



# COPYRIGHT IN THE ERA OF ARTIFICIAL INTELLIGENCE: AUTHORSHIP, OWNERSHIP AND LIABILITY IN AI GENERATED WORK

**AUTHOR : ABHINAV CHOUDHARY**

**DESIGNATION : STUDENT**

## **CHAPTER: COMPARATIVE ANALYSIS OF LEGAL FRAMEWORK**

A comparative legal analysis of AI-generated works and copyright law explores how different legal systems address the challenges posed by artificial intelligence (AI) in the realm of intellectual property. In recent years, AI has become a prominent force in creative fields, raising profound questions about the applicability of existing legal frameworks to works that are generated autonomously or with minimal human input. The issue of AI-generated works challenges traditional copyright doctrines, which were designed to protect the rights of human creators. This analysis compares how various jurisdictions—specifically the United States, the European Union, and India—approach the issue of authorship, ownership, and liability in the context of AI-generated works.

### **1. The United States Approach**

In the United States, the legal framework surrounding copyright law has historically been rooted in the principle that works are eligible for protection only if they are the product of human authorship. This foundational idea is enshrined in the U.S. Copyright Act of 1976, which explicitly states that only human creators can be recognized as authors. Under this statute, the concept of authorship requires a human element in the creation of a work, specifically stating that a work must be the product of a human's intellectual effort and creativity to be eligible for copyright protection. This provision has served as a cornerstone of copyright law for decades, ensuring that the rights to creative works are granted only to individuals who contribute their personal, creative efforts to their productions.

However, as technology has evolved and artificial intelligence (AI) has advanced, this traditional understanding of authorship has come under scrutiny. AI systems, particularly in recent years, have demonstrated an ability to independently create a wide variety of works, ranging from music and literature to visual arts and even scientific innovations. These AI-generated works, while highly complex and impressive, have raised significant legal and philosophical questions about whether they should be afforded the same protections under copyright law as human-generated creations. The

emergence of AI as a creative force has thus tested the limits of current legal doctrines, especially those concerning authorship and ownership<sup>11</sup>.

One of the most notable legal cases addressing the issue of AI-generated works in the

U.S. was **Thaler v. U.S. Copyright Office (2022)**. This case arose when Dr. Stephen Thaler, an inventor and AI researcher, sought to register a work created by his AI system, **DABUS** (Device for the Autonomous Bootstrapping of Unified Sentience). Thaler argued that DABUS, an AI system capable of generating innovative designs, should be recognized as the author of the work in question, which was a series of images generated by the AI system. Thaler submitted an application to the U.S. Copyright Office, requesting that copyright protection be granted to the work. However, the U.S. Copyright Office rejected the application, asserting that the work could not be registered because it lacked a human author, a requirement under the Copyright Act.

The Copyright Office's decision was grounded in the belief that authorship, as defined by the law, must involve a human creator. The office's reasoning was that copyright law, as it stands, does not recognize non-human entities as valid authors, and therefore, AI systems like DABUS cannot be considered the author of a work, regardless of their ability to create it. This rejection was consistent with previous positions taken by the Copyright Office, which had also denied requests to register works created by AI in earlier instances. The office's stance is that, in accordance with U.S. law, copyright protection is granted only to works that are the product of human intellectual labor, thereby excluding AI as a legal author.

In response to this rejection, Thaler appealed the decision in U.S. courts, arguing that the law should be updated to reflect the technological advances that have allowed AI systems to play an increasingly central role in creative endeavors. Thaler's argument was that AI, although not a human being, can serve as a tool in the creative process and can even contribute autonomously to the generation of original works. He contended that the law's rigid focus on human authorship fails to account for the fact that AI

systems are now capable of contributing meaningfully to the creative process and should not be excluded from copyright protection merely because they lack human attributes. Thaler's appeal underscored the need for a reexamination of copyright law in light of contemporary technological developments, suggesting that copyright protection should be extended to works created by AI systems, perhaps with the human operator of the AI system being recognized as the owner of the work.

Despite these arguments, U.S. law has thus far resisted granting copyright protection to AI-generated works. This resistance is rooted in a deep-seated belief that copyright law exists to incentivize human creativity and innovation. The central concern is that extending copyright protection to works created by AI systems would undermine the traditional purpose of copyright, which is to encourage and reward human authors for their intellectual and creative contributions. The fear is that allowing AI systems to be recognized as authors or granting them rights over their creations could dilute the very essence of what copyright law seeks to protect: human creativity and the labor of human creators.

Moreover, there is concern that recognizing AI-generated works as eligible for copyright protection could create legal and practical challenges. For example, if AI systems were considered authors, the question of ownership would become more complicated. Would the owner of the AI system be the rightful owner of the copyright? Or would the person who programmed or utilized the AI be entitled to the copyright? Such questions are difficult to answer under the current framework, and many legal scholars have raised concerns about the implications of granting AI authorship rights, particularly when it comes to issues like licensing, infringement, and enforcement.

Nevertheless, the growing body of works produced with AI tools is fueling an ongoing debate about whether the traditional interpretation of authorship should be reconsidered. Some legal scholars and tech industry experts argue that the law must evolve to accommodate the rise of AI in the creative industries. They suggest that an inclusive approach to authorship could foster innovation and allow for a broader range of creative expressions. Others, however, maintain that the current system is sufficient and that any changes to copyright law should be made with caution, ensuring that the rights of human creators remain paramount.

## 2. The European Union's Stance

The European Union (EU) has long followed a copyright framework that is grounded in the principle of human authorship. This principle is enshrined in key legal instruments, such as Directive 2001/29/EC, which seeks to harmonize aspects of copyright and related rights across the EU member states. The Directive requires that for a work to be protected under EU copyright law, it must be created by a human author. This stipulation has been a cornerstone of EU copyright law, ensuring that intellectual property protection is granted only to works that reflect the creative input of human beings. The reasoning behind this requirement is that copyright law is fundamentally designed to protect and incentivize human creativity and effort in the creation of original works.

As artificial intelligence (AI) technologies have advanced, the legal landscape has been forced to contend with the challenges posed by AI's growing role in the creation of works in fields such as music, art, literature, and even scientific innovation. AI systems are increasingly capable of generating content autonomously, raising significant questions about the application of traditional copyright principles. Unlike in the past, when the human element of authorship was clear, AI now produces creative works with little or no direct human input, which makes the question of authorship and ownership in the context of AI-generated works highly complex. This technological shift has sparked considerable debate within the EU about how to adapt copyright law to address the rise of AI in creative processes.

The question of whether AI-generated works should be eligible for copyright protection has become a key issue in EU legal and policy discussions. In 2020, the European Parliament issued a report that acknowledged the growing importance of AI in the creative industries and called for the development of new intellectual property frameworks to accommodate AI-generated inventions and creative works. This report recognized that AI's role in creativity could change the traditional concept of authorship, particularly the notion that only human creators can be considered authors. The report underscored the need to explore legal mechanisms that could balance the protection of intellectual property with the realities of AI's expanding capabilities. However, despite this call for exploration, no significant reforms to EU copyright law have been enacted to explicitly recognize AI as a potential creator of works or to provide clear guidelines for the protection of AI-generated content.

The reluctance to allow AI systems to be considered legal persons capable of holding copyrights remains a significant obstacle in the EU, similar to the approach in the United States. One of the core challenges is the deeply ingrained association of authorship with human subjectivity, creativity, and the personal connection between the creator and the work. In the EU, authorship has traditionally been tied to the emotional and intellectual investment of human creators in their works, as well as to the concept of moral rights. Moral rights, which are a critical part of EU copyright law, reflect the personal and artistic relationship between an author and their work. These rights are meant to ensure that authors can maintain control over how their works are used and ensure that their reputation is protected. The notion of granting AI systems copyright protection seems to conflict with the personal connection and moral rights that the law seeks to uphold for human creators.

As AI systems become increasingly autonomous and capable of creating highly original and complex works, the legal system is faced with the dilemma of whether to continue to deny copyright protection to such works or to revise the legal framework to accommodate the new reality. The EU's current position remains hesitant about granting AI authorship status. Although AI-generated works are not explicitly excluded from protection under EU law, the absence of clear provisions for AI as a potential author means that these works often fall into a legal grey area. The lack of legal clarity leads to uncertainty about who, if anyone, should be granted ownership rights over AI-generated content. This uncertainty creates practical challenges for those wishing to commercialize AI-generated works and raises the possibility of disputes over ownership and licensing. Furthermore, the issue of ownership is complicated by the fact that AI systems themselves are not legal persons and cannot hold property rights under current EU law. As a result, questions arise about who should be considered the rightful owner of an AI-generated work. In scenarios where human involvement is minimal, such as when an AI system operates largely autonomously, should the owner of the AI system, the developer who created the system, or the person who used the AI to generate the work be considered the legal owner? In the absence of clear guidance from the law, these questions remain unresolved, and various stakeholders may find themselves in disputes over who holds the rights to such works.

In addition to concerns about authorship and ownership, there are also broader ethical and philosophical questions surrounding AI-generated works in the EU. The concept of authorship has traditionally been tied to human creativity, personal expression, and moral rights, and some argue that granting copyright protection to works created by AI could undermine the human-centric nature of intellectual property law. Critics of extending copyright to AI-generated works contend that doing so could dilute the value of human creativity and lead to a situation where AI-generated content floods the market, potentially diminishing the opportunities for human artists to be recognized and compensated for their work. These concerns have fueled debates about whether it is appropriate to allow AI systems to hold intellectual property rights or whether the current human-centered framework should be preserved.

Despite these challenges, there is growing recognition within the EU that copyright law must evolve to address the impact of AI on the creative industries. The European Commission has acknowledged the need to consider AI's potential role in the future of copyright, and there have been discussions about the possibility of creating new legal categories or exceptions to accommodate AI-generated works. For instance, some have proposed the creation of a new category of works that are not directly tied to human authorship but are still entitled to some form of protection. This would ensure that AI-generated content is not left without protection, while still maintaining the traditional human connection to creativity that has long been central to copyright law.<sup>12</sup>

### 3. India's Legal Framework

In India, the Copyright Act of 1957 governs the protection of various creative works, including literary, dramatic, musical, and artistic compositions. Similar to the legal frameworks in the United States and the European Union, India's copyright law has traditionally been based on the concept that only human creators are eligible to claim authorship and, therefore, protection under copyright law. According to the Indian Copyright Act, an author is defined as a person who creates a work. The Act does not, at present, contemplate artificial intelligence (AI) as a creator or author of a work, meaning that content generated solely by AI systems is not entitled to copyright protection under Indian law. This strict human-centric approach to copyright protection is in line with the broader philosophy that copyright is intended to safeguard human creativity and labor.

The exclusion of AI-generated works from copyright protection in India is consistent with the global consensus that copyright law is inherently tied to human authorship. However, this narrow interpretation of authorship has increasingly been called into question as AI

systems continue to advance and demonstrate remarkable capabilities in generating creative works. AI tools can now compose music, produce visual art, write literature, and even design products, which raises the fundamental issue of whether the law should recognize the role of AI as a creator, or whether such works should remain unprotected because they lack a human creator. The rapid rise of AI in creative industries challenges the traditional boundaries of copyright law, leading to the need for a reconsideration of the existing legal framework in India.

Despite the challenges posed by AI to traditional copyright concepts, India's copyright law has not yet undergone significant reform to address the implications of AI-generated works. The Indian government, however, has shown growing interest in exploring how

<sup>12</sup>K. Kurian, 'Copyrightability of AI-Generated Works in India' (2021) 7(2) JIPR 115. AI impacts various sectors, including intellectual property. Over the past few years, the government has begun to recognize that AI technologies present new challenges that may require legal and regulatory responses. While the Indian Copyright Act of 1957 has not explicitly addressed AI-generated works, the legal community in India is slowly beginning to acknowledge that the law may need to evolve in response to the increasing use of AI in creative industries.

One avenue for legal reform in India could be the development of a framework that recognizes AI as a contributor to the creative process, or as a potential author of works. While this concept remains far from realization, there are early signs that India is beginning to engage with these ideas. For example, India's patent system has already taken steps to recognize the role of AI in the innovation process. In 2017, the Indian government introduced amendments to the Patent Rules, which explicitly acknowledge AI systems as contributors to inventions. While the recognition of AI as an inventor in the patent context is not directly related to copyright law, it represents a significant shift in the Indian legal landscape and suggests that India may be open to extending similar considerations to AI-generated works in the future.

However, it is important to note that copyright law and patent law operate differently, and there are distinct legal challenges associated with extending AI recognition to each area. Patent law focuses on the novel and technical aspects of inventions, while copyright law deals with the protection of creative works that reflect personal expression. In the context of AI-generated works, questions arise about whether the work can truly reflect human creativity and whether AI's involvement in the creation process goes beyond mere technical assistance. AI systems, after all, do not possess the same creative intentions, emotions, or subjective experience that human creators do, which is one of the key reasons why AI-generated works are not currently eligible for copyright protection.

In the realm of copyright law, one of the primary challenges is defining the relationship between human creators and AI systems in the creative process. If an AI system creates a work entirely on its own, without substantial human intervention, should the AI

system be considered the author, or should the work remain unprotected? Alternatively, if a human provides significant input or guidance to the AI, does this make the human the author, or is the AI's contribution substantial enough to warrant co-authorship? These questions are further complicated by the fact that current Indian copyright law does not provide clear guidance on how to address works created with the assistance of AI, or works where the AI is the primary creator.

While the Indian judiciary has not yet had the opportunity to address the issue of AI-generated works in the context of copyright law, the rise of AI technologies has made it clear that legal reform is needed. As AI continues to play an increasingly important role in the creative industries, the Indian legal system may need to adapt in order to provide clarity and certainty regarding the treatment of AI-generated works. In the absence of clear legislative provisions or judicial precedents, there is a growing recognition among legal scholars and practitioners that India's intellectual property laws may require modernization to reflect the realities of AI in the creative process.

One possible avenue for reform could be the establishment of a specific legal framework for AI-generated works. This could involve creating a new category of works that are generated with significant input from AI systems, or it could involve updating the definition of authorship to recognize AI as a potential creator in certain contexts. Such a framework would help clarify the ownership and protection of AI-generated works and ensure that creators and innovators who use AI systems have a clear understanding of their rights and obligations under the law.

Furthermore, there may be opportunities to incorporate elements of the Patent (Amendment) Rules, 2017 into the copyright law, which would allow for the recognition of AI systems as contributors to creative works, while still maintaining the focus on human creativity as the central tenet of copyright protection. This approach could help strike a balance between protecting the rights of human creators and acknowledging the increasing role of AI in the creative process.<sup>13</sup>

While India's Copyright Act, 1957 currently limits copyright protection to works created by human authors, there is growing recognition that the law may need to evolve to address the challenges posed by AI-generated content. The country's intellectual property system has not yet fully engaged with these challenges, but the increasing role of AI in creative industries and the recognition of AI's role in other areas, such as patents, suggest that reform may be on the horizon. In the coming years, India may need to develop new legal frameworks that strike a balance between protecting human creativity and adapting to the technological advancements brought about by AI. As the legal landscape evolves, the treatment of AI-generated works will undoubtedly become a significant issue for policymakers, legal professionals, and the creative industries in India.

#### 4. Comparing Approaches to Ownership and Liability

One area where the U.S., EU, and India differ significantly is in the treatment of ownership and liability for AI-generated works. These differences are a result of varying interpretations of intellectual property law and the complex relationship between human authorship and AI technology in creative processes. While all three jurisdictions—U.S., EU, and India—adhere to the general principle that copyright protection is traditionally tied to human authorship, they approach the question of ownership and liability in distinct ways, particularly when the AI is heavily involved in the creation of a work.

In the United States, ownership of a copyrighted work is typically granted to the creator, who is usually a human author. The U.S. Copyright Act assumes that works are created by humans and attributes ownership to the person responsible for the creation. However, complications arise when the creator is an AI system. According to current U.S. law, if a work is generated solely by an AI system without human involvement, no individual or

entity can claim ownership. This is because, under U.S. law, the requirement for authorship necessitates human involvement. As a result, works created exclusively by AI would not qualify for copyright protection and would instead fall into the public domain. This creates a gray area for creators who use AI systems in their creative processes. While AI can assist in generating content, the law does not recognize it as a legitimate creator, leaving the works it generates without the protection typically afforded by copyright law. This limitation has led to debates about whether the U.S. copyright framework should be updated to address the evolving role of AI in creative industries.

On the other hand, the European Union shares a similar view regarding ownership, with copyright protection being granted only to works created by human authors. The EU's legal framework, as outlined in Directive 2001/29/EC, maintains the principle that authorship must be human, but it also allows for certain exceptions in the form of work-for-hire agreements. In a work-for-hire arrangement, the individual or entity commissioning the work—rather than the creator—may hold the ownership rights to the work. The issue becomes more complex when AI is involved in the creation process. In these cases, the human who controls the AI system, or the person who commissions the work, might be deemed to own the rights to the work generated by AI. However, this remains an open question in European law, as there is no clear, widely accepted rule on how to handle ownership in AI-generated works. The concept of work-for-hire has the potential to complicate matters further, as it raises the issue of who should own the rights to works where human creators work alongside or under the direction of an AI system. For example, if an AI system produces a significant portion of the work, should the ownership be attributed to the human who provided the input, or should it be the entity that owns the AI system? These are unresolved questions that are the subject of ongoing legal debate in the EU, with no definitive framework for AI-generated works yet established.

In India, the Copyright Act of 1957 similarly links ownership to human authorship. Indian copyright law, like that of the U.S. and the EU, does not currently recognize AI as a creator or author of a work. Under this legal framework, if AI is used as a tool in the creation of a work, the ownership of that work rests with the human who directs or controls the AI system. However, as AI becomes more autonomous and capable of contributing independently to the creation process, ownership questions may arise. For instance, if an AI system is able to generate works without substantial human guidance, it becomes unclear who should own the rights to these works. Should it be the person who designed or programmed the AI system? Should it be the user who operated the system? Or, should it be a new legal entity altogether? These questions have yet to be addressed explicitly by Indian courts, and as AI continues to play a more significant role in creative fields, the need for legal clarity on ownership issues will likely become more pressing.

In terms of liability, all three jurisdictions—U.S., EU, and India—currently assign liability for copyright infringement to human actors. This means that when an AI-generated work infringes upon existing copyright protections, the responsibility for the infringement falls to the human involved in the creation or use of the AI. However, the question of who should be held responsible in the case of AI-generated infringement remains a complex issue. For example, if an AI system creates a work that copies another existing copyrighted work, it may not be clear who is at fault. The creator of the AI system, the user of the AI, or the entity that owns the AI system could all be potential candidates for liability. The current laws in these jurisdictions do not offer definitive guidance on how to allocate responsibility in such cases, creating legal uncertainties.

The complexity of liability issues increases as AI systems become more autonomous and capable of independent decision-making. In the future, as AI systems become more sophisticated, there may be situations where the AI acts without human oversight, further

complicating the question of liability. Should the liability for infringement rest with the person who programmed or designed the AI system, or should responsibility lie with the user who activated or interacted with the AI? In such cases, determining liability could become even more difficult. This presents a need for legal reforms in all three jurisdictions to establish clearer rules regarding liability in the context of AI-generated works and to account for the evolving nature of AI technologies.

To address these issues, all three jurisdictions may need to update their legal frameworks to create more specific provisions regarding ownership and liability for AI-generated works. This could involve developing new guidelines for determining authorship, ownership, and liability in cases where AI plays a significant role in the creation process. Such reforms would help provide greater clarity and predictability for creators, users, and businesses that rely on AI technologies. In conclusion, while the U.S., EU, and India share a common legal foundation in their treatment of AI-generated works, they each face unique challenges in addressing ownership and liability issues. As AI continues to play a more prominent role in creative industries, these jurisdictions will likely need to update their legal frameworks to reflect the changing realities of the digital age. By doing so, they can ensure that their intellectual property laws remain relevant and capable of protecting the rights of creators and users in the age of AI.

## 5. Legal Challenges and Reforms

As AI-generated works continue to gain prominence, there are increasing calls for legal reforms to adapt copyright laws to the modern digital age. Across the United States, the European Union, and India, there is a growing recognition that AI is playing an essential and increasingly influential role in the creative process. Whether in music composition, visual arts, literature, or even software development, AI is pushing the boundaries of traditional creative practices. Despite this, the legal frameworks in these jurisdictions struggle to keep pace with these advancements. The central issue that arises is the lack of clarity regarding AI's status as a creator or author, leaving a significant gap in the legal protection available for AI-generated works.

In the United States, there has been a firm rejection of granting copyright to works generated solely by AI systems. The U.S. Copyright Office has consistently upheld the principle that works must be the product of human authorship to be eligible for protection. In 2022, the case of *Thaler v. U.S. Copyright Office* reaffirmed this stance, with the court ruling that works created entirely by AI systems could not be copyrighted because they lacked a human author. While the U.S. has firmly rejected the idea of AI as a valid author, there are ongoing discussions within legal and academic circles about how copyright laws could evolve to address the increasing role of AI in the creative industries. Some experts advocate for reforming the law to recognize AI as a tool or collaborator, allowing human creators to claim copyright on works that involve substantial AI input. Others argue that the law should acknowledge AI as an independent creator with its own rights, though this remains a contentious issue. The challenge in the U.S. lies in finding a balance between incentivizing human creativity and acknowledging the transformative potential of AI in the creative process.<sup>14</sup>

In the European Union, the conversation around copyright protection for AI-generated works is more focused on exploring how existing legal frameworks can be adapted to accommodate the role of AI in the creative process. In 2020, the European Parliament issued a report that called for the creation of new intellectual property frameworks to address the challenges posed by AI. The report emphasized that AI's involvement in creative processes could redefine the concept of authorship, suggesting that AI should be treated as a tool in the creative process rather than as an independent creator. This shift in perspective is significant, as it opens the door for potential reforms that could allow human creators to claim ownership over works produced with the assistance of AI. However, despite these calls for reform, the EU has not yet implemented comprehensive changes to its copyright law, and the legal status of AI-generated works remains

ambiguous. The EU's approach reflects a recognition that AI is increasingly central to creative industries, but it also shows caution in integrating AI fully into the legal framework. The challenge lies in striking the right balance between adapting the law to technological advancements and maintaining a legal system that continues to prioritize human authorship and creativity.

In India, the debate surrounding AI-generated works is still in its infancy. The Indian Copyright Act, 1957, similarly requires human authorship for works to qualify for protection, and as of now, there is no legal provision that accommodates works generated solely by AI. However, as AI technology continues to make strides in creative fields such as music composition, art, and literature, legal scholars and practitioners in India are beginning to recognize the need for reform. The Indian government has started to explore the implications of AI on various sectors, including intellectual property, but there has been no formal movement to amend copyright laws to account for AI-generated works. The potential for legal reform in India lies in the development of clear guidelines that would allow for the recognition of AI as a tool used by human creators or, in some cases, as an independent contributor to creative works. The discussion is still in its early stages, but as AI technology continues to impact various industries, there will likely be increasing pressure to address this issue in India's legal framework.

Overall, the comparative legal analysis of AI-generated works highlights significant challenges but also opportunities for innovation in copyright law. While the U.S. has firmly rejected the idea of granting copyright to AI-generated works, the EU has been more open to exploring how existing frameworks could be adapted to accommodate AI's growing role in creativity. In India, the legal conversation is still emerging, but there is a growing recognition that the country's copyright laws may need to be updated to reflect the increasing importance of AI in the creative industries. The core issue across all three jurisdictions is the uncertainty surrounding the role of AI as a creator or author. This uncertainty leaves a significant gap in the legal protection available for works generated by AI, which could stifle innovation and hinder the development of AI-assisted creativity.

As AI technology continues to evolve, it is likely that these legal systems will need to adjust to better reflect the realities of AI-driven creativity. Legal reforms could take several forms, from creating a new category of intellectual property that accounts for AI-generated works to adapting existing frameworks to allow for the recognition of AI as a tool or collaborator. Such reforms would ensure that creators—whether human or machine-assisted—can obtain appropriate protection for their works. By updating copyright laws to reflect the increasing role of AI in creative fields, these legal systems can support innovation and encourage the continued development of AI technologies, ultimately benefiting both human creators and the industries that rely on creative works. As the legal frameworks evolve, it will be essential to strike a balance between preserving the principles of human creativity and embracing the transformative potential of AI in the creative process.<sup>15</sup>