



REVISING COPYRIGHT LAWS IN THE REGIME OF GENERATIVE ARTIFICIAL INTELLIGENCE

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ABSTRACT

The rise of Generative Artificial Intelligence (GAI), which can create novel content or ideas, unique texts, images, essays, or other media, leads to new copyright litigation between machines/computer systems and humans. The increasing use of GAI raises questions about the concept of authorship, ownership, and infringement in copyright law. The ability of GAI systems to generate creative content that closely resembles human-generated content challenges traditional notions of copyright law. Therefore, the need to reassess and evaluate the efficiency and efficacy of existing legal instruments to cope with the evolving era of Generative AI is pressing. The present study which particularly concentrates on the issues and challenges of the Copyright law in the age of Generative AI, accordingly aims toward the following objectives: (i) To understand the concept of Generative Artificial Intelligence (GAI); (ii) To identify the general meaning, evolution, nature and scope of the Copyright alongwith its Indian legal perspective about authorship, ownership and infringement; (iii) To bridge the gaps between Copyright laws and Generative AI (categorically to balance the issue of authorships and/or ownership of AI generated works).

Keywords: Generative Artificial Intelligence (GAI), Copyright laws and Generative AI, Authorship and Ownership of AI-Generated works, Infringement of Copyright by AI.

INTRODUCTION

The Monkey's Selfie case,¹ a very interesting, relevant, and peculiar matter in the domain of copyright law, where the dispute was raised regarding the title of copyright over a monkey's photograph clicked by the monkey himself. The fact of the case was that David John Slater, a

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¹ Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018).

wildlife photographer, left his camera unattended in a reserve on the island of Sulawesi, Indonesia, in 2011; a seven-year-old crested macaque named Naruto, who lived in the reserve, apparently took several photographs of himself (monkey's selfie) with Slater's camera. Slater, in December 2014, published the photograph in a book where he was one of the copyright owners of the money selfie. The People for the Ethical Treatment of Animals (PETA) and Dr. Antje Engelhardt, a next-friends and on behalf of Naruto filed a complaint for the infringement of copyright in 2015 concerning to Naruto's selfie but the District Court as well as the Federal Court in the United States (U.S.) both inter-alia opined that 'animals other than humans lack statutory standing to sue under the Copyright Act'.² Par contre, it came to know meanwhile in 2017 that Slater agreed to donate 25 per cent of the future revenue from the selfie for charities devoted towards the betterment of crested macaques, and it led to different controversies as the lawsuit was compromised and settled out of court among the litigants due to that consideration.

In the aforesaid instance, the legal battle which instigated over the title of a copyright rarely and accidentally occurred between a human and an animal. However, the time has arrived when diversified copyright litigation between machine/computer systems and humans is going to become a new normal. In 2017, an Artificial Intelligence (AI) humanoid robot named Sophia, which was built by Hanson Robotics, received citizenship of Saudi Arabia and became the first robot citizen of any country around the world. Noteworthy to mention that when the view of Sophia was sought over the given rights to her, she opined: 'we should have equal rights as humans or maybe even more. After all, we have fewer mental defects than any human'.³ Significantly, recent developments in AI technologies compelled the entire world to rearrange, modify and upgrade all its surroundings, which is not merely limited to technology, rather it seeks changes in social, political, economic, and legal spheres as well. Nowadays, the introduction of Generative AI (GAI) systems, which can create novel content or ideas, unique

² "Monkey selfie Controversy: Lawsuit over rights settled", The Hindu Business Line, San Francisco, Sept. 12, 2017, available at: <https://www.thehindubusinessline.com/news/variety/monkey-selfie-controversylawsuit-over-rights-settled/article9855206.ece> (last visited on June 9, 2023); see also, Matthew Haag, "Who Owns a Monkey Selfie? Settlement Should Leave Him Smiling", The New York Times, Sept. 11, 2017, available at: <https://www.nytimes.com/2017/09/11/us/selfie-monkey-lawsuit-settlement.html> (last visited on June 9, 2023).

³ Gali Katznelson, "AI Citizen Sophia and Legal Status", Petrie-Flom Center of Harvard Law School, Nov. 9, 2017, available at: <https://blog.petrieflom.law.harvard.edu/2017/11/09/ai-citizen-sophia-andlegalstatus/> (last visited on June 10, 2023).

texts, images, essays or other media in response to prompts,⁴ trends towards masterful manipulation of humans and poses a threat to several ethical as well as legal aspects thereof.⁵

In the view above, it is a need of the hour, while keeping in mind the principle of ‘prevention is better than cure’, to reassess and evaluate the efficiency and efficacy of the existing legal instruments to cope with foreseen challenges in the evolving era of Generative AI. The legal domain of this particular issue, which is widespread and rapidly increasing day by day, needs to be critically analysis through several specific laws which broadly include but not limited to, laws of Information Technology (IT), Intellectual Property Rights (IPR), Corporate Laws, Consumer Protection, Data Privacy, Cybercrimes, Evidence, and the procedural laws as well. Nevertheless, the present study, which particularly concentrates on the issues and challenges of the Copyright law in the age of Generative AI, accordingly aims toward the following objectives:

- To understand the concept of Generative Artificial Intelligence (GAI);
- To identify the general meaning, evolution, nature and scope of the Copyright along with its Indian legal perspective about authorship, ownership and infringement;
- To bridge the gaps between Copyright laws and Generative AI (categorically to balance the issue of authorship and/or ownership of AI-generated works).

UNDERSTANDING THE GENERATIVE ARTIFICIAL INTELLIGENCE

The journey of Artificial Intelligence (AI), though, started from curation (the ability to discern or curate what is relevant, useful, and impactful from the overwhelming abundance of data),⁶ and now enters into the phase 2 generation (the ability to create new content), which becomes popular as Generative-AI (GAI).⁷ In 1957, Frank Rosenblatt (a psychologist at Cornell University) invented the first neural networks (a key piece of technology underlying GAI) that

⁴ “The Future of Generative AI: Expert Insights and Predictions”, Harvard Online, Apr. 11, 2023, available at: <https://www.harvardonline.harvard.edu/blog/future-generative-ai> (last visited on June 9, 2023); See also, “Roundtable on Generative AI for the SDGs: Friend or Foe, Hope or Hype”, United Nations, May 4, 2023, available at: <https://media.un.org/en/asset/k14/k14ar7aqzw> (last visited on June 9, 2023).

⁵ Dr. Lance B. Eliot, “Generative AI ChatGPT As Masterful Manipulation of Humans, Worrying AI Ethics and AI Law”, Forbes, Mar. 1, 2023, available at: <https://www.forbes.com/sites/lanceeliot/2023/03/01/generative-ai-chatgpt-as-masterful-manipulation-of-humans-worrying-ai-ethics-and-ai-law/> (last visited on June 10, 2023).

⁶ Robert J. Gates, “The Age of Curation: A new creative Renaissance in a World of Data Abundance”, Apr. 24, 2023, available at: <https://www.robertjgates.com/the-age-of-curation-a-new-creative-renaissance-in-a-world-of-data-abundance/> (last visited on June 20, 2023).

⁷ Sandeep Maheshwari, “The Future of Artificial Intelligence”, May 11, 2023, available at: <https://youtu.be/jnnj6Fd2ym0>

were capable of being trained. In 2014, a type of algorithm called a generative adversarial network (GAN) was created, enabling GAI applications like images, video, and audio.⁸ The latest GAI interfaces not only can perform a wide range of routine tasks like the recognition and classification of data, rather it also has the ability to write text, compose music, and create digital art or images.⁹

Nevertheless, funding for GAI contributes only a fraction of total investment in the domain of AI, but a swift change has been noted in recent times when the segment of GAI received an investment of \$12 billion only in the first five months of 2023.¹⁰ It shows an average exponential annual growth rate of 74 per cent from 2017 to 2022 for GAI. Notably, a recent study found that GAI use cases could deliver about 75 per cent of the value across four areas, namely customer operations, marketing & sales, software engineering, and research & development by way of its ability to support interactions with customers, generate creative content for marketing and sales, and draft computer code based on natural-language prompts and so on.¹¹

Meaning and Concept: The Generative-AI (GAI) refers to programs and algorithms which use ‘deep learning’¹² to create art, music, and other creative content as per the command of the user. In other words, it is a type of ‘machine learning’ but more complex, as each GAI can produce different sets of creative pieces depending on the exact user input and taking into account the vast amount of available data sets.

GAI, as a sub-discipline of AI, typically builds using foundation models which contain expansive artificial neural networks inspired by the billions of neurons connected in the human brain. These Foundation models, which are part of deep learning, enabled new capabilities and improved existing ones across a broad range of modalities, including images, video, audio, and computer code. AI trained on these models can perform several functions, which inter alia include classifying, editing, summarising, answering questions, and drafting new content.¹³ On

⁸ Elysse Bell, “Generative AI: How It Works, History, and Pros and Cons” Investopedia, May 26, 2023, available at: <https://www.investopedia.com/generative-ai-7497939> (last visited on June 20, 2023).

⁹ Michael Chui, et.al., THE ECONOMIC POTENTIAL OF GENERATIVE AI: THE NEXT PRODUCTIVITY FRONTIER (McKinsey & Company, June 2023) 4.

¹⁰ Id., 5.

¹¹ Id., 3.

¹² Bergur Thormundsson, “Deep learning - statistics & facts”, Statista, Apr 27, 2023 available at: <https://www.statista.com/topics/9586/deep-learning/#topicOverview> (last visited on June 20, 2023).

¹³ Michael Chui, et.al., THE ECONOMIC POTENTIAL OF GENERATIVE AI: THE NEXT PRODUCTIVITY FRONTIER (McKinsey & Company, June 2023) 4.

the other hand, it can also be used for non-generative purposes (for example, classifying user sentiment as negative or positive based on call transcripts) while offering significant improvement over earlier models.¹⁴

Traditional AI vis-à-vis Generative AI: The GAI simply defines itself as the field of science which studies the fully automated construction of intelligence.¹⁵ Unlike traditional AI which is based on a closed system paradigm i.e., the conventional methodology like, Input→ Process, and→ Output and the generally the outcome is predictable; the GAI follows an opened systems with non-linear properties i.e., the generative method where the machine while interacting with its environment, encounters and creates possible solutions to problem as well as the outcome is quite unpredictable. The distinguishable feature of GAI is that there is no difference between the training phase and the execution phase, as the system learns while executing. Thus, the GAI engine can replace human heuristic exploration through autonomous mechanisms, where a machine can build its own intelligence.¹⁶ Whereas the traditional AI used for detection or classification of objects, now the GAI focuses on generating different content while scraping a large amount of data from Internet sources.

Practical Application and Exploration: The predominant application of GAI primarily came into attention with the evolution of ChatGPT, an AI chatbot (a computer program that simulates human conversation through voice commands or text chats or both) launched by OpenAI on November 30, 2022, and within the next five days, it had attracted over one million users.¹⁷ The latest version of ChatGPT as GPT-4, was released on March 14, 2023, and it is a large multimodal model (accepting image and text inputs, emitting text outputs) that, while less capable than humans in many real-world scenarios, exhibits human-level performance on various professional and academic benchmarks.¹⁸ Instead of relying on the traditional ladder approach to search results, ChatGPT takes a request, scans for answers, and provides a response that includes citations to the sources.

¹⁴ Id., 6.

¹⁵ Tijn van der Zant, et.al., “Generative Artificial Intelligence”, in Vincent C. Muller (ed.), in 5 Philosophy and Theory of Artificial Intelligence 113 (Springer, SAPERE, 2013).

¹⁶ Id. 115, 119.

¹⁷ Bernard Marr, “A Short History of ChatGPT: How We Got to Where We Are Today”, Forbes, May 19, 2023, available at: <https://www.forbes.com/sites/bernardmarr/2023/05/19/a-short-history-of-chatgpt-how-we-got-to-where-we-are-today/> (last visited on June 20, 2023).

¹⁸ “GPT-4”, Open AI, Mar. 14, 2023, available at: <https://openai.com/research/gpt-4> (last visited on June 20, 2023).

With ChatGPT, it is possible to produce an essay in as little as ten seconds.¹⁹ With the commercial success of ChatGPT, Google subsequently launched a similar chatbot service called Bard on March 21, 2023 draws on information from the web to provide fresh, high-quality responses.²⁰ Likewise, ChatGPT and Bard, which provide a textual outcome, OpenAI's Dall-E²¹ or Google's Imagen works towards creating images based on GAI technology. Furthermore, OpenAI's Jukebox²² or Google's MusicLM²³ has the ability to output a new music sample produced from scratch, just provided with genre, artist, and lyrics as input. Similarly, different GAI interfaces are also there for other types of content creation (like audio, video, animation, etc.) with the help of GAI. These GAI models can generate outputs that can closely resemble human-generated content. It is pertinent to mention that due to the massive amounts of data used in training, these models may sometimes lead to unrealistic or imaginary outputs as well. Table No. 1 below shows a few of these applications of GAI along with their examples across various modalities.

Modality	Application	Example use cases
TEXT	Content Writing	Marketing: creating personalized emails and posts; Talent: Drafting interview questions, job descriptions.
	Chatbots or Assistants	Customer service: using chatbots to boost conversion on websites.
	Search	Making more natural web search; Corporate knowledge: enhancing internal search tools.
	Analysis and	

¹⁹ Subhra Mondal et.al., "How to Bell the Cat? A Theoretical Review of Generative Artificial Intelligence towards Digital Disruption in All Walks of Life", 11(2) Technologies (2023) 44.

²⁰ Sundar Pichai, "An important next step on our AI journey", Feb. 6, 2023, available at: <https://blog.google/technology/ai/bard-google-ai-search-updates/> (last visited on June 20, 2023).

²¹ "DALL·E now available without waitlist", OpenAI, September 28, 2022, available at: <https://openai.com/blog/dall-e-now-available-without-waitlist#OpenAI> (last visited on June 20, 2023).

²² "Jukebox", OpenAI, April 30, 2020, available at: <https://openai.com/research/jukebox> (last visited on June 20, 2023).

²³ Kristin Yim, "Turn ideas into music with MusicLM", Google, May 10, 2023, available at: <https://blog.google/technology/ai/musiclm-google-ai-test-kitchen/> (last visited on June 20, 2023).

	Synthesis	Sales: analyzing customer interactions to extract insights; Risk and legal: summarizing regulatory documents.
CODE	Code generation	Information Technology (IT): Accelerating application development and quality with automatic code recommendations.
	Application prototype and design	IT: quickly generating user interface designs.
	Data set generation	Generating synthetic data sets to improve AI models' quality.
IMAGE	Stock image Generator	Marketing and sales: generating unique media.
	Image editor	Marketing and sales: personalizing content quickly.
AUDIO	Text to voice Generation	Trainings: creating educational voiceover.
	Sound creation	Entertainment: making custom sounds without copyright violations.
	Audio editing	Entertainment: editing podcast in post without having to rerecord.

3-D OR OTHER	3-D object Generation	Video games: writing scenes, characters; Digital representation: creating interior design mockups and virtual staging for architecture design.
	Product design and discovery	Manufacturing: optimizing material design; Drug discovery: accelerating Research and Development (R&D) process
VIDEO	Video Creation	Entertainment: generating short-form videos for social media; Training or learning: creating video lessons or corporate presentations using AI avatars.
	Video editing	Entertainment: shortening videos for social media, removing background noise or image; E-commerce: adding personalization to generic videos.
	Voice translation and adjustments	Video dubbing: translating into new languages using AI-generated or original speaker voices; Live translation: for corporate meetings, video conferencing;

		Voice cloning: replicating actor voice or changing for studio effect such as aging.
	Face swaps and adjustments	Virtual effects: enabling rapid high-end aging; de-aging, cosmetic, wig, and prosthetic fixes; Lip syncing or ‘visual’ dubbing in postproduction: editing footage to achieve release in multiple rating or languages; face swapping and

THE COPYRIGHT: A BIRD’S-EYE VIEW

The Black’s Law Dictionary defines the word ‘Copyright’ as ‘the right to copy; specifically, a property right in an original work of authorship (including literary, musical, dramatic, choreographic, pictorial, graphic, sculptural, and architectural works; motion pictures and other audiovisual works; and sound recordings) fixed in any tangible medium of expression, giving the holder the exclusive right to reproduce, adapt, distribute, perform, and display the work’.²⁴ As per Concise Law Dictionary, the term ‘Copyright’ signifies ‘the right given by law for a certain term of years to an author, composer, etc. (or his assignee or heirs) to print, publish and sell copies of his original work or translation thereof’. In other words, a person or an organisation that holds the copyright on a piece of writing, music, etc., is only legally entitled to publish, broadcast, perform it, etc. and any other person is disbarred from using it wholly or in part without prior permission from the original copyright holder.²⁵

Historical Journey: In the mid-14th century, as soon as Johannes Gutenberg invented the movable type mechanised printing press, the concept of copyright was gradually started to be formalised.²⁶ The authors attempted to commercialise their writings through printed publications, but an unauthorised reprint of the same simultaneously caused substantial financial damage to both the author and the actual publisher. The original printer-publisher who

²⁴ Bryan A. Garner (eds.), BLACK’S LAW DICTIONARY (Thomson Reuters, USA, 9th edn., 2009) 386.

²⁵ A.S. Hornby, OXFORD ADVANCED LEARNER’S DICTIONARY, (Oxford University Press, New York, 6th edn., 2000) 277.

²⁶ Brander Matthews, “The Evolution of Copyright”, 5(4) Political Science Quarterly (1890) 587.

invests the money, energy and time to publish a book often gets outraged with the pirated copies, which immediately become available at a lower price due to non-inclusion of scholarly charges for the authors.²⁷ Accordingly, an informal copyright protection or printing privilege was granted to Johannes of Speyer (a printer-publisher) by the Senate of Venice on September 18, 1469, as an exclusive right for five years to print the epistles of Cicero and of Pliny.²⁸ The Venice issued a similar type of privilege directly to Peter of Ravenna (an author-jurist) for printing, publication and selling his work 'Phoenix' in 1491. In Germany, this analogous privilege was traced for the first time in 1501 and contemporarily followed by other Italian states and France.²⁹

In England, a privilege for seven years was entrusted to John Palsgrave (an author) in 1530, while considering the embedded value and time of his work.³⁰ On April 10, 1710, the privilege finally got the legal recognition through the Statute of Anne (considered as the first-generation copyright legislation), which was enacted by the British Parliament to safeguard the financial interest of an author or a proprietor of any book and writing for a specified period, and to prevent the detrimental practice of piracy thereof.³¹ However, the expression 'Copyright' literally for the first time evolved under the Engraving Copyright Act of 1735 in the United Kingdom (UK).

In America, the Copyright Act was initially introduced in its three states, Virginia, New York and New Jersey during 1785-1786. It is pertinent to mention that the importance of copyright is significantly acknowledged under Article I (8) of the US Constitution³² in 1787, and finally, the federal legislation, namely, the Copyright Act, was passed by the US Congress on May 31, 1790. Par contre, it was alleged that the Act of 1790 copied almost verbatim from the Statute of Anne, 1710.³³

In India, the Indian Copyright Act, 1847, was primarily enacted during the period of British colonisation. The concept of copyright, along with its legal validation, gradually started to

²⁷ Id. at 587.

²⁸ Joanna Kostylo, "Commentary on Johannes of Speyer's Venetian monopoly 1469", in Lionel Bently & Martin Kretschmer (eds.), in *Primary Sources on Copyright (1450-1900)*, (Faculty of Law, University of Cambridge, 2008) available at: https://www.copyrighthistory.org/cam/tools/request/showRecord.php?id=commentary_i_1469 (last visited on June 13, 2023).

²⁹ Brander Matthews, "The Evolution of Copyright", 5(4) *Political Science Quarterly* (1890) 588-589.

³⁰ Ibid.

³¹ Asherry Magalla, "The History of the Concept of Copyright" *Martin Luther Law Journal* (2013) 25.

³² The Constitution of the United States (September 17, 1787) Article I, Section 8.

³³ Asherry Magalla, "The History of the Concept of Copyright", *Martin Luther Law Journal* (2013) 40.

expand around the world and ultimately received its earliest international exposure under the Berne Convention for the Protection of Literary and Artistic Works in 1886.³⁴

Nature and Scope: The nature of copyright is broadly twofold: (a) one is from the perspective of Legal Right, and (b) another in the context of Property, specifically the Intellectual Property (IP). First of all, Rudolf Von Ihering (1818-1892), a German legal scholar (also known as the father of sociological jurisprudence),³⁵ opines that ‘rights are legally protected interests’ and on a similar footing, Sir John Salmond (1862-1924)³⁶ states ‘the right is an interest recognised and protected by a rule of legal justice’.³⁷

Accordingly, Ihering and Salmond both emphasised the interest theory where the existence of interest has been affirmed as a sine qua non factor to every legal right. The expression ‘interest’ hereby signifies an individual or collective human demand or expectation which needs to be settled in a society by way of a continuous process of adjustment and change in consistency with the dynamic goals, objectives and values of a particular society. Likewise, any other legal right, the ‘copyright’ also evolved to protect the interest of the authors and/or the publishers in the form of a privilege which subsequently transformed into a legally recognised right accompanied by the principle *ubi jus ibi remedium*. Even the interest of the authors and/or the publishers, which was primitively limited to mere economic interest (prevention of commercial exploitation), has now expanded towards moral interest (protection of individual honour, reputation, and integrity of the work)³⁸ as well. The nature of copyright from the perspective of a legal right is described below:

It is a right in rem which is available against the society at large and can even be extended to the entire world. It is a combination of both proprietary rights and personal rights. So far, the economic interest (as measurable in terms of money) is concerned, copyright can be classified as a proprietary right and can be inherited. On the other hand, it can be considered as a personal right and not inheritable when the moral interest (which has no monetary value) is concerned thereat. The dual character of antecedent or primary right and remedial or sanctioned right is

³⁴ Monika and Dr. Parmod Malik, “Historical Development of Copyright Law”, 5(1) International Journal of Law Management & Humanities (2022) 565.

³⁵ “Rudolf von Ihering”. Encyclopedia Britannica Sep. 13, 2022, available at: <https://www.britannica.com/biography/Rudolf-von-Ihering> (last visited on June 15, 2023).

³⁶ R. F. V. Heuston, “Sir John Salmond”, 5 *Adelide Law Review* (1964) 220.

³⁷ Dr. Sanjeev Kumar Tiwari, JURISPRUDENCE LEGAL THEORY & ELEMENTS OF LAW,

³⁸ Mira T. Sundara Rajan, “Moral rights: the future of copyright law?”, 14(4) *Journal of Intellectual Property Law & Practice* (2019) 257.

also found under the copyright, as it initially derives as a privilege to the authors/publishers and is also backed by the sanction or remedy if any infringement occurs thereof.

Secondly, the concept of property is two-dimensional, where the wider sense connotes 'property includes all a person's legal rights, of whatever description' and the narrower view portrays 'property includes not all a person's rights, but only his proprietary as opposed to his personal rights'.³⁹ The former constitutes a person's life, liberty, reputation, and estate as his property, but the latter only considers those rights which have an economic value, like land, chattels, debts, patents, copyright, etc. Accordingly, the concept of copyright, which comprises economic right as well as moral right, significantly comes under both the strict and liberal definition of property. Unlike a corporeal or tangible property, which can be touched or felt by the human senses, the copyright falls under the category of incorporeal or intangible property, which is abstract in form and not even visible or sensed through human instinct. More specifically, the copyright is often considered a subset of intellectual property (IP). The property right is not absolute in nature rather limited to a specific time period, which covers the lifetime of the author, including ten to eighty years beyond, as based on the distinct domestic law of a country.

The most popular notion behind the scope of copyright supports that the copyright is 'a mere right to copy' and the prime objective of copyright is to recognise and protect the rights of authors/creators in their intellectual works while rewarding an incentive to reproduce and disseminate such works. Per contra, various scholars, while discarding the above view, argued that copyright aims to promote public welfare by the advancement of knowledge, and to regulate trade by providing certain privileges and obligations.⁴⁰ However, the copyright does not subsist on an idea and as such, any infringement cannot be claimed in case of its adoption by others.⁴¹

Indian Legal Scenario: The Copyright Act, 1957 (as amended up to 2021) is the parent legislation which presently governs the copyright in India, and repeals the Copyright Act, 1911 of the British Parliament as modified in its application to India by the Indian Copyright Act,

³⁹ Bryan A. Garner (eds.), BLACK'S LAW DICTIONARY (Thomson Reuters, USA, 9th edn., 2009) 1336; See also, Dr. Sanjeev Kumar Tiwari, JURISPRUDENCE LEGAL THEORY & ELEMENTS OF LAW, (Samudhvab Publisher, Kolkata, 1st edn. 2012) 176.

⁴⁰ Lydia Pallas Loren, "The Nature of Copyright: A Law of Users' Rights", 90(6) Michigan Law Review (1992) 1624-1633.

⁴¹ P. Narayana, INTELLECTUAL PROPERTY LAW (Eastern Law House, Kolkata, 3rd edn., 2017) 255. ⁵⁷ The Copyright Act, 1957 (Act 14 of 1957), s. 79.

1914. The Act of 1957 does not comprehensively define the expression ‘copyright’; rather, section 14 thereof lists several activities which a copyright holder is entitled to do or authorise the doing. Even the Act fails to set forth an effective and efficient aim or objective behind the legislative enactment. Nevertheless, in consistency with the purpose of the present study, only the relevant concepts of authorship and ownership issues in the copyright law have been taken into consideration under this portion.

First of all, section 2(d) of the Act, 1957 provides an illustrative description of the word ‘author’ which inter alia includes writer (author) for any literature or dramatic work,⁴² composer for a musical work;⁴³ painter (artist) for an artistic work, and photographer of a photograph,⁴⁴ producer for a cinematograph film⁴⁵ or sound recording;⁴⁶ the person who causes the creation of any computer-generated literary, dramatic, musical or artistic work.

Noteworthy to mention that in the absence of any exposition of the term ‘person’ under the Act of 1957, the General Clauses Act, 1897, enters into the scene and indicates ‘person’ shall include any company or association or body of individuals, whether incorporated or not. However, different High Courts of the country have taken divergent views while interpreting the word ‘person’ in the case of copyright’s authorship as depending upon the nature of the work. For instance, the Delhi High Court in several occasions observed that a juristic person is incapable of being author of work in which copyright may exist but entitled to get the ownership thereon by virtue of an agreement; per contra the Bombay High Court held that any legal person (including an individual, a partnership firm, or a company) is entitled to get the authorship and the first ownership of copyright over a cinematograph film.⁴⁷ Moreover, section 2(z) of the Copyright Act, 1957, denotes that if any work has undergone an indistinguishable and collaborative effort of two or more authors, then the outcome will fall under the scope of joint-authorship.

Secondly, section 17 of the Copyright Act, 1957 considers the author of a work as the first owner of copyright, except in case of a few special circumstances which simply, amongst other things, exemplify:

⁴² Id., s. 2(h) ‘dramatic work’

⁴³ Id. s. 2(p) ‘musical work’.

⁴⁴ Id. s. 2(s) ‘photograph’.

⁴⁵ Id. s. 2(f) ‘cinematograph film’.

⁴⁶ Id. s. 2(xx) ‘sound recording’.

⁴⁷ Ramesh Sippy vs. Shaan Ranjeet Uttamsingh, 2013 SCC Online Bom 523 Para 48’.

Tech Plus Media Private Ltd. v. Jyoti Janda 2014 SCC Online Del 1819 para 20 ‘...The plaintiff is a juristic person and is incapable of being the author of any work in which copyright may exist. However, the plaintiff can be the owner of a copyright under an agreement with the author of the said work...’; the Delhi High Court in this matter held that ‘The Central Board of Secondary Education is not the author of the work. The author of the work is normally a natural person who exercises skill, knowledge and judgment in connection with the preparation of each of the questions, which are part of the examination paper.’; ‘...Copy right is conferred only upon "authors" or those who are natural person from whom the work; has originated or the authors may be legal persons to whom copyright has been assigned in accordance with law. by the authors from whom the work had originated...’ & para 55 ‘...a machine cannot be "author" of an artistic work, nor can it have copyright therein...’ any work made in course of the author’s employment under a contract of service or apprenticeship, then the employer shall be the first owner of the copyright; similarly in case of a government work, the ownership shall vest to the government;

INTERFACE BETWEEN COPYRIGHT LAW AND GENERATIVE ARTIFICIAL INTELLIGENCE

The open access digital technology has led to an explosion of material available on the web; the manifest ease of manipulating these materials has generated unprecedented concerns about preserving the integrity of culture and knowledge, composed, to a significant extent, of works in copyright (including both the economic as well as moral rights of authors). Secondly, the public faces a growing need for access to reliable information. Thirdly, maintaining the integrity of digital information is a crucial prerequisite for the effectiveness of text or data mining and, at a far more sophisticated level, for the integrity of Generative Artificial Intelligence.

(GAI) technologies:⁴⁸ The GAI has the potential to create an enormous amount of work with less investment in a very short span of time. The requirement of the use of skill, labour, and judgement in originality may be deemed to have been satisfied by virtue of the algorithm on

⁴⁸ Mira T. Sundara Rajan, “Moral rights: the future of copyright law?”, 14(4) Journal of Intellectual Property Law & Practice (2019) 257.

which such GAI actually compiles and creates the work.⁴⁹ However, the question of authorship for the works of GAI is still under controversy. The

Delhi High Court in *Navigators Logistics Ltd. vs. Kashif Qureshi & Ors.*,⁵⁰ a copyright's authorship was claimed over a list compiled by the computer, but it was rejected on the grounds, inter alia, of lack of human intervention.

On the other hand, section 2(d)(vi) of the Copyright Act, 1957 entrusted the authorship of any computer-generated work (specifically, literary, dramatic, musical or artistic work) upon the person who causes the work to be created. This provision, though, applies to the works of GAI but significantly excludes the computer or GAI from getting the credit of authorship thereat. Accordingly, there is no doubt that the Indian legislature had intended to restrict the authorship of copyright only to individuals. Again, in *Amar Nath Sehgal vs. Union of India*, the Delhi High Court observed that 'in the material world, laws are geared to protect the right to equitable remuneration. But life is beyond the material. It is temporal as well. Many of us believe in the soul. Moral rights of the author are the soul of his works. The author has the right to preserve, protect and nurture his creations through his moral rights. Moral rights are related to the feelings and emotions of the human author. These rights are not meant for AI.

The premise, which reflects civil law countries such as Germany, France and Spain, indicates that works created must bear the "imprint of the author's personality". The authorship, therefore, should be denied to AI in the AI-generated works, as the AI does not have a personality. Making GAI a legal entity would mean that it should possess the capacity to enter into contracts with other persons. It will also have duties under the law and will be liable for its acts. Most importantly, it should have the capacity 'to sue and be sued' under the law.

Another perplexing question will be about the term of AI-generated works. The AI does not die like a human being. One may, however, argue that the term may be counted from the date of publication for a period of 50 or 60 years, depending on the laws of the countries. Conferring copyright protection on AI with respect to AI-generated works is disputed because a human being is mortal and experiences fatigue while working. Therefore, a human author creates limited works in his/her lifetime in which a copyright subsists, and the copyright is justified as his/her efforts are to be rewarded. On the contrary, an AI is immortal, does not experience

⁴⁹ V. K. Ahuja, "Artificial Intelligence and Copyright: Issues and Challenges", *ILI Law Review*, (Winter Issue, 2020) 274.

⁵⁰ 254 (2018) DLT 307.

fatigue and is capable of producing any number of works. Conferring copyright protection on AI-generated works is therefore ‘equivocal and disputable’.⁵¹ Further, the experts who are not in favour of giving copyright protection to AI-generated works argue that if the same model and the same inputs are given, the GAI will produce output that will be the same every time. Therefore, it is hard to say that it is ‘unique and creative’.

In addition, it will be difficult for GAI to negotiate the royalty with others and enforce the rights which are available to the author under the copyright law. Making GAI an author of the work will not be an easy task, as it is likely to create more difficulties than resolve them.⁵² Copyright subsists only in original work. The word original does not mean that the work must be the expression of original or inventive thought. The originality which is required relates to the expression of the thought, but the expression need not be in an original or novel form; the work must not be copied from another work- that is, it should originate from the author. No formalities like registration are required to acquire copyright. Copyright in a work automatically subsists as soon as the work comes into existence, provided it is original. Although there is a provision for registration of copyright work, it does not confer any special right or privilege rather has an evidential value before the court of law.⁵³ As per the understanding of the jurisprudence of ‘original’ work in the light of copyright laws in different jurisdictions. It has become important to delve into the question of whether work generated by Artificial Intelligence can be considered as ‘original’ as per the laws of copyright. In India, the legislature has been silent on it, and so is the judiciary, which sets and examines several principles to determine the originality, including (a) the Sweat of the Brow Doctrine; (b) Modicum of Creativity; and (c) Skill and Judgement Test.

CONCLUSION

This study hereby finds that the generative AI (GAI) is the actual author of the contents created by it. Noteworthy to say that a mere guiding command or prompt provided by the user based on their idea to do the work does not override the actual performing task of GAI behind such creation. Per contra, the copyright authorship not only accommodates the right to copy, rather it is also accompanied by a set of liabilities regarding the contents of the creation. It is pertinent

⁵¹ Sik Cheng Peng, “Artificial Intelligence and Copyright: The Author’s Conundrum”, WIPO-WTO Colloquium Papers, 181 (2018).

⁵² V. K. Ahuja, “Artificial Intelligence and Copyright: Issues and Challenges”, ILI Law Review, (Winter Issue, 2020) 276-277.

⁵³ P. Narayana, INTELLECTUAL PROPERTY LAW (Eastern Law House, Kolkata, 3rd edn., 2017) 256.

to mention that any AI-generated task is not fully independent in nature; rather, it depends on the instructions of the user as well as reveals the outcome based on available internet resources. Thus, the creation of GAI may suffer from the risk of manipulative commands by the user and false or fabricated information contained in cyberspace. Accordingly, if the authorship over the AI-generated content is entrusted to the GAI itself, it can promote, encourage or cause mishandling of the tool to mislead, defame, harass or annoy the people at large by the miscreants with the veil of anonymity. Apart from that, the entitlement of authorship upon the GAI can also be restricted in the following instances:

1. Lack of the author's personality.
2. Uncertain term of copyright.
3. No economic or moral interest of GAI in its' creative work.
4. Absence of any actual labour, skill or judgement by the GAI behind the creation.
5. Problems in the assignment or transfer of the copyright due to a lack of natural representation on its behalf.

In the view above, the concept of joint authorship cannot be sought as an alternative solution thereat. Therefore, the best possible solution to the matter can be achieved through assigning the sole authorship of AI-generated content only to its human user. This copyright authorship upon the natural user not only seemed as a right but its significance lay upon the indistinguishable liabilities which may prevent misuse of the AI phenomenon in the near future, with the consciousness of people to suffer civil or criminal liability if any contravention occurs thereof. In a similar context, the Union Minister of State for Commerce and Industry recently, in a written reply in the Rajya Sabha, categorically revealed as follows:

‘The exclusive economic rights of a copyright owner, such as the right of reproduction, translation, adaptation, etc., granted by the Copyright Act, 1957, obligate the user of Generative AI to obtain permission to use their works for commercial purposes if such use is not covered under the fair dealing exceptions provided under Section 52 of the Copyright Act. Since Intellectual property rights are private rights, these are enforced by the individual rights holders. Adequate and effective civil measures and criminal remedies are prescribed under the

Copyright Law against any act of infringement or unauthorised use of works, including digital circumvention.’⁵⁴

Last but not least, this study, while evaluating the existing copyright law of India with special reference to the copyright authorship of AI-generated content, hereby suggests the following recommendations:

- The definition of ‘AI-generated work’ immediately needs to be introduced under the Copyright Act, 1957.
- The authorship, along with the first ownership of AI-generated works, needs to be entrusted to the natural user of the instrument through necessary amendments to the Act.
- The GAI should be discharged from the liability of copyright infringement; rather, it is the programmer or user of GAI who needs to be brought under the periphery of joint liability or strict liability, depending upon the facts and circumstances of any violation.
- The ambiguity in different terms like ‘computer-generated’, ‘originality’ and ‘person’ needs to be well explained with proper illustrations (if applicable) under the legislation.

⁵⁴ “Existing IPR regime well-equipped to protect AI-generated works, no need to create separate category of rights”, February 9, 2024, PIB, available at: <https://pib.gov.in/PressReleasePage.aspx?PRID=2004715> (last visited on March 8, 2025).