



COPYRIGHT AND ARTIFICIAL INTELLIGENCE A LEGAL CHALLENGE

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Abstract

The rapid advancement of Artificial Intelligence (AI) has significantly transformed the creation, distribution, and consumption of creative works. AI systems are now capable of generating text, music, artwork, and software with minimal human intervention. While these developments offer new opportunities for innovation, they also raise complex legal questions within the framework of copyright law. Issues such as authorship, ownership, liability, and the legality of using copyrighted material to train AI models remain unresolved in many jurisdictions. This research paper examines the intersection between copyright law and artificial intelligence, focusing on the challenges posed by AI-generated content, the limitations of existing copyright regimes, and possible legal solutions for regulating AI creativity. The paper also analyzes global approaches and the Indian legal perspective to determine whether current copyright laws are sufficient to address the emerging issues associated with AI technologies.

Keywords: *Artificial Intelligence, Copyright Law, AI-Generated Content, Authorship, Intellectual Property*

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1. Introduction

The rapid advancement of artificial intelligence (AI) has ushered in a new era of creativity and innovation. AI systems are now capable of generating a wide range of content, including text, images, music, and even code. While this technological progress offers numerous opportunities, it also raises complex legal questions, particularly in the realm of copyright law. This introduction explores the intersection of AI-generated works and copyright law in India, examining the existing legal framework, challenges, and potential solutions.

Copyright law, as we know it today, has its roots in the need to protect creative works and promote innovation by granting creators exclusive rights to their creations. The origins of copyright can be traced back to the invention of the printing press in the 15th century¹, which revolutionized the dissemination

of written works. The Statute of Anne, enacted in 1710 in England, is widely regarded as the first modern copyright law², establishing the legal framework for protecting literary works and setting the stage for future developments in intellectual property law.

Over the centuries, copyright law has evolved in response to technological advancements that have transformed the way creative works are produced and distributed. The advent of photography, motion pictures, radio, and television, among other innovations, necessitated adaptations to copyright law to address new forms of media and methods of reproduction. Each technological leap required the legal system to reconsider and often expand the scope of copyright protection to ensure that creators' rights were adequately safeguarded.

The digital revolution of the late 20th century brought about significant challenges for copyright law. The proliferation of the internet and digital technologies enabled the mass production and distribution of content at unprecedented scales, leading to widespread concerns about piracy and the unauthorized use of copyrighted works. In response, copyright law underwent further changes, such as the introduction of the Digital Millennium Copyright Act (DMCA)³ in 1998, which aimed to address the unique challenges posed by digital media.

However, the rise of AI as a creative force represents a new kind of challenge—one that questions the very foundation of copyright law. Unlike previous technological advancements, which primarily affected the reproduction and distribution of works, AI directly impacts the creation process itself. AI-generated works raise issues that are not adequately addressed by existing copyright frameworks, particularly concerning authorship and ownership. These issues are further complicated by the international nature of copyright law, as different jurisdictions may have varying interpretations of how AI-generated works should be treated.

2. Meaning of Copyright

Copyright is a form of intellectual property right that provides legal protection to the creators of original literary, dramatic, musical, artistic, cinematographic, and sound recording works. It grants the author an exclusive right to reproduce, distribute, communicate, and adapt their creation, subject to certain limitations and exceptions.

In India, copyright is governed by the Copyright Act, 1957, which has undergone several amendments to adapt to changing technological landscapes, including the proliferation of digital content and computer software.

Acc to Copyright Act 1957 copyright means the exclusive right subject to the provisions of this Act, to do or authorize the doing of any of the following acts in respect of a work or any substantial part thereof, namely--

- (a) in the case of a literary, dramatic or musical work, not being a computer programme,--
 - (i) to reproduce the work in any material form including the storing of it in any medium by electronic means;
 - (ii) to issue copies of the work to the public not being copies already in circulation;
 - (iii) to perform the work in public, or communicate it to the public;
 - (iv) to make any cinematograph film or sound recording in respect of the work;
 - (v) to make any translation of the work;
 - (vi) to make any adaptation of the work;
 - (vii) to do, in relation to a translation or an adaptation of the work, any of the acts specified in relation to the work in sub-clauses (i) to (vi);
- (b) in the case of a computer programme:
 - (i) to do any of the acts specified in clause (a);
 - (ii) to sell or give on commercial rental or offer for sale or for commercial rental any copy of the computer programmer:

Provided that such commercial rental does not apply in respect of computer programmes where the programme itself is not the essential object of the rental.

- (c) in the case of an artistic work, --
 - (i) to reproduce the work in any material form including--
 - (A) the storing of it in any medium by electronic or other means; or
 - (B) depiction in three-dimensions of a two-dimensional work; or
 - (C) depiction in two-dimensions of a three-dimensional work;]
 - (d) in the case of a cinematograph film.
 - (i) to make a copy of the film, including –
 - (A) a photograph of any image forming part thereof; or
 - (B) storing of it in any medium by electronic or other means;]
 - (ii) to sell or give on commercial rental or offer for sale or for such rental, any copy of the film.
 - (iii) to communicate the film to the public;
 - (e) in the case of a sound recording, --
 - (i) to make any other sound recording embodying it ⁶[including storing of it in any medium by electronic or other means];

(ii) to sell or give on commercial rental or offer for sale or for such rental, any copy of the sound recording;]

(iii) to communicate the sound recording to the public.

Explanation. --For the purposes of this section, a copy which has been sold once shall be deemed to be a copy already in circulation.⁴

This clearly means, in simpler terms, that copyright is not a single right but a bundle of exclusive rights granted to the creator or copyright holder of a work. These rights vary depending on the nature of the work—be it literary, artistic, cinematographic, or digital—and include the right to reproduce, adapt, perform, publish, and communicate the work to the public.

Notably, these rights presume human creativity and authorship, and the Act does not currently recognize the possibility of non-human (i.e., AI-generated) authorship, thereby exposing a significant legal gap in the age of artificial intelligence. The Act does not contain any explicit provision dealing with artificial intelligence (AI)-generated works. As AI technologies, including generative AI models like ChatGPT, DALL·E, and others, are now capable of producing text, images, music, and even films with minimal or no human input, this absence creates significant legal uncertainty. The copyright regime continues to rely on traditional notions of human authorship and originality, which are increasingly being tested by AI-driven creation.

3. Artificial Intelligence

Artificial Intelligence (AI) refers to the simulation of human intelligence by machines, especially computer systems, enabling them to perform tasks that typically require human cognition. These tasks include learning, reasoning, problem-solving, understanding language, recognizing patterns, and making decisions.

In simple terms, AI is when a computer or machine is designed to think and act somewhat like a human, by processing data, learning from experience, and improving over time without being explicitly programmed for every single task.

Among various forms of AI, generative AI has gained significant attention for its ability to create new content such as text, images, music, and videos. A prominent example of generative AI is ChatGPT, a language model developed by OpenAI⁵. ChatGPT uses deep learning techniques to understand and generate human-like text based on the input it receives. It can hold conversations, answer questions, write essays, and even assist in creative writing, all without direct human instruction for each specific output.

ChatGPT is a language model created by OpenAI– a San Francisco-based AI company – that can generate replies in natural language to a variety of queries.⁶ A LLM is a highly effective type of machine learning process designed specifically for natural language processing tasks.⁷ Its main focus is on language modelling, which involves creating probabilistic models that can accurately predict the next word in a given sequence based on the preceding words. This is accomplished by training the model on large amounts of text data, which allows it to learn the probability of word occurrences and the patterns in language usage. The goal of language modeling is to create a system that can accurately generate human-like responses and recognize natural language input, making it an essential component of modern natural language processing applications.⁸ The ChatGPT software application was designed to facilitate and support interactive communication by generating automatic text-based responses. The methodology involves integrating information from various sources, such as books, journals, websites and articles, resulting in the development of original and engaging discourse. The field of natural language processing (NLP) involves the use of computational methods to facilitate the understanding and analysis of large amounts of data in a way that mimics human language. Computer systems are capable of acquiring significant amounts of data or executing commands by utilizing NLP functionalities.⁹

chatGPT – as mentioned earlier – is a generative AI tool. A full understanding of the complexity of the evolution and ownership of the ideas created by AI can be achieved by evaluating the results and sharing observations about the interaction between humans and computer systems. OpenAI released ChatGPT as a chatbot ¹⁰designed primarily to assist with online customer care. Yet, the AI technology underpinning this program has outperformed all forecasts and grown in popularity. The emergence and widespread application of AI systems in the creative sectors have raised concerns about the rightful ownership of intellectual property and the protection of copyright.

4. Intersection of AI and Copyright Law

The intersection of AI and copyright law is a complex and multifaceted issue that has garnered significant attention in recent years. As AI systems become increasingly capable of generating content that rivals or even surpasses human creativity, the legal community is grappling with how to categorize and protect these works under existing intellectual property frameworks.

One of the central challenges in this intersection is the concept of authorship. Copyright law traditionally recognizes the creator of a work as its author, granting them exclusive rights to reproduce, distribute,

and display the work. However, AI-generated works disrupt this model by introducing scenarios where the "creator" may be a machine rather than a human being. This raises several questions: Can a machine be considered an author under copyright law? If not, who should be recognized as the author of a work created by AI? The programmer who designed the AI? The user who provided input to the AI system? Or perhaps no one at all, leaving AI-generated works unprotected by copyright?

These questions are not merely theoretical; they have practical implications for a wide range of industries. For example, in the entertainment industry, AI is increasingly being used to generate music, scripts, and visual effects. In the art world, AI-generated artworks have been sold at prestigious auctions, raising questions about the ownership and authenticity of such works. In the literary field, AI is being used to produce written content, from news articles to novels, challenging traditional notions of authorship and creativity.

Legal scholars and practitioners have proposed various approaches to addressing the issue of authorship in AI-generated works. Some argue that the human authorship requirement should be maintained, meaning that AI-generated works would not be eligible for copyright protection unless a human played a significant role in their creation. Others propose recognizing AI systems as authors in their own right, with the copyright being assigned to the AI's owner or developer. Another approach is to create a new category of intellectual property rights specifically for AI-generated works, which would take into account the unique nature of these creations.

Another significant issue at the intersection of AI and copyright law is the question of originality. Copyright law typically requires that a work be "original" to qualify for protection, meaning that it must be the result of the author's intellectual effort and not merely a copy of existing works. However, AI systems often generate content by analysing and synthesizing existing data, leading to questions about whether AI-generated works can truly be considered "original." For instance, AI-generated music may be composed by analyzing thousands of existing songs, raising the question of whether the resulting composition is genuinely original or merely a derivative work.

The issue of originality is further complicated by the fact that AI systems are often trained on vast datasets that include copyrighted works. This raises concerns about whether the use of such datasets constitutes copyright infringement, particularly if the AI-generated work closely resembles one of the works in the training dataset. Courts and legal scholars have begun to explore these issues, but there is currently no consensus on how to apply copyright law to AI-generated works in this con

Copyright law has traditionally protected human-created works, recognizing the original expression of ideas as a valuable asset. However, the advent of AI has challenged this traditional paradigm. AI systems can now generate content that is at par from human-created works, raising questions about authorship, ownership, and the scope of copyright protection.

Copyright law has historically been designed to protect human-created works, recognizing the original expression of ideas as a valuable asset. However, the rise of AI has blurred the lines between human and machine creativity. AI systems can now generate content that is indistinguishable from human-created works, raising questions about authorship, ownership, and the scope of copyright protection.

In India, copyright law is primarily governed by the Copyright Act, 1957. While the Act does not explicitly address AI-generated works, it does provide protection for "literary, artistic, musical, and dramatic works." The interpretation of these terms in the context of AI-generated content has become a subject of debate among legal scholars and practitioners.

This research intends to study the intersection of copyright law and artificial intelligence, exploring the legal complexities and challenges that arise as AI technologies evolve. By examining key issues such as authorship, ownership and infringement in the context of AI - Generated works, this study aims to provide insight into the adequacy of existing copyright laws and propose potential reforms to address emerging challenges.

5. Author's Point of View

The emergence of Artificial Intelligence as a creative tool represents one of the most significant technological developments affecting intellectual property law in recent decades. In the author's opinion, the interaction between copyright law and artificial intelligence highlights the limitations of traditional legal frameworks that were originally designed to regulate human creativity rather than machine-generated outputs.

Copyright law historically rests on the premise that creativity originates from human intellect and expression. The requirement of human authorship is central to copyright protection in most jurisdictions. However, AI technologies, particularly generative AI systems, have blurred the boundary between human and machine creativity. When a machine independently produces a painting, music composition, or literary text, the traditional concept of authorship becomes difficult to apply. The author believes that existing copyright laws cannot adequately address such developments without significant reinterpretation or reform.

The author also emphasizes the importance of protecting human creativity in the era of artificial intelligence. Creative industries such as literature, music, film, and visual arts form an essential part of cultural development and economic growth. If AI-generated content becomes dominant without adequate safeguards for human creators, there is a risk that artists and writers may lose incentives to produce original works. Therefore, copyright law must continue to prioritize human creativity while accommodating technological advancements.

Another perspective that the author considers important is the ethical dimension of AI-generated creativity. Artificial intelligence systems often replicate styles, patterns, and artistic techniques learned from human creators. In some cases, AI-generated outputs may closely resemble the works of specific artists or writers. The author believes that ethical guidelines should accompany legal regulations to ensure that AI systems do not exploit or unfairly imitate the distinctive styles of human creators without recognition.

6. Conclusion

In conclusion, the author's position is that artificial intelligence should be viewed primarily as a tool that enhances human creativity rather than as an independent creator. Copyright law should adapt to technological developments while preserving its core objective of protecting human intellectual effort. Legal reforms should focus on recognizing the contributions of human actors involved in AI creation, ensuring fair compensation for original creators whose works are used in training datasets, and maintaining transparency in the use of AI-generated content. By adopting a balanced and forward-looking approach, copyright law can successfully navigate the challenges posed by artificial intelligence while continuing to promote innovation and creativity in the digital age.