"Artificial Intelligence-Generated Content: Copyright, Ownership, and Fair Use in the Age of Creative Machines"

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ABSTRACT

This research explores content generated by artificial intelligence, with a specific emphasis on ownership and fair use in an evolving creative environment. It explores AI's historical evolution and transformative impact on creativity. The paper addresses AI ownership complexities and discusses India's legal framework, stressing the need for adaptation in intellectual property laws. It also examines fair use issues related to AI-generated content, emphasizing transformation, intent, and attribution. Additionally, the paper contemplates future challenges and implications in the creative field, offering valuable insights. This research endeavors to advance comprehension regarding copyright ownership and fair use in the era of AI-generated content, offering insights beneficial to policymakers, legal experts, content creators, and innovators navigating this dynamic technological landscape.

KEYWORDS: *Artificial Intelligence, Intellectual Property, Copyright*

INTRODUCTION

"The canvas of copyright is expanding as AI paints new masterpieces, inviting us to redefine ownership and access." **- Fei-Fei Li**

In the age of technology and creative machines, where algorithms breathe life into the digital canvas, the dawn of artificial intelligence has escorted in a new era of innovation, transforming the way content is produced and consumed, all while echoing Albert Einstein's profound words: *"Imagination is more important than knowledge."* Knowledge, the bedrock on which societies build, now faces a remarkable challenger – artificial intelligence.

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As AI- driven algorithms steps into the realms of creativity, they stir a cauldron of questions surrounding copyright ownership and the frontiers of fair use. For example, **who owns AI- generated work? Do works generated by artificial intelligence (AI) qualify as fair use?**

A notable case that illustrates these challenges is the famous *"monkey selfie"* case. In *"monkey selfie"* case, a macaque monkey took his selfie using a photographer's camera. This raised question about the copyright ownership of the image. It highlighted the blurred lines between creativity and technology. Just as AI- generated content challenges traditional notions of authorship, the monkey selfie case challenged the conventional understanding of who can claim ownership of a creative work.

In the words of john Locke, *"every man has a property in his own person,"* reflects the idea of personal ownership. However, in a digital era, the question arises: who owns the rights to creative works when the creator is not a human but a complex web of algorithms and code? The monkey selfie case and AI- generated content both confront us with the need to redefine copyright ownership and boundaries of fair use in the age of creative machines and evolving technology.

With the rapid advancement of technology, regulation becomes a challenging task. In the context of projects generated through the collaboration of artificial intelligence and human involvement, authorship can be assigned to the individual contributing creative input. However, the landscape becomes murkier when AI creates works independently, such as the AI-written novel *"the day when computer writes a Novel"* developed in 2016, almost won a national literary prize or music generated by artificial intelligence companies like deep mind. As technology strengthens itself, the need to redefine copyright ownership and the limit of fair use in the age of creative machines becomes increasingly urgent. The intersection of human and AI creativity presents a frontier that requires careful exploration and adaptation within our legal and ethical frameworks.

OBJECTIVE

The objective of this research paper is to provide a comprehensive analysis of copyright ownership and fair use in the context of AI-generated content. The present paper also focuses on the concept of Artificial intelligence (AI) generated creations and investigates AI-generated content ownership, including aspects of authorship, creativity, and the role of human creators.

EVOLUTION OF AI-GENERATED CONTENT

"The real question is not whether machines think but whether men do."- B.F. Skinner

"With this quote in mind, let's explore the captivating history of AI-generated content, where machines have been challenging our perceptions of creativity and intelligence."

The history of AI-generated content began in the 1950s with rudimentary attempts at machine-generated language. Progress was slow due to technological limitations. In the 1980s, advanced computing and NLP

allowed for more complex language generation, exemplified by the **"SHRDLU"** system. Commercial applications emerged in the 1990s and 2000s, including personalized news content. Deep learning and neural networks have further advanced AI- generated content, enabling the mimicry of human writing styles, creation of poetry, novels, chatbots, and virtual assistants. The field continues to progress, offering a wide range of potential applications.

KEY POINTS

- **1980s:** AI-generated content traces its roots to the 1950s when computer scientists embarked on the journey of machine-generated language.
  Initially, rudimentary rule-based systems were used for generating basic sentences, but the limitations of technology held back progress.

- **1980s:** In the 1980s, with improved computing power and NLP, researchers delved into more intricate language generation. "SHRDLU" was an early example, blending rules and heuristics to describe virtual world objects in natural language.

- **1990s-2000s:** the 1990s and early 2000s witnessed AI-generated content finding commercial uses, like personalizing news content through data analysis to create reader-tailored articles.

- **Recent years:** recent advancements in deep learning and neutral networks have expanded the horizons of AI-generated content. These systems can mimic human writing styles, crafting intricate language, from poetry to novels, and giving rise to interactive AI-generated content like chatbots and virtual assistants.

- The history of AI-generated content is marked by continuous advancement, propelled by improvements in computing power and natural language processing. While it's still in its infancy, its potential applications span a wide spectrum; from personalize marketing messages to medical diagnostics and creative writing. (source: aicontentfy.com)

DEFINING AI OWNERSHIP: CREATOR VS. MACHINE

The ownership of AI-generated content is a complex and evolving issue in copyright law. In traditional terms, the inventor or author is not considered the owner of AI-generated works. Instead, ownership typically rests with the AI developer, the user, or the employer, depending on the context. The Chinese Feilin's case recognized that AI can't be considered an author, but works with human input are protectable. The decision emphasized the necessity of human involvement to safeguard these creations and the interests of developers and users.

Google's involvement in AI for local news and the creation of *'The Next Rembrandt'* in 2016 highlighted the challenges. Since this AI-generated art lacked a human creator, it had no copyright protection, which had implications for companies involved in selling AI art. Copyright law rulings in such cases were found to be complex and in need of adaptation.

AI-generated content poses difficulties in many countries copyright laws due to the unclear division of authorship and ownership. While some argue that AI creations can't exist without human involvement, the increasing autonomy of AI blurs traditional authorship boundaries. The issue of AI replicating copyrighted material and the use of open-source AI models raise intellectual property concerns, adding to the complexity.

A recent US case underscored the importance of human authorship in AI-generated art, ruling that AI-generated art cannot receive copyright protection. This decision was influenced by Stephen Thaler's attempt to copyright AI art, which led to the US copyright office investigating AI-related copyright issues.

The *"Monkey Selfie"* case further illustrates the challenge as copyright law traditionally reserves rights for human creators. In 2018, the USPTO rejected the copyright for Dr. Steven Thaler's AI-generated artwork "A Recent Entrance to Paradise" because it lacked human creative input. This decision reflected the principle that works created solely by AI, without human involvement, may not be eligible for copyright.

Nevertheless, a noteworthy paradigm shift transpired in February 2023, as graphic-novel maestro Kris Kashtanova successfully acquired copyright for their artificially intelligent-generated comic tome, "Zarya of the Dawn." The distinction was that this comic book was labelled as *"AI-assisted"* rather than *"AI-generated"* because it involved human input in creating the overall storyline. This rendered it qualified for copyright protection, notwithstanding the exclusion of copyright coverage for individual AI-generated images within the comic book.

These cases collectively underscore the evolving nature of copyright law and its need to adapt to the creative output of AI. They emphasize the growing importance of human involvement in AI-generated works to establish eligibility for copyright ownership.

LEGAL FRAMEWORK AND REGULATIONS IN INDIA

As per **section 2(d)** of the copyright Act, 1957, "author" is defined based on the type of work, encompassing *"creators, composers, artists, photographs, and producers."* Yet, this definition does not clarify whether the author should be an individual or a legal entity. Notably, works generated by computers, whether with or without human involvement, raise questions about authorship, a provision adopted from the U.K. seeks to protect such works, even if they lack a human author, acknowledging the evolving landscape of creative works in digital age.

In the copyright office's 2018 practice and procedure guidelines for registering creative works, only the name of the actual individual who created the work can be listed in the "creator" column.

India recently granted copyright protection to AI-created art, recognizing the **RAGHAV** Artificial Intelligence Painting App as a co-author of the work titled **"Suryast."** India holds the distinction of being the first country to take this step; the Copyright Office accepted the application featuring both AI and a human co-author but did

not recognize the AI as an autonomous author. This might establish a precedent for other nations to recognize AI as authors, given that many jurisdictions typically safeguard only works involving human input, with exceptions in countries such as the UK, Ireland, and India.

The main challenge in recognizing AI as an author in many places is determining the protection term. In India, **the copyright term is life plus 60 years**, implying it's meant for living beings.

So, without legislative changes, AI-authored works could have permanent copyright protection or we could incorporate TRIPS provisions to address non-human authors.

Under Section 17 of the Copyright Act 1957, the initial owner of a work is considered the author, but ownership can be transferred to the employer or someone else through an agreement. Transferring ownership in the case of AI-generated works is challenging since AI cannot authorize. India's Ministry of Industry and Commerce is addressing these issues by forming a task force involving experts and academics. They're exploring ways to utilize AI in various fields, providing recommendations and setting up a National Artificial Intelligence Mission to coordinate AI activities in India for five years.

India needed a privacy policy to address AI's privacy concerns due to its rapid growth. The Data Protection 2019 law is influenced by the **EU's GDPR**. **The Sri Krishna Committee Bill** aims to hold businesses accountable for using emerging technologies, Incorporating AI in order to mitigate potential harm. Although not as comprehensive as the GDPR, it includes provisions for fair data processing, data quality, and privacy enforcement. The Bill allows the Data Protection Authority to oversee technical innovations and promote research for personal data protection. (Source: international journal of law).

FAIR USAGE IN THE ERA OF INNOVATIVE MACHINES

"Fair use is the intersection of creativity and copyright, allowing for the flow of ideas and the protection of original works." - **Pamela Samuelson**

Copyright law provides legal protection to creators, encompassing writers, musicians, artists, and more. It grants exclusive rights over original works like literature, drama, music, art, films, and recordings, including computer programs. These exclusive rights allow the creator to control the reproduction of their work for a specific period. Copyright aims to safeguard the author from unlawful use of their work.

Additionally, there's a concept called "fair dealing," which limits the copyright owner's rights. Fair dealing permits certain uses of copyrighted material without the author's permission, such as for research, private study, criticism, or review. Although the term "fair dealing" lacks a precise legal definition, the courts have clarified its scope over time.

DOCTRINE OF FAIR USE

The "Fair Use Doctrine" aims to balance copyright owner rights and public interests by allowing limited copying in specific situations. It's a subjective concept, dependent on the case, and encourages socially valuable uses like criticism, news reporting, education, and parody.

DOCTRINE OF FAIR USE IN INDIA

The Doctrine of Fair Dealing in the Indian Copyright Act, 1957, allows limited use of copyrighted material while preserving its integrity and respecting the rights of the owner. The Indian Copyright Act of 1957 permits "fair dealing" with literary, dramatic, musical, or artistic works, excluding computer programs, for purposes like private use, research, criticism, review, news reporting, and educational use. This encompasses reproducing works for news reporting, broadcasting, filming, and making copies or modifications to computer programs under specific circumstances.

LEGAL PROVISIONS FOR FAIR DEALING

Article 13 of the TRIPS agreement and Article 9(2) of the Berne Convention set forth the necessity for restrictions and exemptions to exclusive rights, with the aim of preventing any compromise to the ordinary exploitation or legitimate interests of the rights holder. These principles are adopted in the copyright laws of WTO member countries. The specifics of fair dealing exceptions vary by nation; in India, they are outlined in Section 52 of the Copyright Act, 1957.

- Article 13 of the TRIPS (Trade-Related Aspects of Intellectual Property Rights) sets forth a clear directive, stating that member countries must restrict the application of limitations and exceptions to exclusive rights in a manner that is limited to specific, exceptional situations. These exceptions should not infringe upon the customary or typical exploitation of the copyrighted work, and they must not unduly harm the lawful interests of the rights holder. In essence, this provision aims to strike a delicate balance between safeguarding the intellectual property rights of creators and promoting the broader societal interests associated with the use and dissemination of creative works.

- Article 9(2) of the Berne Convention underscores the significance of legislating exceptions to exclusive copyright rights for specific situations. These exceptions must align with the customary exploitation of a work and should not disproportionately undermine the rightful interests of the copyright holder. Notably, since all World Trade Organization (WTO) member nations are bound by TRIPS and the Berne Convention, this principle has been integrated into the substantial copyright laws of these countries. This ensures a harmonized approach to copyright exceptions and limitations, balancing the rights of creators and the broader public interest in utilizing creative works within the global framework of intellectual property protection.

Section 52 of the Copyright Act of 1957 delineates specific exemptions to the infringement of copyright. This provision allows for the restricted utilization of copyrighted material without the explicit authorization of the owner.

AI-GENERATED CONTENT AND FAIR USE

As lawsuits over AI's use of copyrighted content rise, a key question is whether it qualifies as fair use. It's case-specific, not a blanket rule. These cases are pivotal in copyright debates. Fair use analysis depends on specifics, and it's possible to predict how courts may evaluate it with AI training.

In the era of creative AI, fair use principles are debated as machine-generated content becomes prevalent. Fair use in copyright law allows limited use without permission but becomes complex due to the blurred line between human and AI authorship.

- **First Fair Use Factor: Purpose and Character of AI Use**

   This factor assesses whether using copyrighted material to train AI qualifies as fair use. It considers whether the use is commercial or nonprofit and whether it "transforms" the copyrighted work. Non-commercial use supports fair use, while commercial use weighs against it. Many AI platforms used for commercial purposes may not qualify. Transformative purpose is key in AI fair use defence, but it doesn't guarantee fair use. Courts consider more than just transformation in these cases.

- **Second Fair Use Factor: Nature of Copyrighted Work**

   This factor assesses the nature of the copyrighted work. Generative AIs training on highly creative works, like art, music, or writing, may face challenges under this factor. When the underlying work is creative, it tends to weigh against fair use. However, if the AI trains on more factual works, it may support a fair use exception.

- **Third Fair Use Factor: Amount of Copyrighted Works Used**

   This factor evaluates how much of the copyrighted work is used. Copying the entirety or the most creative part of a work usually weighs against fair use. AI training often involves copying complete works, as AI needs extensive data. OpenAI argues that the amount copied isn't the point; it's about what's made available to the public. But this view is not supported by the Copyright Act. If entire works are used, This element is likely contrary to the qualification for a fair use exemption.

- **Fourth Fair Use Factor: Impact on Copyrighted Work's Market**

   This factor assesses how the infringing use affects the market and value of the copyrighted work. If the infringing work competes with the copyrighted work or hinders potential markets, it usually weighs against fair use. AI training without compensating copyright owners, even when licenses are available,

harms their licensing markets. This underscores the significance of evaluating the potential licensing value in the analysis of fair use.

As previously examined, establishing fair use in the context of generative AI training involving copyrighted material is markedly contingent on the specific circumstances. While certain applications of AI may meet the criteria for fair use, a sweeping exception that disregards the rights of creators lacks support in both the Copyright Act and legal precedents. Without specific details, it's hard to predict court outcomes. Technological innovation should be balanced with respect for copyright principles to prevent potential harm. Ethical AI development is essential, and artists and copyright owners' rights must be respected.

WAY FORWARD

1. **Amend Regulations On Intellectual Property**

   It is crucial to revise intellectual property regulations to align with the swift progress in AI technology. This involves acknowledging and tackling the distinctive challenges presented by AI-generated content, copyright ownership, and fair use in the digital age within the Indian legal framework.

2. **Define Specific Standards For Ai-Generated Creations**

   While legal recognition may not be extended to AI, it should be acknowledged and governed under separate criteria distinct from traditional copyrights. This approach bridges gaps in existing legislation without compromising established principles.

3. **Mandatory Appointment Of Compliance Officers**

   Mandate AI enterprises to designate compliance officers exclusively devoted to safeguarding copyright. These officers shall undertake audits and evaluations to ascertain the adherence of AI-generated content to copyright laws, actively identifying potential infringements within the legal framework of India.

4. **Regulation And Penalties For AI-Generated Content**

   Following the Copyright (Amendment) Act 2012, there should be specific individual act addressing rules and regulations pertaining to AI-generated content, focusing on copyright ownership and fair use. These regulations should include provisions for penalties against fraudulent copyright claims.

5. **Ai-Generated Content Certification**

   Establish a certification system for AI-generated content, enabling us to differentiate it from human-generated content and clarify its source.

6. **Ai Education, Training and Awareness**

We should raise awareness and establish education and training programs for content creators and AI developers to educate them about AI-generated content copyright, ownership and fair use. This should be complemented by a parliamentary debate, public awareness campaigns, collaboration with educational institutions, and the creation of online resources and workshops.

7. **Promoting The Use Of TPM For Enhanced Copyright Protection**

As a step forward in the realm of AI-generated content copyright, ownership and fair use, it's important to popularize the use of TPM (Technological Protection Measures). Copyright holders should actively employ TPM to safeguard their creative works from unauthorized use and distribution.

8. **Innovative Pricing Models for Copyright Protection**

Similar to the "pay what you wish" model used in humble bundle, where payments vary according to the game, this approach can contribute to the economic benefit of content owners. It can serve as a TPM (Technological Protection Measure) for safeguarding copyrighted works through a "pay and watch" system.

9. **Enforce Data Usage And Governance Policies**

Implement robust data usage and governance policies for AI projects operating in India. These policies must encompass clear oversight and compliance mechanisms to ensure the responsible and ethical use of copyrighted material during AI training.

10. **Leveraging Global Legal Models for Enhanced AI Content Regulations**

By examining laws from countries with more advanced provisions for AI and AI-generated content, we can introduce new provisions into regulations governing copyright, ownership and fair use of AI-generated content.

CONCLUSION

In conclusion, this research paper explores the complex and evolving landscape of copyright ownership and fair use in the era of AI-generated content. It highlights the historical evolution of AI-generated content, the challenges it poses to traditional notions of authorship, and the legal and regulatory frameworks in India. The paper emphasizes the need for adapting intellectual property laws to address AI-created works and the growing importance of human involvement in establishing copyright ownership.

As AI technology continues to advance, the paper suggests several key points for the wa forward, including revising intellectual property regulations, establishing distinct criteria for AI-generated works, mandatory appointment of compliance officers, exploring new copyright models, AI-generated content certification,

education and training programs, strengthening data privacy protections, and enforcing data usage and governance policies.

In essence, this research aims to provide valuable insights for policymakers, legal experts, content creators, and innovators navigating the changing creative landscape shaped by artificial intelligence. It underscores the necessity of balancing technological innovation with respect for copyright principles and ethical AI development to prevent potential harm and ensure a fair and equitable environment for all stakeholders in the creative field.

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