
DIVING INTO THE LEGAL ABYSS: NAVIGATING THE COMPLEXITIES OF AI-GENERATED CONTENT

Ms. Rajeswari.H, B.B.A. LL.B. (Hons.), JSS Law College, Mysuru, Karnataka, India

“I believe AI is going to change the world more than anything in the history of humanity. More than electricity.”

- Kai-Fu Lee

ABSTRACT

Artificial intelligence (AI) refers to the capability of a computer, robot, or other programmed devices to carry out tasks that mimic human intelligence. AI is often described as systems that are capable of thinking and behaving like humans. It is essentially a fusion of various technologies, including machine learning, deep learning, and natural language processing. Despite being in the early stages of development, the creation of non-biological man is closer than commonly thought. AI algorithms produce a vast quantity of content daily by analyzing extensive datasets, recognizing patterns, and generating content that mimics human intelligence. Significant legal consequences concerning AI in connection with intellectual property rights pertain to copyrights and patents. Determining the true owner, originator, or inventor of such content can be extremely challenging. Under intellectual property law, the owner is considered a legal entity, sparking a contentious debate among experts regarding the recognition of AI as a legal entity. The effectiveness and enforceability of existing intellectual property laws pose complexities, and the absence of a comprehensive legal framework for AI-generated content and innovations is a matter of concern on both a national and global scale. This article delves into the intricate obstacles associated with artificial intelligence, highlighting the struggles in striking a harmonious equilibrium between advancing AI technology and safeguarding intellectual property rights.

Keywords: Artificial Intelligence, Intellectual Property Rights, AI-Generated Content, Machine learning, Legal complexities

1. INTRODUCTION:

For centuries, humans have been hailed as the most intelligent, imaginative, and sagacious beings in the cosmos. Throughout the last century, humans have harnessed the power of technology to create replicas of themselves, commonly referred to as humanoids or robots, which have astoundingly defied the laws of nature. These remarkable creations have been meticulously studied and observed. The primary objective behind the development of this technology was to assist individuals with a multitude of tasks. Artificial Intelligence, or AI, has emerged during the last ten years as a sophisticated kind of computer technology that can simulate human intelligence. Growth of AI from the past few years is remarkable yet alarming. Do we have adequate global legislation to regulate AI and its activities? The question of who should be held responsible for any accidents is a complex issue that poses a challenge to legal experts and lawmakers worldwide. The advancement of AI has resulted in the production of a vast array of content, such as novels, artworks, photos, advertisements, news articles, and music. These materials are generated in massive quantities on a daily basis and currently lack any legal constraints. The ownership and authorship of such content are significant factors that perplex individuals around the world. The issue of granting copyright protection to content generated by artificial intelligence (AI) has sparked a lively debate among scholars. The question at hand is whether the outputs produced by AI systems should be eligible for copyright protection. Advocates of copyright protection argue in favor of extending it to AI-generated content. On the other hand, some argue that predominantly automated AI systems do not require copyright incentives. This article delves into the copyrightability of AI-generated content and explores the perspectives of different nations on this matter. Additionally, it emphasizes the urgent requirement for a legislative framework to address the challenges posed by AI-generated content.

2. CONCEPT OF AI

AI can be understood as a system that can think and act like humans. Tracing the evolution of AI, in the 1950's many scholars believed that the concept of AI is possible and one among them was Alan Turing, who in his paper, "Computing and Machinery Intelligence " contended that mathematically AI is possible. He argued that if human beings could use the available information and solve problems why can't machines do the same. Followed by this, a conference "Dartmouth Summer Research Project on Artificial Intelligence (DSRPAI)" hosted by John McCarthy and Marvin Minsky in 1956 was held. In this historic conference, Allen

Newell, Cliff Shaw, and Herbert Simon's, Logic Theorist was proposed. The Logic Theorist was a program designed to mimic the problem solving skills of a human, where top researchers from various fields agreed on the possibility of AI¹. McCarthy proposed the terminology 'Artificial Intelligence', later he founded LISP, an AI programming language which paved the way for the modern sophisticated Artificial intelligence systems².

In the present day, AI algorithms use programs such as machine learning , deep learning and natural language processing through which they generate content. AI can be defined as “a catch-all term that describes a branch of computer science dealing with the development of systems that behave in a way similar to human intelligence”³. Drawing these definitions, artificial intelligence can be defined as a software that replicates human intelligence in a variety of jobs that are primarily meant to benefit humans.

4. INTERLINKING AI AND IPR

Artificial intelligence (AI) technology is progressing rapidly and generating a diverse range of content on a daily basis. It has become an integral part of our daily lives. The content produced by AI differs from that created by humans in that human-generated content is influenced by emotions, culture, and personal experiences, whereas AI processes input, analyzes patterns, and generates content. This technology challenges traditional notions of authorship and copyright ownership. Not only are copyrights affected, but patents and trademarks as well. AI is driving innovation and creating content using available data. The consequences of this technology are significant, and it is crucial to implement appropriate measures to address them.¹ The legal framework of Intellectual Property law is intricately linked with innovative discoveries and artistic works, and has evolved over time due to technological progress. In a society where knowledge is crucial for survival, the role of IP laws is paramount. The protection and management of artificial intelligence and its generated content necessitate the presence of robust IP laws.

4.1 WHAT IS AI GENERATED CONTENT

AI creates data by using multiple technologies, significant ones are: Accessing data sets,

1 Harvard University ,Blog, special edition on AI 'The History of AI' by Rockwell Anyoha , available at <https://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/> Accessed on 21st February, 2024 (6:34pm)

2 Stuart Russell, Peter Norvig, Artificial Intelligence: A Modern Approach (Pearson Education, London, 2007)

3 Drexl et al, 'Technical Aspects of Artificial Intelligence: An Understanding from an Intellectual Property Law Perspective', (October 8, 2019). Max Planck Institute for Innovation & Competition Research Paper No. 19-13, Available at SSRN: <https://ssrn.com/abstract=3465577> or <http://dx.doi.org/10.2139/ssrn.3465577>

Graphical processing units, Intelligent data processing and Application programming interfaces. Each time an AI system runs through a set of data, it tests and measures its own performances and improves the system by adding more information to it⁴. The main ideology behind AI is learning the inputs and generating content. These contents may be of two types:

1. contents created with human intervention, and
2. contents created without human intervention

If the material is produced with human involvement, it is relatively straightforward to assign copyrights, as the ownership and authorship rights can be attributed to the individual who directs the machine to create it. This falls within the realm of computer-generated content. However, if the material is autonomously generated by AI, the issue becomes debatable. Several nations, including India, have refused to grant copyrights to AI-generated content due to its lack of a fundamental prerequisite: a human author, creator, or inventor. Computer-generated content and AI-generated content can be distinguished upon the basis that computer-generated content are permissible for copyright protection under s.2(d)(vi) of the Copyrights Act, 1957⁵ as the Act recognises it as an author.

'S.2(d)(vi) in relation to any literary, dramatic, musical or artistic work which is computer-generated, the person who causes the work to be created'

Although deep reinforcement learning systems and other common AI technologies lack creativity and rely on humans, researchers have already begun to work toward developing a new class of advanced AI technologies known as Artificial General Intelligence (AGI), which demonstrates intelligence akin to that of humans⁶. If this technology becomes a reality, it will be able to produce art independently of human input or intervention. The protection of copyrights for such generated works is questionable.

4.2 ISSUES IN COPYRIGHTABILITY OF AI GENERATED CONTENT

4.2.1 AUTHORSHIP AND OWNERSHIP

Understanding the complexities surrounding copyrightability of content generated by artificial

4 'How Does AI Actually Work? (CSU Global 2021)<https://csuglobal.edu/blog/how-does-ai-actually-work> Accessed on 1st Dec 2023 (5:45pm)

5 The Copyrights Act, 1957 (Act 14 of 1957)

6 Adithya R, 'Copyrightability of AI generated works - critical analysis' Indian Journal Of Law Polity and Administration

intelligence requires a thorough grasp of authorship and ownership. Copyrights safeguard two distinct categories of rights, namely economic rights and moral rights. In principle, both AI and human creators can be eligible for copyright protection, as they employ fundamental principles of judgement and selection in content creation. Nevertheless, the challenge lies in effectively analysing these two sets of rights and establishing appropriate incentives for copyright protection. Moral rights pertain to the original creator of the work, whereas economic rights are attributed to the author of the work. The owner of a work enters into a contractual agreement with the author, who utilizes their creative abilities and intellectual labor to produce the work. The author carries out their tasks within the scope of their employment with the owner and is granted both authorship rights and moral rights. In the event of any infringement or violation of the work, the author has the right to seek damages. Additionally, certain tasks such as compiling, selecting, evaluating data, and creating content can also be performed by artificial intelligence (AI). Theoretically, it is possible to grant authorship rights to AI; however, AI lacks sentience, emotions, and the ability to exercise moral rights over its work. Therefore, it is necessary to establish a suitable legislative framework that addresses the unique characteristics of AI.

4.2.2 ORIGINALITY OF CONTENT

Copyrightability of a content poses numerous challenges and one among them is originality. It is argued all across the world that the AI generated content is not original, it is generated and derived from various sources. Section 13 (1) (a) of Copyrights Act stipulates that Copyright can be provided to Original literary works only⁷. Although the term originality is not defined it is inferred that there should be originality of expression even when there is no originality of Idea. This concept grapples with the world of intellectual property. If there is no originality, copyright protection could not be given.

4.2.3 LEGAL AND ETHICAL ISSUES

AUTHOR

AI autonomously creates a wide variety of contents and providing authorship rights is a huge problem. S.2(d)(vi) of Copyrights Act of 1957⁸ recognizes computer generated contents but it does not speak about AI generated content for the sole purpose that such contents are created

⁷ Act 14 of 1957

⁸ *ibid*

without human interference and who avails the benefits and claims are perplexing. The copyright law all across the globe does not accept a non-human entity to be an author, in the case of 'Monkey Selfie' where a macaque took a picture of itself using a photographer's camera. This sparked debate and the court ultimately ruled that issuance of copyrights to animals and non-human entities is not possible⁹.

LIABILITY

AI lacks the capacity to accept responsibility for any of the consequences of its actions. The likelihood of AI-generated content violating someone else's copyright is very high. For instance AI could make music simulating works of famous music artists, the rights of such artists are being violated¹⁰. AI, as a mindless computer, possesses the capacity to generate content that infringes upon the basic rights of individuals. A prominent illustration of this is the AI application Deepfakes, which encroaches upon the privacy of numerous individuals by manipulating their personal data. The question of responsibility in such instances remains uncertain at present.

BIASNESS

The contents that are supplied into the AI form its basis. These supplied data are views from different members of the public, not hard facts. Another important factor to take into account is the authenticity and impartiality of such contents. These slanted materials have the power to influence individuals.

TRANSPARENCY

AI-generated works are intricate and ambiguous. The AI-generated content is opaque. This gives rise to questions about the legitimacy and dependability of these contents. This leads to misunderstandings about whether the information is AI or human-generated. Since AI cannot explain the results of its works, it is unreliable and does not merit copyright protection.

MISINFORMATION AND MANIPULATION

AI is capable of providing misinformation as the contents created by it are not transparent and

⁹ *Naruto v. Slater*, 888 F.3d 418 (9th Cir. 2018)

¹⁰ Rachel Reed, 'AI created a song mimicking the work of Drake and The Weeknd. What does that mean for copyright law?', (2nd May 2023) Harvard Law Today, Available at <https://hls.harvard.edu/today/ai-created-a-song-mimicking-the-work-of-drake-and-the-weeknd-what-does-that-mean-for-copyright-law/> accessed on 2nd March 2024 (10:05 pm)

people will be misguided and manipulated. Celebrities are the easy target for all this objectionable content. Few examples could be, November 07, 2023, a day after a licentious video of actor Rashmika Mandanna surfaced on several social media platforms, she came out decrying late actor Paul Walker was created for *Fast & Furious 7*. In 2020 Indian legislative assembly elections politician Manoj Tiwari's speech delivered in English was manipulated to be disseminated in the 'haryanvi' dialect¹¹. AI systems can be programmed to generate content that is intentionally misleading, deceptive, or designed to exploit human vulnerabilities. Safeguarding against such manipulation and ensuring the ethical use of AI-generated content involves implementing robust mechanisms for content verification, fact-checking, and user education¹².

4.2.4 CORE THEORIES OF INTELLECTUAL PROPERTY

There are three theories of intellectual property: Labour theory, Personality theory & Incentive theory¹³. Labour Theory assumes that one should bear fruits of one's labour. In the field of copyrights the labour theory is well in practice. However, if we juxtapose this theory for a work generated by an AI, a dilemma arises. In the work of an AI, it is not clear if the credit should be given to the AI itself or to the creator of the AI¹⁴. Incentive theory or Reward theory argues that we should 'reward an individual for his work which enriches the society'¹⁵. providing such reward will enrich a person to work more efficiently and effectively. Providing incentives will enhance creativity and the number of inventions also increases. Incentive theory cannot be used on Artificial intelligence-based devices . AI lacks sentience; it is incapable of experiencing joy or suffering, gain or loss, or regret or fulfilment. Thus, providing an AI with any kind of incentive would be counterproductive to its goals of incentive theory.

Personality Theory was given by Georg Wilhelm Friedrich Hegel in his "Philosophy of Rights", wherein, he said that – "A person has as his substantive end the right of putting his will into any and everything and thereby making it his because it has no such end in itself and derives

11 Vikrant Rana, Anuradha Gandhi And Rachita Thakur, 'Deepfakes And Breach Of Personal Data – A Bigger Picture' LiveLaw (24 Nov 2023) Available at https://www.livelaw.in/law-firms/law-firm-articles/-deepfakes-personal-data-artificial-intelligence-machine-learning-ministry-of-electronics-and-information-technology-information-technology-act-242916?utm_source=internal-artice&utm_medium=also-read accessed on 3rd March 2024 (4:45pm)

12 Abdikhakimov, I., 2023, June. Legal aspects of AI generated content. In International Conference on Legal Sciences (Vol. 1, No. 5, pp. 1-17).

13 Justin Hughes, 'The Philosophy of Intellectual Property' (1988) 77 *Georgetown Law Journal* 287.

14 *Supra*, see note 7

15 *ibid*

its destiny and soul from his will. This is the absolute right of appropriation which man has over all things”¹⁶

The creations and ideas of a person are driven by their will, whereas AI operates as a machine devoid of consciousness, relying on programming and machine learning to execute tasks through a command-line interface.

5 . WHY AI GENERATED CONTENT SHOULD BE COPYRIGHTED

- AI possesses all the necessary elements to generate content that is eligible for copyright protection. There exist unique creations produced by AI that meet the criteria established by the Sweat and Brow Doctrine and the Modicum Creativity Doctrine. An instance of such an AI system, which relies on sensor technology, is the trapped photo system. This system incorporates software that assesses an animal's dimensions, form, and proximity before deciding whether to capture an image and how to adjust the focus. It is proficient in capturing photographs of extraordinary wildlife. Consequently, copyright protection can be granted to these types of content.
- The creations and ideas of a person are driven by their will, whereas AI operates as a machine devoid of consciousness, relying on programming and machine learning to execute tasks through a command-line interface.
- AI generates content with utmost accuracy and efficiency, thereby augmenting and complementing human intelligence. The progress in AI will empower humans with a superior technological advantage.
- It is crucial for the legal system to be efficient in order to adapt to the fast-paced technological advancements that are reshaping our society. Without appropriate legislation, the challenges associated with AI-generated creations could escalate and pose even greater concerns.
- In the event that these materials are not protected by copyright, individuals may assert authorship and ownership of them, leading to a violation of the rights of other writers and producers.

¹⁶ John Carlin, ‘Culture Ventures: Artistic Appropriation and Intellectual Property Law’, (Heinonline website) <<https://heinonline.org/HOL/LandingPage?handle=hein.journals/cjla13&div=10&id=&page=>>>

6. GLOBAL RESPONSE TO AI GENERATED CONTENT

The laws relating to copyrights were formed after three major international covenants: The Berne Convention¹⁷, The TRIPs Agreement¹⁸ and The WIPO copyright treaty. These instruments recognise only a natural person as an Author. The other countries have a different opinion upon AI and copyrights. Few of them are:

AI AND COPYRIGHTS IN USA.

According to the United States Copyright Act of 1976, a work should be created by a human entity or a legal person for copyright protection. The US copyrights office recognizes copyright as “the fruits of intellectual labour...founded in creative powers of the mind”¹⁹. The US laws thus only provide copyrights to human creators. However, this position can be evolved and amended in the future.

AI AND COPYRIGHTS IN EU

In the EU, Although computer software enjoys copyrights incentives, as per the Article 2(1) of the computer program directs²⁰, “the author of a computer program shall be the natural person or group of natural persons who have created the program or the legal person designated as the right holder by that legislation”. This legislation does not accept AI as a legal person and copyrights of AI generated is not recognised.

AI AND COPYRIGHTS IN CHINA

China recognised copyright protection of AI generated works . In the case of Shenzhen Nanshan District Court – a new judgement was issued for a copyright infringement dispute between Shenzhen Tencent Computer System Co., Ltd. and Shanghai Yingxun Technology Co., Ltd²¹. In this case, the work of an intelligent writing assistance system ‘Dreamwriter’ was accepted. Likewise, countries such as Australia, Japan, Singapore, South Africa, and numerous

17 Berne Convention for the Protection of Literary and Artistic Works (September 28, 1979).

18 Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994 (TRIPs), World Intellectual Property Organisation.

19 Jai Vignesh k , ‘AI generated artworks and copyrights’ https://suranaandsurana.com/2023/07/04/ai-generated-artworks-copyright/#_ftn7 accessed on 3rd Dec 2023 (5:00pm)

20 Directive 96/9/ EC Of The European Parliament And Of The Council of 11 March 1996 on the legal protection of databases, Official Journal of the European Communities <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31996L0009>> accessed on 3rd Dec 2023 (9:30pm)

21 Beijing Film Law Firm v Baidu Network Technology Co., Ltd. [2018] Beijing Internet Court, J0491MC.

others have not acknowledged AI as a legal or juristic entity and are currently developing appropriate laws to address concerns around AI and copyrights.

7. LEGAL FRAMEWORK OF AI AND COPYRIGHTS IN INDIA

The Copyrights Act, 1957, The Trademarks Act, 1999, The Patents Act, 1970 are the primary legislation governing intellectual property rights in India. These rights are provided for fostering creativity and innovation. The Department for Promotion of Industry and Internal Trade (DPIIT), The Ministry of commerce are the nodal departments in India for administering IP laws. This Department deals with International Organisations such as World Intellectual Property Organisation (WIPO) and is a signatory to TRIP's treaty. The 161st report by the Parliamentary Standing Committee²² states that the present IP laws does not accept the copyrightability and patentability of AI generated contents and says that the present development in AI will increase manifold as digital technology is playing a crucial role. Moreover, the huge benefits of AI and its applications in India's revenue generation and economy as well as its impact on technological innovation necessitates its expansion in a secure manner. In view of this, the Committee recommends that a separate category of rights for AI and AI related inventions and solutions should be created for their protection as IPRs. In 2020, An Artwork was created by an AI software named RAGHAV. At first the Indian Copyright Office denied the application of registration for the content created by RAGHAV subsequently Ankit Sahni, the creator of the AI technology registered as the author and the AI software as the co-author and the copyrights office accepted the registration. The basis of this registration is disputable and the court has not decided on this issue.

8. CONCLUSION

Artificial Intelligence (AI) faces a range of opportunities and challenges within the realm of Copyrights. AI has emerged as a powerful technology capable of imitating and reproducing human behaviour. The rapid advancement of AI technology necessitates the establishment of effective legal frameworks to ensure its positive impact. Current laws recognize works produced by AI with human involvement, where the rights belong to the human creator. However, the issue of ownership and authorship rights becomes complex when AI generates content independently. AI lacks the capacity to engage in economic activities or benefit from

22 Department Related Parliamentary standing Committee on commerce , 161st Report, Review of the Intellectual Property Rights Regime in India (Presented to the Rajya Sabha on 23 rd July, 2021) (Laid on the Table of Lok Sabha on 23rd July, 2021).

copyright protections. AI does not possess legal personhood, thus it lacks the ability to enforce its rights in the event of infringement. Granting AI and AI-generated content special recognition is crucial in order to prevent the misuse of such works. The introduction of the concept of an 'AI Companion' could be a means to provide copyright protection for AI-generated content. It is often stated that even a flawed law is preferable to no law at all, highlighting the importance of lawmakers worldwide engaging in discussions regarding AI and copyright issues. Ultimately, the aim is to establish an appropriate legal framework that addresses current and future challenges associated with AI-generated content.