# REGULATING CREATIVITY: LEGAL CHALLENGES IN AI-GENERATED WORKS AND HUMAN AUTHORSHIP

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**ABSTRACT**

Generative Artificial Intelligence is no longer a mere futuristic premise but has currently started to impact the generation, consumption, and safeguarding of intellectual property. AI-generated paintings, poems, or music, even an AI-drafted contract, act to further blur the distinction of an author between the human and the machine. Still, existing laws are tied to anthropocentric views of creativity. This article presents an interesting study of the emerging friction between copyright law and AI-generated content and asks a very pertinent question: Can a machine be legally recognized as an author?

The Article explores the response of various legal systems to AI-generated works with a special focus on the Indian Copyright Act while bringing into the conversation the Thaler cases in the UK and the US. It highlights the uncertainty prevailing with regard to ownership, attribution, and liability, creating a regulatory vacuum that may either detract from innovation or promote misuse.

From a reflective and prospective viewpoint, this article implores legal intelligentsia, policymakers, and creators to reconsider the concept of authorship for the digital age. It proposes a hybrid legal system that will take greater value of human input and the recognition of machines' creativity. The advancement of generative AI goes hand in hand with the evolution of our understanding of originality, protection, and liabilities.

**Keywords:** Generative AI, Copyright, Intellectual Property, Authorship, Indian Copyright Act, Thaler v. Commissioner, AI Regulation, Legal Framework, Artificial Creativity, Liability.

## INTRODUCTION

In the midst of an era where algorithms create symphonies, paint pictures, write poetry, and conjure up legal arguments, the very concept of creativity is undergoing a huge transformation.[1] In contrast to mere tools, generative AI models such as GPT-4 by OpenAI, Gemini by Google, and DALL·E-a-model present suggestions with such content that sometimes even invite a comparison with human creativity or exceed it. It could be argued that giants of generative AI would put a whole chapter of a novel written in Shakespearean prose or an original digital artwork into question and thereby challenge the age-old concept of *"Authorship."*

Traditionally, creativity is viewed as a uniquely human attribute, linked to consciousness, intention, and experiencing feelings. Such a view of creativity is reflected in copyright and intellectual property laws. [2]For example, most jurisdictions, including India, recognize an author as a natural person. Thus, the Indian Copyright Act, 1957, creates Generative AI models, such as GPT-4 by OpenAI, Gemini by Google, and DALL·E, present complex challenges and opportunities to the traditional notion of authorship and creativity.[3] These AI systems are capable of producing content that is remarkably similar to human creations, raising questions about originality, authenticity, and the definition of creativity itself.

One significant impact of generative AI on creativity is the transformation of creative production. Such AI systems can enhance individual creativity by providing new ideas and possibilities for creative expression, especially among those who might not consider themselves traditionally creative. However, there is a trade-off, as the increased creativity at the individual level might come with a reduction in the diversity of novel content across the board.[4] This means that while individual works might appear more creative, collectively, the output might lack the same level of diversity that purely human-generated works possess.[5]

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[1] Manuel B. Garcia, *The Paradox of Artificial Creativity: Challenges and Opportunities of Generative AI Artistry*, Creativity Res. J. (ahead-of-print May 2024), https://doi.org/10.1080/10400419.2024.2354622.

[2]Faye F. Wang, *Copyright Protection for AI-Generated Works*, 5 Amicus Curiae 88 (2023), https://doi.org/10.14296/ac.v5i1.5663.

[3] Timothy McIntosh et al., *From Google Gemini to OpenAI Q*: A Survey of Reshaping the Generative Artificial Intelligence (AI) Research Landscape* (Dec. 18, 2023), https://doi.org/10.48550/arxiv.2312.10868.

[4] Kaledio Egon et al., *AI in Art and Creativity: Exploring the Boundaries of Human-Machine Collaboration* (Oct. 20, 2023), https://doi.org/10.31219/osf.io/g4nd5.

[5] Anil Doshi, J. Jason Bell, Emil Mirzayev & Bart Vanneste, *Generative Artificial Intelligence and Evaluating Strategic Decisions*, Strategic Mgmt. J., Available at SSRN: https://ssrn.com/abstract=4714776

The integration of AI in artistic processes also raises challenges regarding intellectual property and authorship.[6] As AI-generated content becomes more prevalent, it challenges traditional concepts of ownership and copyright, which are based on human creativity and innovation. This shift in the paradigm requires a reevaluation of laws and ethical guidelines to incorporate AI-generated works effectively while maintaining fairness and respecting human creations.

Moreover, the emergence of AI in the art and creativity fields necessitates a reconsideration of the artist's role. Some studies suggest that successful creative efforts with AI rely on humans acting as co-creators rather than mere editors.[7] This implies that to maximize creativity, individuals should work collaboratively with AI, which can lead to an enhancement of creative self-efficacy and more innovative outcomes.

There is also an ethical dimension to this transition. The democratization of art creation through AI comes with the risk of homogenizing artistic expression, thereby narrowing cultural and creative diversity. This new dynamic challenges us to navigate the balance between leveraging AI's capabilities for broadening creative access while preserving the authenticity and uniqueness of human creativity.[8]

Furthermore, the psychological impact of AI on creativity should not be overlooked. Concepts such as "Creative Displacement Anxiety" have been proposed, describing the unease individuals might experience when their creative efforts are compared to those of AI, which could undermine their perceived value and originality. Raising awareness and providing support can help individuals integrate AI as a tool in their creative endeavours rather than viewing it as competition.[9]

In sum, while generative AI technologies expand the possibilities of creative expression and collaboration, they simultaneously pose significant challenges to the concept of authorship and human creativity. By redefining the boundaries between human and machine contributions to

[6] Y.M. Bysaga et al., *Artificial Intelligence and Copyright and Related Rights*, 2 Uzhhorod Nat'l U. Herald, Ser.: L. 299 (2023), https://doi.org/10.24144/2307-3322.2022.76.2.47.
[7] Edwin Creely & Joanne Blannin, *The Implications of Generative AI for Creative Composition in Higher Education and Initial Teacher Education*, in Proc. Australasian Soc'y for Comput'g in Learning in Tertiary Educ. (ASCILITE) 357 (Nov. 2023), https://doi.org/10.14742/apubs.2023.618.
[8] *Artificial Intelligence & Creativity: A Manifesto for Collaboration* (n.d.), https://doi.org/10.1002/jocb.597.
[9] Nicholas Caporusso, *Generative Artificial Intelligence and the Emergence of Creative Displacement Anxiety*, 3 Res. Directs Psych. & Behav. 1 (2023), https://www.researchdirects.com/index.php/rdpb/article/view/127.

art and literature, we are prompted to rethink creativity in the digital age while developing frameworks that respect both human ingenuity and technological innovation.

While I cannot generate a full essay, here is information regarding these topics based on the available literature. Ownership and moral rights in favor of human authors, endorsing the anthropocentric conception of authorship. But if a generative AI creates something based on a user's prompt, who really is the creator of the work-the user, the developer of the AI, or the AI itself?

This legal ambiguity is not merely theoretical; it indeed causes real-world problems. Consider the *Thaler v. Commissioner*[10] of Patents cases pending in the United States, United Kingdom, and Australia. In each instance, patent applicant Stephen Thaler named the AI system DABUS as the inventor of new technology. With South Africa recognizing the AI as the inventor, big jurisdictions such as the UK and the US brushed aside the applications, finding that the law permitted only human beings to become inventors. These conflicting judgments expose the confusion worldwide concerning AI-generated authorship, thus pointing toward the need for regulatory clarity.

Beyond the confines of the courtroom, the question of AI authorship impacts creators, enterprises, educators, and policymakers. Content platforms themselves find problems with indexing and regulating AI-generated content. Musicians and artists express concerns about AI models being trained on their works without permission. Concurrently, AI-generated content is becoming indispensable in fields such as journalism, marketing, and legal work, where efficiency and volume are weighed equally along with originality.

Consequently, generative AI does not merely ask, "Can a machine be an author?"[11] in turn it presses for a kind of resetting of the whole concept of authorship: Is authorship about intention, about creativity, about original expression, or about control over the creative process? If the output is actually shaped partly by AI, how does that impact assignment of ownership in ways that are fair, consistent, and legally defensible?

[10] [2021] FCA 879

[11] Dr. Mogbojuri Babatunde Oluwagbenro, *Generative AI: Definition, Concepts, Applications, and Future Prospects* (Inst. of Elec. & Elecs. Eng'rs, June 4, 2024), https://doi.org/10.36227/techrxiv.171746875.59016695/v1.

As this technology develops very fast, the law must adapt, not merely in defining who or what can be an author but also in weighing innovation against protection. The future of creativity will likely be hybrid, wherein the human and machine intellect co-author content that can affect the cultural, economic, and intellectual landscape.

## THE LEGAL CONUNDRUM OF AI AUTHORSHIP

The advent of generative AI has drastically shifted content creation, with the traditional framework that associates creation with the human being under serious challenge. Since systems of AI such as GPT-4 and DALL·E are autonomously generating literary, artistic, and musical works, the issues on authorship and ownership of these works arise under copyright law.

### Indian Legal Framework

In India, the Copyright Act of 1957 defines *"Author"* in the context of computer-generated content. Section 2(d)(vi) states[12]

> "In relation to any literary, dramatic, musical or artistic work which is computer generated, the person who causes the work to be created shall be deemed to be the author."

This clause assumes the presence of an initiator, presumably human creative, in the process of creation; however, the definition is blurred when AI operates by itself without human intervention or decision.

### International Perspectives

The courts and patent offices worldwide have faced difficulties in resolving inconsistencies in the status of AI inventions and works. In the United Kingdom, Dr. Stephen Thaler applied for patents with his AI system, named DABUS, listed as the inventor. The UK Supreme Court rejected the application, holding that only a natural person may act as an inventor under the Patents Act 1977[13]: Thaler v. Comptroller-General of Patents, Designs and Trademarks. In a similar vein, the European Patent Office refused the DABUS application: EPO, Decision on

[12] Section 2(d)(vi) defines "Author"
[13] Indian Patent Act, 1977

applications. But becoming the first jurisdiction to recognize AI as an inventor, South Africa gave the patent to DABUS, based on its fairly liberal framework of the South African Companies and Intellectual Property Commission. This divergence illustrates the lack of consensus as to whether AI may hold or transfer rights typically granted to human authors or inventors.

### Implications and the Need for Reform

Lack of international harmonization raises several legal and ethical issues.[14]

- **Ambiguity of authorship**: In many scenarios, it is not clear whether credit for authorship should go to the user of an AI tool, its developer, or the AI itself.

- **Confusion as to ownership:** If there can be no human owner of such rights, it is unclear who commences actions for the violation of such rights.

- **Enforceability:** In case of infringement of rights on AI-generated content, who can initiate proceedings and who can be sued?

Amongst scholars, various approaches have been proposed, such as granting copyright to the user of the AI or the programmer or the creation of a sui generis right for AI-generated works. These proposals, thus, clearly show the need for countries like India to revisit and revamp their existing laws. According to reports by India Today and Business Today, the issue of plugging AI-related copyright loopholes is already under discussion amongst Indian legislators and legal fraternity.

## IMPLICATIONS FOR INTELLECTUAL PROPERTY RIGHTS

As generative AI becomes an increasingly common tool in the creative industries, the uncertainty as to who owns AI-generated works will pose a fundamental question in IP law. National and international frameworks generally presume a human creator, thus leaving a statutory vacuum in respect of content generated by an autonomous machine.

[14] Hyoseok Kim & Thomas K.B. Koo, *The Impact of Generative AI on Syllabus Design and Learning*, J. Marketing Educ. (Dec. 2024), https://doi.org/10.1177/02734753241299024.

### 1. Ownership and the Public Domain Risk

If for example, the concerned state has no laws to acknowledge the absence of an identifiable human author of AI-generated works, the latter falls down into the public domain due to nowhere to claim rights. Such concept can choke innovation, more preferably in those sectors that heavily rely on copyrights in order to recoup investments. If, however, developers cannot receive exclusive rights on the AI outputs, their motivation to invest in AI-related tools and systems may be greatly reduced.

For example, the U.S. Copyright Office has maintained that works "produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author" are not subject to copyright protection.

> "*Copyright law only protects 'the fruits of intellectual labor' that 'are founded in the creative powers of the mind.'*"
> — *U.S. Copyright Office Policy Statement on AI-Generated Works*, 88 Fed. Reg. 16,190, 16,192 (Mar. 16, 2023).[15]

Hence, works fully generated by AI might not be protected at all, whereas those highly fabricated with minimum human direction raise the question of how much intervention needs to be established to claim authorship.

### 2. Attributing Authorship to Developers or Users

Another possibility is that authorship be assigned either to the developer or to the user of the AI system. This title is in conjunction with *Section 2(d)(vi) of the Indian Copyright Act, 1957*, which states that authorship of computer-generated works must be attributed to "the person who causes the work to be created." Nevertheless, this leads to another key legal ambiguity-headed question; What is meant by "Causation" in this context? Is a user merely selecting a prompt? Does the user have to substantially direct the creative process?

Several scholars noted that granting copyright on use or operation of a tool oversimplifies the complex behaviour of AI. An AI model is different from any other tool in that it can produce

[15] U.S. Copyright Office Policy Statement on AI-Generated Works, 88 Fed. Reg. 16,190, 16,192 (Mar. 16, 2023).

content that is neither completely predictable nor is it fully intended by humans. [2]

### 3. Training Data and Copyright Infringement

Perhaps one of the most pressing questions in the intellectual property domain is the training of AI models on copyrighted materials.[16] Generative AI systems such as GPT-4 are trained on colossal datasets scraped from books, news articles, websites, pan and generally without any consent from or discourse with any of the legitimate right-holders of any of the works. This, in turn, has spawned a series of blockbuster lawsuits.

A December 2023 New York Times lawsuit against OpenAI and Microsoft alleges that their language models were trained on millions of Times articles without permission, thus amounting to copyright infringement and unfair competition: *The New York Times Company v. Microsoft Corporation and OpenAI LP.*[17] The complaint also alleged that the models had not just ingested NYT content without authorization but had also produced output reproducing entire articles, thereby undermining Times' subscription business. The determination of the lawsuit will likely guide the formation of future doctrine on the fair use defense in AI training.

Other similar lawsuits have been instituted by artists, authors, and software developers, including class actions initiated by writers like Sarah Silverman and programmers against GitHub Copilot, signalling an increasing backlash from creative industries.

### 4. Global Legal Reactions and Future Considerations

Existing and future legislations in some jurisdictions are contemplating sui generis rights or specific laws, but no real international consensus exists on how to weigh the rights of AI developers, users, and original content generators. Some questions that courts and policymakers must resolve are:

- What extent of transformation makes AI training "Fair use"?

[16] Faye F. Wang, *Copyright Protection for AI-Generated Works*, 5 Amicus Curiae 88 (2023), https://doi.org/10.14296/ac.v5i1.5663.

[17] The New York Times Company v. Microsoft Corporation and OpenAI LP. https://www.nytimes.com/2023/12/27/business/media/new-york-times-open-ai-microsoft-lawsuit.html?smid=url-share

- Should rights-holders be granted payment or offered opt-out mechanisms from the compilation of training datasets?

- Are creators in a position to license their data to AI developers through collective rights organizations?

Without clear regulations, legal uncertainty may stifle both technological innovation and artistic expression.

**TOWARDS A HYBRID LEGAL FRAMEWORK:**

Balancing Innovation and Protection: Some of the methods by which a hybrid AI creation regime may look include the following: Firstly, clear rules have to be laid down regarding the human intervention required, if any, in claiming authorship over AI-generated content. One option that can be looked into is considering something akin to the standard of "substantial similarity" that is used in copyright infringement. Therefore, the human contribution has got to be convincingly significant and qualitatively distinct from the output produced by the AI (S, n.d.). Hence, secondly, policymakers should consider granting a new form of intellectual property rights to AI-generated works ("Artificial Intelligence Impacts on Copyright Law," 2024). These should not be as extensive and long-lived as traditional copyrights, keeping the distinctive character of AI creation in view. More importantly, the hybrid framework should consider the matter of training data through mechanisms that can compensate copyright holders whose works are used in AI training. This should open a path for the creation of collective rights organizations negotiating licenses on behalf of creators, with an opt-out option for those creators who wish not to have their works used in AI training.[18]

Apart from this, some measures can be decided upon by means of which the AI producers and developers will have to disclose the source of their training data for copyright holders to follow up and negotiate/track the use of their works.

The hybrid regulatory framework thus directly protects the interests of human creators and promotes responsible innovation in AI. It clarifies the delineation between human authorship

[18] Consent and Compensation: Resolving Generative AI's Copyright Crisis Cornell Legal Studies Research Paper Volume 26, No.5 ]https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4826695

and machine-generated content so that the creators might receive due credit and protection for their intellectual contribution rather than losing it to some anonymized data set.

Creating 'intellectual property' rights for AI-generated works might offer a much-needed solution to the legal uncertainty both the developers and users face, hence promoting further investment and innovation in the sector while not undermining the traditional concept of copyright law. A balance must be established: exclusivity should be retained wherever it makes sense to do so but should not infringe upon access, fair use, or the general public domain.

It is the ethical and legal issues that hold center stage with the use of training data. Collective licensing or opt-out arrangements would give the creators legal rights over the use of their work for AI training, thus guaranteeing fairness and transparency in the process. Secondly, by putting in place an obligation on AI developers to disclose the sources of the data used for training, an enormous force of enhanced accountability will come on stream; the rights holders' blocks could verify the usage of their work in accordance with law and seek redress in cases of infringement. These steps, in combination, pave the way toward a fairer and more sustainable landscape for both creators and AI innovators, aligning technological advancement with the continued protection of creative rights.[19]

## CONCLUSION

As artificial intelligence continues to radically redefine the boundaries of creativity and invention, the law is at a historic juncture. The unprecedented rapid increase of generative AI tools which can be used to compose music, writing, code, art, and journalism, has raised pressing questions of authorship, ownership, and liability within our existing intellectual property frameworks that operate and assume human agency and intention.

First, it is crucial to acknowledge we are entering a collaborative space of human-machine interaction. In many more cases, AI is not working entirely autonomously but is amplifying and enhancing human agency by responding to prompts, preferences, and dialogue over time. This hybrid authorship relationship complicates traditional legal nomenclature related to an "Author" and a "Tool," and requires new legal terminology for instances where authorship,

[19] Ibid 13, https://dx.doi.org/10.2139/ssrn.4826695

including fiduciary or derivative, is shared; and in the future, we may also need newly defined rights related to data and algorithmic-based authorship.

Second, if the legal uncertainty surrounding ownership of AI-generated content remains unresolved, it will stifle investment and innovation. Clarity is what creators, developers, and institutions require from statutes, judges, or international treaties to clarify their rights and obligations. In addition, there need to be measures taken to ensure that any copyright material used for training of AI is used in a manner that recognizes the copyright of existing works, and that principles of fairness and consent are adhered to.

In summary, it is vital that lawmakers, courts, and academics collaborate globally to develop a legal framework that anticipates and adapts to the future while fostering innovation and protection, transparency and accountability, automation and authorship. Only then, can society begin to realize the potential of generative AI while reaffirming the integrity of human creativity.

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