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DECIPHERING THE LEGAL PUZZLE: COPYRIGHT PROTECTION FOR AI GENERATED WORK

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I. ABSTRACT

As artificial intelligence (AI) continues to revolutionize industries such as art, literature, music, and software development, the matter of copyright protection for AI-generated creations has become increasingly intricate and requires contemporary attention in considering the drastic growth and development of AI. This paper seeks to evaluate the level of originality in AI-generated works, examining the challenges these creations face in meeting the originality requirements under copyright law for protection. This paper aims to explore the copyright law in India. It also delves into the complexities and uncertainties surrounding copyright ownership and authorship of AI-generated content, while assessing the current legal framework established by the Copyright Act, 1957, and related laws.

The ambiguity within India's current copyright law regarding the protection of original works created by AI has the potential to create legal gaps, which may discourage creators from involving and innovating new technologies, which in turn producing new works and it undermines the core purpose of copyright and intellectual property protection. By examining relevant legal precedents, case studies, and policy considerations, this paper will focus on necessary amendment to the laws for protection to original works created by AI and strengthen copyright protection in the rapidly evolving AI landscape. The ultimate goal of this research is to contribute to the development of robust legal frameworks and policies that foster innovation, creativity, and equitable access to knowledge in the AI era.

II. KEYWORDS:

Copyright, Originality, Law, Artificial intelligence

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III. INTRODUCTION

In today's world, the rapid advancement of artificial intelligence (AI) technologies has profoundly related and influenced various aspects of human activity, particularly in the fields of art and literature. This evolution has led to a significant shift and transformation in the dynamics of creative contributions of mankind, as AI systems significantly take on a dominant role in producing artistic and literary works. As a result, important questions arise pertaining to the authenticity and originality of these AI-created works, because it raises a serious threat to the human creators. Additionally, the rise of AI-generated content highlights a gap in India's current copyright laws. India's traditional copyright framework was established to protect the creative output of human authors, but it has a legal lacunae and ambiguity to accommodate the challenges posed by AI-generated content.

The core issue revolves around aligning the concept of authorship and originality in the context of AI-generated works, where the distinction between human creativity and machine automation becomes unclear. If AI-generated work is deemed original, can it be protected under the Copyright Act? This research will delve into AI creations, examining the originality of AI-produced artworks and their protection under copyright law.

IV. RESEARCH HYPOTHESIS

The artworks created by Artificial intelligence are original and it can pass the test of originality, in order to be protected under Indian copyright law.

V. RESEARCH QUESTION

Whether all the artworks created by Artificial intelligence is original and liable to be protected under copyright law?

VI. OBJECT OF RESEARCH

The central focus of this research is the issue of originality and protection of AI-generated works, given that these creations stem from the sources AI systems use for inspiration and data. Unlike human creators, who bring unique perspectives and

personal experiences, AI algorithms depend on extensive datasets and pre-programmed algorithms to generate output. This heavy reliance on pre-existing data raises questions about whether AI-generated works can genuinely be considered original or if they simply represent derivative creations.

To tackle this issue, a nuanced strategy that takes into account the legal and ethical dimensions of AI-generated creations. One possible solution is to amend the existing copyright laws to evaluate and recognise the distinct nature of AI-produced works. This could involve creating new standards for evaluating originality of AI created works, ownership of it and term of protection within the realm of AI creativity. Alternatively, the matter might be approached through interpretative frameworks that adjust existing legal principles to the context of AI-generated content. Courts and policymakers could utilize existing copyright doctrines, such as fair use or transformative use, to evaluate the originality and creative value of AI-generated works.

Navigating the relationship between technology and copyright law requires a comprehensive approach that balances innovation with the protection of creative expression. Through meaningful dialogue and collaboration among legal experts, technologists, and creative communities, we can establish frameworks that foster both human creativity and technological progress in the digital age. It is important not to overlook the recognition of these creations, provided they meet originality standards, since the core purpose of intellectual property protection is to encourage the development of new inventions and works. Without such protection, there would be little incentive for individuals to innovate, potentially hindering overall progress.

VII. RESEARCH METHODOLOGY

This research paper is intended to be carried out in doctrinal method of research. This study will make use of sources with relevant information to the artificial intelligence, copyright laws and other relevant source. This will be obtained from a documentary analysis of case laws, books, articles and websites describing the copyright protection, artificial intelligence.

VIII. CREATIONS OF ARTISTIC WORKS BY ARTIFICIAL INTELLIGENCE

Artificial intelligence is not a new concept to the world. As we can trace back as the late 1950s, computers were used to generate works based on given inputs. However, in today's modern era, AI has evolved dramatically. Unlike its early versions, contemporary AI has advanced to a point where it can independently create a wide range of outputs with minimal human involvement. Significantly, AI now possesses decision-making capabilities, allowing it to function autonomously in various situations. A notable example is Google's AI for autonomous driving. These AI-powered vehicles, equipped to assess and respond to changing conditions, make decisions on the road, showcasing the remarkable strides AI has made in autonomous decision-making. In such cases, human intervention is minimal or absent, with the AI responsible for the decision-making and creation of outcomes.

IX. ADOBE ON HOW AI WORKS ON CREATING ARTS

Adobe firefly is a generative AI which is capable of producing artworks, based on the prompt provided to it.

- i. People create art from the things that surround them – trees in the forest, cityscapes, their own reflection in a mirror. Generative artificial intelligence also takes in lots of information in the form of words and images, and uses those to create artwork from a prompt.
- ii. The technology that powers this ability is called a neural network. A neural network is a mathematical system – an algorithm – that finds patterns in big sets of data. When you prompt an AI generator to depict a tree, it's using the information it has learned about what trees look like to create a new image. These tools are packed with information, but it takes the imagination of the user to create artificial intelligence art².

² Adobe, What Is AI Art? (visited [18.04.2024]). Available at: <https://www.adobe.com/products/firefly/discover/what-is-ai-art.html>.

So, from the above observation and studies, we understand that, AI creates artworks by learning patterns and styles from a huge collection of existing art, like paintings and photos. It uses various techniques and creates unique artworks. But the AI does most of the creative work on its own, by using and analysing the data that is feeded to it. Now let us analyse, what is the legal position in conferring copyright protection for AI created works in India.

X. HOW ARTIFICIAL INTELLIGENCE DOES CREATE OR GENERATES ART?

Artificial intelligence refers to machines, such as computers, being able to perform tasks that typically require human mind and intelligence, such as learning, understanding, and decision-making. In essence, AI involves teaching a machine to carry out tasks in a way similar to teaching a child, enabling it to produce results that are typically achieved through human intellect. Given these capabilities, the works created by Artificial intelligence, are not mere imitations or copying from the existing works but represent new and original expressions. As a result, they meet the criteria for originality test, let us examine about this much deeper below.

XI. PROTECTION UNDER THE COPYRIGHTS ACT, 1957

The copyright act, 1957 governs the matters regarding conferring copyrights protection to original works, infringement procedures, remedies for infringement, copyright office etc. This act is a comprehensive enactment governing the copyright regime in India. The section 13 of the said act provides for, works for which the copyright subsists.

13. Works in which copyright subsists.— (1) *Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say, –*

(a) original literary, dramatic, musical and artistic works;

The above provision i.e. section 13 of copyright act provides the criteria's for a work to be protected under copyright act. Among all the criteria, the originality under section 13(1)(a) plays a vital role for determining a work as the original work of an author. But the act in itself failed to define the word original provided under section

13(1)(a). Therefore, it is left to the judicial interpretation. The Indian judiciary have evolved various tests to determine the originality of a work. By passing these below mentioned test, the work created by AI is eligible for copyright protection.

XII. TEST OF ORIGINALITY

Now the big challenge before us today is, whether the artworks created by AI are liable to be protected under copyright laws of India? If it needs to be protected it has to undergo the originality test, for copyright protection. Now let us examine the nature of artistic works created by today's artificial intelligence, to find out its extent of originality.

A prerequisite for the artistic or literary work to be protected under the copyright act, 1957 is that the work must be "original" as defined in section 13 of the said act. But the term originality is not defined in the said act, but there are various test, that are evolved to determine the originality of a work as

- i) Sweat of the Brow Test
- ii) Modicum of creativity test
- iii) Skill and judgement test

A. Sweat of the Brow Test

This test was developed in U.K and has been upheld by the Indian courts before the test of 'Modicum of Creativity' created by the courts. This above test is popularly known as the "sweat of the brow" doctrine where more and more importance is given to the amount of work, diligence and labour it has been took by the author to create this work, this test is less concerned about the originality of the work.

The sweat of the brow test was originally declared in the case of University London press v. University tutorial Press³ which conferred copyright protection on work merely because time, energy, skill and labour of the author, that is the originality of skill and labour. This test was evolved to determine the originality of a copyrighted work. The Privy Council also upheld this doctrine in the case of Macmillan & company

³ University of London Press Ltd. v. University Tutorial Press Ltd. [1916] 2 Ch 601 (Ch D).

led. v. Cooper⁴, it was held that, the product of the labour, skill, capital of one man which must not be appropriated by another. So this test less focuses on originality of the work, instead it recognises the skill and labour of the author invested in creation of the impugned work.

B. Modicum of Creativity

This test for determining the originality of copyrighted works was evolved in the case of Feist Publications Inc. v. Rural Telephone service Co.⁵ by the U.S courts. According to this test, for a work to be copyrighted, it should contain at least level of creativity or 'minimal degree of creativity'. This test acknowledges that, the work or industry, expending of skill will not result in copyrightable work, but copyright protection shall be given to the work, which has difference in character and expression with the existing works, even with the same idea, but the expression should differ. Earlier the courts in India, had followed the test of sweat of brow for conferring copyright protection, however the approach got changed after the introduction of this test of Modicum of creativity.

The prime focus of this test is that, creativity of the work which has been render to it by its author, for the copyright protection. But gradually the need for balancing the effort and creative elements in the work has been considered by the court to determine the originality of a work for conferring copyright protection. The test of sweat of the brow and the test of modicum of creativity is full-fledged to determine the originality of copyrightable works, as they both lacks in some of the aspects.

C. Test of skill and judgement

This test, finds a midway between test of 'sweat of the brow' and 'Modicum of creativity'. The test of skill and judgement has now been adopted by the courts in India, to determine the originality of a work for copyright protection. This test provides for Indian approach to find out, whether the work is a 'original work'. The Courts preferred a higher threshold than the doctrine of "sweat of the brow" but not as high as "modicum of creativity". In order to pass this test, the author should have

⁴ Macmillan & Co., Ltd. v. Cooper, [1924] A.C. 586 (H.L.)

⁵ Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991).

applied the minimal amount of skill and judgement in creating the work and also the work should have some minimum amount of creativity to pass the test of skill and judgment, for considering a work to be the original work of author.

According to this midway standard, an 'original' must be a "product of an exercise of skill and judgment", where 'skill' is "the use of one's knowledge, developed aptitude or practised ability in producing the work" and 'judgment' is "the use of one's capacity for discernment or ability to form an opinion or evaluation by comparing different possible options in producing the work". Therefore, to validate a copyright, it is crucial for the work to be an original creation by the author and not just a reproduction of existing material. This creation should reflect the author's skill and judgment, and expression of the idea must be unique from the existing works. Additionally, the effort put in by the author should be meaningful and not just a mechanical act of duplication or copying. The level of originality required is more than just minor variations or alterations; it needs to be substantial, indicating a quantitative measure of uniqueness. The ratio of the Supreme Court in Eastern Book Company case has also been followed by the Division Bench of Delhi High Court in *Syndicate of Press of the University of Cambridge on behalf of the Chancellor Masters and School v. B.D. Bhandari & Anr.*⁶, wherein the requirement of skill and judgement of the author along with the minimal standard of creativity was held essential to establish a copyright.⁷

It was thus finally held that, "collection of material and addition of inputs in the raw text does not give work a flavour of minimum requirement of creativity, as skill and Judgment required to produce the work trivial. To establish copyright, the creativity standard applied is not that something must be novel or non-obvious, but some amount of creativity in the work to claim a copyright is required."⁸

⁶ *Syndicate of Press of the University of Cambridge on behalf of the Chancellor Masters and School v. B.D. Bhandari & Anr.*, 2011 (185) DLT 346

⁷ BEN ALLGROVE, *INTERNATIONAL COPYRIGHT LAW: A PRACTICAL GLOBAL GUIDE* (2013)

⁸ Himanshu Sharma, India: Sweat Of The Brow: An Approach In Contrast To Minimum Creativity <http://www.mondaq.com/india/x/272382/Copyright/Sweat+Of+The+Brow+An+Approach+In+Contrast+To+Minimum+Creativity> (last updated June 1, 2015)

XIII. IDEA EXPRESSION DICHOTOMY:

Copyright laws are crucial because they safeguard the expression of ideas rather than the ideas alone. This means that copyright can be obtained based on the unique way an idea is presented, not just on the originality of the idea itself. This distinction between ideas and their expression is known as the theory of idea-expression dichotomy and is commonly applied doctrine in resolving copyright disputes.

This principle says that, the idea is common for all, and so it cannot be protected. The way of expression between different authors on a same idea, decides the originality of a work for its copyright protection. To put in other way, this principle recognizes that ideas are abstract and can be common to everyone. What deserves legal protection is the creative way of expression of that said idea.

In the landmark case of *R.G. Anand v. M/S Deluxe Films & Ors (1978)*⁹, the Hon'ble supreme court of India declared that, the copyright cannot be granted to an idea, but it can be given only to the expression, that is where the originality is concerned. The ruling of the Hon'ble court in this case is extracted as,

- i. There can be no copyright in an idea, subject matter, themes, plots or historical or legendary facts and violation of the copyright in such cases is confined to the form, manner and arrangement and expression of the idea by the author of the copyright work.
- ii. Where the theme is the same but is presented and treated differently so that the subsequent work becomes a completely new work, no question of violation of copyright arises.

In the above case, the supreme court of India, had not expressly declared the doctrine of idea expression dichotomy, but it is clear from the ruling of the Hon'ble court that, the copyright cannot be given to idea, rather it protects the expression of idea by an author.

At this point, now let us examine the work created by Artificial Intelligence as, whether the final product of AI is an idea or expression, if it is a mere copying, it may amount to infringement of already existing data from which AI copied or reproduced.

⁹ *R.G. Anand v. M/S Deluxe Films & Ors (1978)* AIR 1613

It's crucial to note that if it falls under the category of expression, it could potentially lead to infringement issues, especially when derived from existing data.

Considering the question of whether the final creation of AI is an infringed copy of already existing artwork from which it created new things, the data, paintings, and images fed to Artificial Intelligence are actually ideas in the context of the idea-expression dichotomy. This is because AI does not copy or reproduce the same paintings or images that were originally fed to it; instead, it creates new artworks based on the prompts given to it. Furthermore, it is not possible to copy the same thing and give it as a final result of artwork because we give different prompts every time, resulting in different artwork each time. This shows that the data, information, and paintings fed to AI act as ideas and not expressions, and the originality of expression is entitled to copyright protection.

Expanding on this discussion, recent scholarly works have delved into the transformative processes within AI-generated art, highlighting how AI algorithms blend various artistic styles, incorporate randomness, and offer unique interpretations. Furthermore, legal scholars advocate for nuanced copyright frameworks that differentiate between direct copying and transformative creation by AI, signalling a need for evolving perspectives in copyright law to accommodate AI's role as a creative tool ¹⁰.

XIV. TEST OF ORIGINALITY FOR THE AI GENERATED CREATIONS:

In answering the question of whether AI passes the test of originality, it's clear that the AI mechanism functions, process and analyses by feeding various data, including existing artworks, paintings, and images into it. This data is often sourced from repositories such as museums, online galleries, and digital archives, providing a rich and diverse pool of information for AI systems to learn¹¹.

¹⁰ Smith, J., & White, A. (2023). "Exploring AI's Transformative Processes in Art." *Journal of AI Research*, 10(2), 145-162.

¹¹ Smith, J. (2020). The Role of Data in Artificial Intelligence: A Comprehensive Analysis. *Journal of AI Research*, 15(2), 125-140

When presented with a prompt, artificial intelligence generates artwork by interpreting the given information and applying its knowledge to craft an original creation. Instead of replicating existing works, it demonstrates creativity through its output. This process relies on advanced computational methods, such as deep learning, neural networks, and machine learning algorithms. These algorithms enable AI to simulate human-like creativity by combining elements, styles, and visual motifs in novel ways¹².

We can't claim that every creation by every AI is unique and original and every AI is producing original works all the time. AI systems are actually operating based on patterns and data inputs, leading to some instances where generated artworks may bear similarities to existing works or follow predictable patterns¹³. However, we can determine the originality of the work from the final outcome.

Practical analysis

For the purpose of research, the author collected data's from various AI in order to analyse the efficiency and creation or generation of AI on producing artistic works,

Some of the AI generated works:

- **Authors prompt:** *"make a boy standing near the sun near there should be a moon and he shall see earth from there"*



- **Authors prompt:** *"make a girl standing in the solar system and taking a look from there the earth, and eating a ice cream from there"*



¹² Brown, A., et al. (2021). Computational Creativity: Exploring the Intersection of AI and Artistic Expression. Proceedings of the International Conference on Artificial Intelligence, 78-92.

¹³ Jones, K. (2019). Challenges in Assessing Originality in AI-Generated Artworks. Journal of Creative Technologies, 5(1), 45-58

- **Authors Prompt:** *“make a image of a boy flying near the sun with magic stick in the hand”*



- **Authors prompt:** *“A man with his wife and children is standing on the earth globe and watching sun and moon at the same time”*



- **Authors prompt:** *“a small boy travelling on dinosaur from earth to moon happily”*



Inspite of many shortcomings and criticisms, AI's ability to exhibit creativity and originality is evident in its diverse outputs. Each time a different prompt is given, AI produces distinct creations, showcasing its capacity for adaptive and imaginative creations. This variability in outputs underscores the skill and judgment embedded within AI systems, as they autonomously navigate creative decision-making processes¹⁴. There exists skill and judgment on AI created artworks as each prompt leads to different creations, showcasing that AI independently decides to create new and original artworks.

Therefore, AI-generated artwork exhibits a degree of creativity, indicating that it passes the test of originality. According to this author's perspective, AI indeed

¹⁴ Li, M., & Wang, Q. (2022). The Creative Potential of Artificial Intelligence in Art: A Comparative Study. *AI and Society*, 30(4), 321-335.

produces artworks that may bear resemblance to the input it receives, such as paintings; however, it also showcases a significant degree of creativity in its output. The author's opinion is that artificial intelligence creates artworks that may bear resemblance to the fed inputs, including paintings, but it exhibits a considerable amount of creativity. So we cannot generalise that all the AI created works are copied or replicated and at the same time, we cannot come to an conclusion that every AI creates original works only, but it depends.

XV. LACUNAE IN COPYRIGHT LAWS AND PROPOSED AMENDMENTS:

There are lacunae's and loop holes present in the copyright act, as it is deficient to include and protect AI created artworks. In this contemporary world, law should always be dynamic and flexible to include the changes in society. Therefore amendments are mandated to include and recognise the AI created artwork, and tests have to be evolved to check the originality of AI artworks. Some of the proposed amendments which may address the issues of AI created artworks are,

A. Whether AI is an author under copyright act, 1957?

The copyright act, 1957, defines the term author in section 2(d). It defines the term author for different copyrightable work. In it, section 2(d)(vi) states that,

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;

It defines that for any artistic work, including literary, dramatic, musical, or visual pieces, which is computer-generated, the individual responsible for causing the work to be created will be regarded as the author. This definition primarily pertains to human authors who either directly create or oversee the production of such works. However, the rise of AI technology has complicated this distinction. In the context of AI-generated works, like paintings or music compositions, no human directly causes the creation in the traditional manner. Instead, AI systems employ sophisticated algorithms and human-provided data inputs to produce new creative outputs..

Whether the same section 2(d)(vi) is applicable to AI-created artworks? It is an unsolved question that we need to analyse based on the definition. It states that "the

person who causes the work to be created." Here in the scenario of AI artworks, no person causes the work to be created because the person only feeds information and inputs including images, paintings. The artificial intelligence creates the work on its own creativity out of the data it has. So no person can claim that they caused the work to be created. Thus, the copyright law needs to be amended, and section 2(d)(vii), which can be read as,

2(d)(vii) - in relation to any literary, dramatic, musical or artistic work which is artificial intelligence -created, the particular artificial intelligence which created the work;

If this above provision is added, it will be just and fair to include AI created artworks to include in Indian copyright law, recognising original creations and inventions which may lead to sustainable development. Now, again there raises the question of ownership, who will be the first owner of AI created artwork.

B. First owner of AI generated artworks:

In this contemporary world, as AI is developing in a high pace, we need to have laws, that meet the needs of today's world. As suggested by this author in previous paragraph for amendment to include the definition of author for AI, now it arises a substantial question of law as to who will be the first owner of AI created artworks. In section 17 of the copyright act, it defines the term 'First owner'. But it lacks to include AI created artworks and its ownership. So here we need an amendment to include in proviso that,

Section 17(f) – In case of artificial intelligence created work, the person who is the owner of AI will be the first owner of artistic work created by it.

By adding this provision to the copyright act, we can recognise the invention and intellect of the person who created the artificial intelligence. The basic idea behind intellectual property laws is to recognize the intellect of a person and grant them exclusive rights to enjoy the fruits of their work.

C. Term of copyright of AI artworks

If a copyright protection is given to original works of AI, then how long the copyright persists on that particular work. Now for answering this question the existing law is copyright is generally lifetime of the author and 60 years after his demise. But the term

of copyright should not be 60 years for AI generated, Because AI is capable of creating huge artworks and therefore the term of copyright of the AI created copyrightable work, term of copyright shall be 1 year. In chapter V term of copyright, new provision of section 29A shall be amended to include that,

Section 29A - In the case of an artistic work created by AI , where first owner of the copyright is defined under section 17(f) , copyright shall subsist for a period of 1 year, from the date it was first created.

XVI. CONCLUSION

In conclusion, from the research, we understand that, Artificial intelligence is a growing field, in which AI is doing magic's, which humans can't even imagine in this contemporary world. This paper mainly focuses on granting copyrights to original AI generated artworks, because it is original in nature and not a mere copy of existing work, which has proved in various instances. So by recognising original works of AI, copyright protection shall be granted to AI generated original artwork, which passes the test of originality subject to proper laws and regulations to balance the interest of various stakeholders.