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Copyright under the Regime of Artificial Intelligence: Redefining Creativity

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Nowadays every creative sector is seeing an increase in the use of intelligent software and mobile applications. The use of Artificial Intelligence (AI) in social and cultural sectors has been drastically increased in all over the world including India. Modern development of AI technology has shown that human beings are no longer indispensable for creative works. A machine equipped with AI technology can independently generate creative works where the use of human intelligence is very nominal. On the other hand, the protection of these AI generated works in terms of the Intellectual Property Rights (IPR) specifically the copyright is quite essential in the contemporary era. Although the relationship between copyright protection and AI is an emerging issue of the intellectual property law, it has received hardly any attention from the law and policy makers till date. Gradually, AI generates artworks that will significantly contributes to the cultural development of the country. However, the copyright law and implementation mechanism are yet to be well equipped to handle an upsurge in the production of AI-generated works. In light of the rapid advancement of AI, the identity of authorship may be often questioned and it could be a serious challenge to the Indian copyright laws as well. In this article, the authors have endeavored to sketch the future of copyright in the advancement of AI industry. Further, the authors suggest some desired contemporary changes to the existing legal regime in order to cope up with the future challenges of AI.

Keywords: Copyright Laws, Artificial Intelligence (AI), AI and Copyright in Australia, China, UK, USA and India, Machine Learning, Authorship of AI Generated Works

Since the advent of globalization, every person has sought to exceed one another in terms of originality, creativity, and innovation; as a result, the usage of technology and software has become increasingly important as people have begun to employ it to quickly accomplish their objectives. Like the other sectors, use of Artificial Intelligence (hereinafter referred as 'AI' in short) in the field of creativity is also increasing day by day.[1] Recently, in the realm of technology the subject of AI has gained popularity. Various scholars, journalists, and general public are interested in self-driving cars, creative machines, and learning algorithms. Policymakers and consumers are more conscious of the necessity and advantages of AI. People are now more aware of the fact that creative works are no longer exclusively produced by human beings. AI driven machines can easily produce creative works without human interference.[2] All credits go to the recent popularization of AI technology.[2]

As the AI based technology has been increasingly used to create music, artwork, poetry, and even film scripts that rises a crucial legal issue about the authorship of AI- generated works. The nature and extent of copyright protection that should be given to AI-generated works is a gray area of Intellectual Property Right (IPR) jurisprudence. Andres Guadamuz persuasively observes as the rise of the machines is here, but they do not appear as conquerors; rather, they come as creators.[3] While there are many and varied definitions of AI, for the sake of this discussion, the term is best understood to refer to the simulation of the cognitive qualities of human thought by a computer entity.[4]

The field of AI has experienced significant technological advancements over the years; enabling computers to perform a variety of activities autonomously and even learn new skills.[4] This complex situation places few questions before the experts, such as, whether AI generated works which is rapidly developing and minimizing the human intervention, are subjected to protection of intellectual property right specifically the copyright or not? If yes, to whom the authorship of AI generated works can be devolved?

Defining AI: Nature and Scope

In 1956, John McCarthy coined the term 'Artificial Intelligence (AI)'[5] which is yet to be defined comprehensively. However, the technology of AI can be referred as 'an ability of machines to do things that people would have required intelligence.'[6] In 1990,

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Ray Kurzweil described AI as 'a science of making computers [to] do things that require intelligence when [to be] done by humans.'[7] In simple words, AI denotes 'an ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem-solving, and decision-making'.[8] The main objective of AI *inter-alia* includes– 'reasoning, knowledge, planning, learning, natural language processing (e.g., understanding and speaking languages),[9] perception, and the ability to move and manipulate objects.'[6]

Predominantly, the word 'Intelligence' hereby can be understood as 'a general mental ability for reasoning, problem solving, and learning'.[10] Intelligence due to its general nature, integrates cognitive functions such as perception, attention, memory, language, or planning.[10] Structural and functional neuro-imaging studies have generally supported a form of parietal network relevant for intelligence.[11] It is the same network that supports cognitive functions such as perception, short term memory storage and language. The fact that this network is distributed and involved in a broad range of cognitive functions is consistent with the integrated nature of intelligence.[12] However, the exact definition and meaning of intelligence, and more specifically, AI, has been the subject of much debate and confusion.[9] For instance, one dictionary offers the following four AI definitions:

(i) AI is a branch of computer science that focuses on creating computers capable of emulating human-like cognitive abilities, including learning, reasoning, and self-correction.[13]

(ii) The notion of enhancing machines to possess certain abilities that are typically associated with human intelligence, such as learning, adapting, self-correction, and more, is known as AI.[13]

(iii) AI refers the expansion of human intellect by utilizing computers mirrors the historical extension of physical strength through the utilization of mechanical instruments.[13]

(iv) In a narrow context, the exploration of methods to enhance computer usage through refined programming techniques is called as AI.[13]

Depending upon the use of the AI, it can be classified in two categories.[14] The entire jurisprudence established that copyright belongs to human beings only. The exclusivity of the author must have been recognized who is inevitably a human.[15] There are two different types of AI, depending on its capabilities– one is the primitive AI which denotes the computer's ability to simulate intelligence; and another is the modern AI which refers to the computer's ability to simulate intellectual self-learning processes.[16] Through the utilization of suitable software or programming, computers have the capability to comprehend and adjust their behavior according to previous actions and knowledge. An important amplification occurs as a consequence of automated communication with other devices.[17] The current progress observed in advanced nations can be examined in this context where a significant level of innovation is necessary to obtain copyright ownership. Even Indian Copyright law mandates that for a creation to be eligible for copyright protection, it must initially satisfy the doctrine of '*modicum* of creativity'[18] i.e., 'a minimal degree of creativity' as laid down by the Supreme Court in *Eastern Book Company and Ors.* v *D.B. Modak and Another*.[19] Based on the analysis of the criterion test outlined in the verdict, it is evident that a conclusive determination cannot be reached for AI generated works where AI fails to fulfill the set forth conditions.[20]

Copyright and Artificial Intelligence

Grammarly, as an AI-powered writing assistant tool, provides users with suggestions and edits to improve their writing through machine learning. While it exemplifies the use of AI to enhance productivity, the final outcome still relies heavily on human input and effort. Hence, in this case, the writer shall serve as the creator of the literary piece rather than Grammarly. *Per contra*, the complication arises when AI autonomously creates original works, similar to how humans do, without any human intervention. Then the questions arise as– (a) What are the potential implication in that situation? (b) Is it possible for the Copyright laws to extend its coverage to include that particular piece of work? The extent and nature of copyright protection provided to AI-generated works vary considerably among different countries worldwide.

In Australia, an individual is required to make a unique and original contribution in their work to be eligible for copyright protection. According to Section 33 of the Copyright Act, 1968 in Australia, a literary, dramatic, musical, or artistic work other than a photograph created by an author is the only type of work in which copyright can exist.[21] The Federal Court of Australia specifically clarified in *Telstra Corporation* v *Phone Directories Company*[22] that a work must be the original creation of an author or writers who must make an 'independent intellectual effort.' In *IceTV Pty Limited*

v *Nine Network Australia Pty Limited*,[23] the Australian High Court addressed the issue of originality and machine creation, concluding that only works created by authors who made 'independent intellectual effort' qualify as original for the purposes of intellectual property laws.

In the People's Republic of China (PRC), the enactment of the first copyright law took place in 1990, despite copyright being explicitly referenced in the 1985 General Principles of the Civil Law of the PRC which established the rights of both natural and legal persons to possess copyright.[24] *Per contra*, the ownership of works created by AI has recently become a subject of debate within Chinese courts. The Beijing Internet Court concluded in *Feilin* v *Baidu*[25] that reports produced by AI are not covered by copyright. Whereas, in *Shenzhen Tencent* v *Yinxun*,[26] the Nanshan District Court of Guangzhou Province in 2020 ruled that a press piece produced by AI is protected by copyright. The evolving circumstances suggest that the issue of ownership regarding AI-generated creations is gaining greater significance in practical terms, and a single definitive solution is yet to be achieved.

In the United Kingdom (UK), for a computer-generated literary, dramatic, musical, or artistic work, the author is considered to be the individual responsible for making the arrangements needed to create the work.[27] Moreover, Section 178 of the Copyright, Designs and Patents Act, 1988 provides a clear definition of 'computer-generated work', stating that it is created solely by a computer without any involvement or contribution from a human author.[27] It is pertinent to mention that AI-generated works are also created by an algorithm, and the final outcome is also backed by a prompt given by a natural individual to AI.

In the United States of America (USA), while the Constitution and Copyright Act, 1976 do not specifically outline the qualifications of an 'author', the U.S. Copyright Office acknowledges copyright protection for works that are only 'created by a human being.'[28] In, the *Monkey Selfie Case*,[29] the Ninth Circuit Court of Appeal U.S. determined that animals do not possess legal standing and held that human participation in the creative process is a prerequisite for getting the copyright protection.

In India when it comes to the 'ownership' of copyright works, there is a clear need for creativity. Even Indian copyright law stipulates that a work must first satisfy the 'modicum of creativity' requirement as outlined in *Eastern Book Company and Ors.* v *D.B. Modak and Another*[6] in order to qualify for copyright protection. According to the Supreme Court hereby held that 'there must be some substantive variation and not just a trivial variation,' was needed.[30] However, based on a guideline fixed in the judgment, it is impossible to draw a firm conclusion that an AI cannot exhibit the necessary 'modicum of creativity'.[6] However, as per the Copyright Act, 1957, the term 'author' *inter-alia* includes– in relation to any literary, dramatic, musical or artistic work which is computer-generated, the person who causes the work to be created.[31] This clause pertains to the concept of AI-generated content with human intervention, and it is understood that the developer maintains ownership in cases where human input is present in the produced work.

Authorship under the Present Legal System

The term 'authorship' is regarded as the most crucial factor in the context of copyright. As previously indicated, in the event of AI-assisted work, the programmer is granted the sole copyright to perform or to grant a person the authority to perform (to make an adaptation, translation, reproduce, etc.) with respect to the work produced in terms of section 14 of the Copyright Act, 1957. So far, the question arises as who is the creator of AI generated works? The laws are absolutely mute. Since AI depends on humans for instructions and algorithms, the author (natural person) of the aforementioned work may be given authorship.[32] If AI was constructed or programmed in such a way that it can recognize, encrypt, and decode inputs on its own, then the authorship of such programme can be attributed to the creator since the AI was used as an intelligence of its own mind.[32] The final scenario is to fully rejects the idea of authorship for AI-generated work. [32]

After the issue of 'authorship', next question comes to mind that will there be any 'originality' of the work created or generated by the AI? 'Originality' is the key factor for a work to get eligibility for copyright protection. Even though the copyright laws do not define these criteria exactly, Section 13 makes it clear that a literary, dramatic, or artistic work must be original in order to qualify for originality. Additionally, courts have interpreted this in a number of judgements in different cases.[33] The Court examines a number of principles to determine originality as *inter-alia* includes– (a) the Sweat of the

Brow Doctrine; (b) Modicum of Creativity; and (c) Skill and Judgement Test. Although AI must pass these tests of originality in order to claim authorship, if it were to be closely examined, it would still come up short because it compiles and modifies works that already exist in the public domain and lacks the necessary skill and judgment. Therefore, works produced by AI cannot be regarded as original.

The Court distinguished between artificial works and those created by humans in the case of *Bleistein* v *Donaldson Lithographing Co.*[34] where human nature was emphasized by Justice Holmes as a crucial component in creating a copyright-eligible work. The Court emphasized that in which there is no human creativity has any place in the copyright realm. However, there is a glimmer of optimism that AI-generated works would be recognised as original, as mentioned in the case of *Alfred Bell & Co.* v *Catalda Fine Arts*,[35] the District Court of the United States waived the bar for originality by holding that it couldn't be copied from any other artistic work with a comparable theme in order to be considered original. The reason behind that AI-generated works were extracted through programming and algorithms rather than being copied from others, the decision was in favour of copyright claims for such works. According to some case law, this issue might be resolved on a case-by-case basis. The Court of Appeal in England decided in the English case of *Nova Productions* v *Mazooma Games*[36] that a player's input 'is not artistic in nature and he has contributed no skill or labour of an artistic kind.' Therefore, taking each user activity into account individually may be a solution to the issue. Now it can be concluded that while taking into account both conventional and modern/practical viewpoints, the law is attempting to keep up with the times and address the technical issues surrounding AI and Intellectual Right protection.

In the public eye, the question of whether to assign legal personality to many objects or not, including Systems of Artificial Intelligence (SAI), is becoming more important. For instance, on April 20, 2015, representatives of the Non-human Rights Project organization declared that Hercules and Leo, two chimpanzees, had been granted legal personhood by the Manhattan Supreme Court for the first time ever. Despite the fact that neither a court nor a statute has ascribed legal personality to SAIs, academics have extensively studied the subject. Rarely is the need for such status granted when the topic of whether SAIs could be recognised as legal persons is posed. It is important to recognise that AI is always viewed as a tool to help people complete their tasks. The Law recognizes artificial persons, such as partnerships, corporations, etc., as legal entities and grants them copyright in works they produce, but only if it can be demonstrated that they are operated and maintained by humans. AI is nevertheless regarded as a legal entity even though it is thought of as an artificial human for this same reason. Having said that, it also provides an answer to the question of who is responsible for infringement brought on by AI. Despite this, AI is not a legal entity. Due to AI's lack of legal status, it is highly difficult to assign blame for any offences that may result from it, making them a major problem.

What is in front of us tomorrow, in a month, a year, ten years, or twenty years? That is a question raised by the increasing number of articles and papers on the successes of systems based on AI.[37] Can we be certain that as the use of smart homes built on SAI operating principles becomes more widespread, owners of such homes one day mayencounter resistance from their AI entity or any other active operation, which, even if it is appropriate and correct, might be unacceptable to the owner.[38] This would be comparable to the original Disney Channel film of 1999 Smart House, in which Pat, the computer system in charge of the house, exhibits extreme care and imprisons its occupants inside.[39]

A person's rights can only be restricted under situations that are allowed by law, which often prohibits interfering with the rights of others. This is related to the restriction of a person's free will. There will undoubtedly be instances where AI decisions and the corresponding actions have an impact on people's free will and way of life as SAI becomes directly involved in human affairs and has the capacity to make autonomous decisions.[40] The issue at hand prompts the question of how to regulate AI systems so that they do not violate others' rights when they are actively acting in society, even if they are motivated by good intentions; and how can we assure that the harm produced by these systems is minimised.[9]

Conclusion

Stephen Hawking has remarked 'Success in creating AI would be the biggest event in human history. Unfortunately, it might also be the last, unless we learn how to avoid the risks.'[41] The present situation surrounding AI and IPR is very challenging as there are a lot of identified grey areas surrounding this very issue

of AI-generated works. Currently, the IP regime is not ready to address this complex issue. At present we do not have specific law to deal with the AI-generated artworks, are only relying upon precedents and interpretation of the foreign courts, but in the long run, this might not work. There is a dire need to create separate legal provisions under the Copyright Law that can deal with AI-generated work.

This special law must have provisions to deal with the liabilities and remedies in case of infringement of copyright. Various international conventions like WIPO have already considered the above matter and have discussed the pros and cons of the same but still, there is a requirement for a uniform structured policy at the international level and national level as well.[3] However, as we consider AI is a relatively new topic so there is no explicit provision as of now but it is taking the words by storm so the existing provisions must be interpreted in such a way that we can reap the benefits of technology without jeopardizing our rights. The WIPO is making a lot of effort to address these issues. To deal with the AI-generated artworks, the '*sui generis'* system might be more appropriate. On the other hand, other experts' advice that particular measures may be taken and incorporated in the copyright laws of the nations to deal with the issue related to AI-generated works. In this case less protection should be given to AI-generated works than to those created by human beings. Additionally, human creativity and ingenuity should be prioritized over machines. So, the time has come for a balanced approach.[42]

References

1 Cameron J & Gray K R, Principles of International Law in the WTO Dispute Settlement Body, *The International and Comparative Law Quarterly*, 50 (2) (2001) 248.

2 Hristov K, Artificial intelligence and the copyright dilemma, *IDEA- The Journal of the Frankin Pierce Center for Intellectual Property,* 57 (3) (2016) 431.

3 Guadamuz A, Artificial intelligence and copyright, World Intellectual Property Organization, *WIPO Magazine* (2019) https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html (accessed on 9 July 2024).

4 Barfield W & Pagallo U, *Advanced Introduction to Law and Artificial Intelligence* (Edward Elgar Publishing Inc., USA) 2020.

5 Smith C, McGuire B, Huang T & Yang G, *The History of Artificial Intelligence*, (University of Washington) 2006, https://courses.cs.washington.edu/courses/csep590/06au/projects/history-ai.pdf (accessed on 7 April 2023).

6 Anyoha R, The history of artificial intelligence, *Science in the News*, 2017, https://sitn.hms.harvard.edu/ flash /2017/ history-artificial-intelligence/ (accessed on 8 April 2023).

7 Archibong E O, Artificial intelligence: A Battle for copyright and autonomy, *The Palm- People's Accolade Law Magazine,* 2020, https://www.thepalmagazine.com/ artificial-intelligence-a-battle-for-copyright-and-autonomy-by-ezekiel-oluwasalvagearchibong/ (accessed on 9 July 2024).

8 Bajpai N & Wadhwa M, Artificial intelligence and healthcare in India, *CSD Working Paper Series,* 2020, https://csd.columbia.edu/sites/default/files/content/docs/ICT%20. India/Papers/ICT_India_Working_Paper_43.pdf (accessed on 9 July 2024).

9 Shane J, *You Look Like a Thing and I Love You: How Artificial Intelligence Works and Why It's Making the World a Weirder Place*, (Voracious/Little Brown and Company, NY, USA, (2019) 51.

10 Colom R, Karama S, Jung R E & Haier R J, Human intelligence and brain networks, *Dialogues Clin Neuroscience*, 12 (4) (2010) 489.

11 Bogre M & Wolff N (eds.), *The Routledge Companion to Copyright and Creativity in the 21st Century* (Routledge, New York) (2021) 33.

12 Ghosh J, Power play of artificial intelligence upon intellectual property rights, 11(1-III) *IJLJ-Indian Journal of Law and Justice*, 100.

13 Kok J N *et.al.*, Artificial intelligence: Definition, trends, techniques and cases, Kok J N (ed.), *Artificial Intelligence*, (EOLSS Publishers Co. Ltd., Oxford, UK), (2009)1.

14 Welsh R, Defining artificial intelligence, *SMPTE Motion Imaging Journal*, 128 (1) (2019) 26.

15 Wang P, On defining artificial intelligence, *Journal of Artificial General Intelligence,* 10 (2) (2019) 1.

16 Guadamuz A, Do androids dream of electric copyright? Comparative analysis of originality in artificial intelligence generated works, *Intellectual Property Quarterly*, 2 (2017) https://ssrn.com/abstract=2981304 (accessed on 10 July 2024).

17 Chesterman S, Artificial intelligence and the limits of legal personality, *International and Comparative Law Quarterly,* 69 (4) (2020) 819, DOI:10.1017/S0020589320000366.

18 *Feist Publications, Inc.* v *Rural Telephone Service Company, Inc.*, (1991) 499 U.S. 340: The US Court hereby for the first time emphasized on the importance of artists demonstrating a certain level of creativity along with working independently. It is further clarified that copyright protection is contingent upon the originality of the creative process in art, rather than just differently presenting the final works.

19 (2008) 1 SCC 1.

20 Margoni T, Artificial intelligence, machine learning and EU Copyright Law: Who owns AI? *CREATe Working Paper Series* (2018) DOI: 10.5281/zenodo.2001763.

21 The Copyright Act, 1968 (Parliament of the Commonwealth, Act No. 63 of 1968).

22 (2015) FCAFC 156; 237 FCR 388; 328 ALR 247; 116 IPR 207.

23 (2009) HCA 14.

24 Hutukka P, Copyright Law in the European Union, the United States and China, *ICC- International Review of Intellectual Property and Competition Law*, 54 (2023) 1044.

25 Peng S C, Artificial intelligence and copyright: The authors' conundrum, *WIPO-WTO Colloquium Papers*, (2018) https://www.wto.org/english/tratop_e/trips_e/colloquium_papers_e/2018/chapter_13_2018_e.pdf (accessed on 10 July 2024).

26 Dreamwriter T, Regulations for the Implementation of the Copyright Law of the People's Republic of China, Arts. 2, 3, *ICC- International Review of Intellectual Property and Competition Law,* 51 (2020) 652.
27 The Copyright, designs and patents act, 1988, Section 9(3); Rajiv Sharma and Ninad Mittal, Artificial Intelligence Lacks Personhood to become the Author of an Intellectual Property, *Live Law*, (2023), https://www.livelaw.in/law-firms/law-firm-articles-/artificial-intelligence-intellectual-property-indian-copyright-act-singhania-co-llp-238401 (accessed on 10 July 2024).
28 Zirpoli C T, Generative artificial intelligence and Copyright Law, *Congressional Research Service,* (2023), https://crsreports.congress.gov/product/pdf/LSB/LSB10922 (accessed on 10 July 2024).
29 (2018) 888 F.3d 418.
30 Buch N, Artificial intelligence and intellectual property: An inevitable interface, *International Research Journal of Human Resource and Social Sciences*, 6 (4) (2019) 16.
31 The Copyright Act, 1957 (No. 14 of 1957), Section 2(d)(vi): as amended and inserted by the Copyright (Amendment) Act, 1994 (No. 38 of 1994, Section 2, sub-clauses (v) and (vi) [w.e.f. 10 May 1995].
32 Hristov K, Artificial intelligence and the copyright survey, *The Journal of Science Policy & Governance (JSPG)*, 16 (1) (2020).
33 Sturm B L T, Iglesias M, Ben-Tal O, Miron M & Gómez E, Artificial intelligence and music: Open questions of Copyright Law and engineering praxis, *Arts* 8 (3) (2019) 115.
34 (1903) 188 U.S. 239 ; 23 S. Ct. 298; 47 L. Ed. 460.
35 (1951) 191 F.2d 99.
36 (2007) EWCA Civ 219.
37 Čerka P, Grigienė J & Sirbikytė G, Liability for damages caused by artificial intelligence, *Computer Law & Security Review*, 31 (2015) 376.
38 Čerka P, Grigienė J & Sirbikytė G, Is it possible to grant legal personality to artificial intelligence software systems? *Computer Law & Security Review*, 33 (2017) 685.
39 Lindbergh B, What 'Smart House' Got Right-and Didn't-About the Future, *The Ringer* (2019), https://www.theringer.com/movies/2019/6/19/18686827/smart-house-disney-artificial-intelligence-katey-sagal (accessed on 10 July 2024).
40 (2018) 888 F.3d 418.
41 Hawking S, Russell S, Tegmark M & Wilczek F, Stephen Hawking: Transcendence looks at the implications of artificial intelligence-but are we taking AI seriously enough? *The Independent* (2014), https://www.independent.co.uk/news/science/stephen-hawking-transcendence-looks-at-the-implications-of-artificial-intelligence-but-are-we-taking-ai-seriously-enough-9313474.html (accessed on 10 July 2024).
42 Bond T & Blair S, Artificial Intelligence & copyright: Section 9(3) or authorship without an author, *Journal of Intellectual Property Law & Practice,* 14 (2019) 423.