 6¹⁸ of the act describes who can be the person who can apply for a patent and Section 2 (y)¹⁹ defines what a true and first inventor means. The definition of true and first inventor under the above-mentioned section does not necessarily include humans and therefore it can cover the AI system within its ambit.

On the contrary, definitions like patentee, a person interested, etc., gives us a general idea that

¹⁶ Pratyusha Ganesh and Vishruti Chauhan, Artificial Intelligence in IPR – a door to future, Ipleaders (Jan. 28, 2022, 2:11 pm), <https://blog.ipleaders.in/artificial-intelligence-ipr-door-future/>.

¹⁷ Patents Act, 1970, § 2(p), Acts of Parliament, (India).

¹⁸ Patents Act, 1970, § 6, Acts of Parliament, (India).

¹⁹ Patents Act, 1970, § 2(y), Acts of Parliament, (India).

the legislature favors human and other such legal persons but not the AI system. These challenges make it all the way more necessary to amend the legislation and give legal recognition to AI and other such scientific systems and their inventors. For a developing country like India to reach its stage of a developed country these amendments are necessary to be made in IPR with changes in technology.

Practical case of patent and AI

The Patent office in South Africa has granted an application for the first time in the history of intellectual property patents to artificial intelligence, the patent in which the inventor is actually an artificial intelligence. This artificial intelligence is an acronym that stands for a device for autonomous bootstrapping. The application specifically stated that the patent is for food containers that improves grip as well as heat transfer. The fascinating part is that inventor in the patent is artificial intelligence.²⁰ Now the questions associated are, the same application has been made in other countries as well where it has been rejected on the grounds that they claim that artificial intelligence is not a legal entity and not a natural person and therefore cannot claim to be an inventory under the respective laws. The US trademark office has also rejected a claim on very similar ground.

However, the Australian bench had said that there is nothing in the Australian law that actually prohibits artificial intelligence from filing an application or being mentioned as an inventor in an application for a patent and therefore this should be permitted. Patent law has been created with the intent of rewarding the creator by creating an artificial monopoly within which she or he can exploit that which they have created.

The system of intellectual property rewards the creative manufacturer or any form of intellectual property with a recognition that recognizes the work done by the artist of the scientific invention made by the scientist and acknowledges their contribution to the field. Now the question here arises that how to do these basic terms with which the intellectual property was initially created address the needs of an AI. Now the solution can be to look at AI as an application made by a corporate entity.²¹

²⁰ Pratyusha Ganesh and Vishruti Chauhan, Artificial Intelligence in IPR – a door to future, Ipleaders (Jan. 26, 2022, 1:15 pm), <https://blog.ipleaders.in/artificial-intelligence-ipr-door-future/>.

²¹ Ozgun A, Yanik M. When AI Gets Creative: Can Artificial Intelligence Own IP Rights? (Feb. 26, 2022, 3:16 pm), <https://www.mondaq.com/turkey/patent/1118474/when-ai-gets-creative-can-artificial-intelligence-own-ip-rights->

Talking about the Indian Patent Act, there are two groups that are important to this discussion. Category 3b, which is the category of applicant, can be either a natural person or other natural people, can be a small business or startup, or can be other things. When is this category? Others say who the inventor is. Some of these applications have a lot of room for people who aren't humans to be inventors.

Copyright and AI

The existing copyright laws protect the interest of creators of literary, artistic, or musical works and give them the exclusive right of control over their work. There was a case where confusion as to the protection of copyright being allowed to a photographer was in question. It was held in this case that ultimately copyright protection is to be given to human creation that created the machine that produced the product. This judgment narrowed the scope of providing copyright protection to AI systems.²² There was another case where the work of humans and machines was differentiated by the court. It was held that copyrighted works can only be created by human touch and without the creation of a human, copyright protection cannot be granted. After this, the scope of protection as a copyrighted work depreciated.²³

Even if authorities agree to give copyright protection to AI inventions, a very important question remains unanswered which is who will be held liable for such copyright. Since copyright can only be granted to humans, and AI lacks the human touch, it remains a ground of debate. Copyright protection can only be claimed when the work is original and is not a copy of any previous work. To pass the test of originality two doctrines have been laid down: -

- The sweat of brow doctrine- The sweat of the brow doctrine states that Copyright can be claimed on work by any author through some simple diligence. This doctrine does not require any originality or creativity, it only requires the author to show his effort and expense on a particular work on which he is claiming copyright.²⁴
- Modicum of creativity- Modicum of creativity doctrine states that it is important to prove some amount of creativity into the work for which copyright is being claimed. In

²² Burrow Gilles Lithographic co. V. Sarony, 11 U.S. 53 (1884)

²³ Bleistein V. Donaldson lithographing company, 188 U.S. 239 (1903).

²⁴ Karthiayani A, Artificial Intelligence And Intellectual Property Laws In India: Is It Time For Renaissance?, Volume 1, Issue 2 (IJLMH) 1,5 (2018), <https://www.ijlmh.com/wp-content/uploads/2019/03/Artificial-Intelligence-And-Intellectual-Property-Laws-In-India-Is-It-Time-For-Renaissance.pdf>.

the case of Eastern book company v. DB Modak,²⁵ the doctrine of a modicum of creativity was applied where the judgment provided was that artificial intelligence machines cannot be said to not achieve a modicum of creativity therefore it shall pass the test of originality hence should be considered for a legislative framework.

Section 2D of the Copyright Act 1957 comes up as a challenging factor for AI systems. The term author has been defined in this section and for claiming copyright of any work the person should be an author according to what has been described in the section. This creates a difficult scenario for AI as it is not a legal person. Hence the Copyright Act 1957 cannot be said to include the system within its Ambit.

SUGGESTION

- The most important thing for the smooth functioning of AI in the IP world is to differentiate between AI created work and aided work
- Another important differentiation required is between an inventor and an invention.
- Few changes in the definition of authorship under the copyright act needs to be implemented
- Some vagueness in trademark laws also requires attention
- As discussed earlier, AI has been implemented by WIPO therefore proper policies must be framed at the international level too.²⁶
- AI systems revolve a lot around data available on the internet therefore proper Act governing data protection of AI mechanism is important.

CONCLUSION

In our daily life, we indulge in activities that involve some or other forms of AI. It is such that we cannot imagine our daily life without such creative inventions. It is not far that inventions will take all over the world. Therefore, India should be prepared to face some dramatic changes on a positive note in order to maintain transparency and accountability. Artificial intelligence should not be devoid of protection under IP laws only on the basis that they are not legal persons. Artificial intelligence itself is an invention of humans, therefore its inventions must be given protection.

²⁵ Eastern book company v. DB Modak (2008) 1 SCC 1.

²⁶ Shreya and Vinamra Kothari, Artificial Intelligence In The World Of IP, Mondaq (Jan.26, 2022, 2:26 pm), <https://www.mondaq.com/india/trademark/1132804/artificial-intelligence-in-the-world-of-ip>

As India is a developing economy, the continuous technological advancement and the urge to produce results at a fast pace demands AI systems even more. It is all set to have an existence in the world of IP. It will not be wrong to say that the growth of IP shall be directly proportional to the growth of AI.²⁷ Recognition of AI in the intellectual property world will encourage creations along with an increase in transparency and easement of accountability making the whole process hassle-free. AI algorithms, redefinition of the terms like ownership, inventorship, patentee, etc., and other such related concepts need a good understanding to legally recognize AI in the IP world. A crucial element of human life as it has become AI is all set to make India a step higher from achieving its goal of developing an economy to a developed economy.

The current relationship between AI and IPR is challenging but achievable. A set of clear rules, regulations, and structured frameworks is necessary at the moment. A proper amendment in the existing IPR legislation is required to smoothly and effectively consider AI. Even after these steps, there's a long way to go.

²⁷ Shreya and Vinamra Kothari, Artificial Intelligence In The World Of IP, Mondaq (Jan.27, 2022, 1:16 pm), <https://www.mondaq.com/india/trademark/1132804/artificial-intelligence-in-the-world-of-ip> .