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Introduction

Welcome to the Indian Journal of Legal Affairs and Research (IJLAR), a distinguished platform dedicated to the dissemination of comprehensive legal scholarship and academic research. Our mission is to foster an environment where legal professionals, academics, and students can collaborate and contribute to the evolving discourse in the field of law. We strive to publish high-quality, peer-reviewed articles that provide insightful analysis, innovative perspectives, and practical solutions to contemporary legal challenges. The IJLAR is committed to advancing legal knowledge and practice by bridging the gap between theory and practice.

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Preface

The Indian Journal of Legal Affairs and Research is a testament to our unwavering commitment to excellence in legal scholarship. This volume presents a curated selection of articles that reflect the diverse and dynamic nature of legal studies today. Our contributors, ranging from esteemed legal scholars to emerging academics, bring forward a rich tapestry of insights that address critical legal issues and offer novel contributions to the field. We are grateful to our editorial board, reviewers, and authors for their dedication and hard work, which have made this publication possible. It is our hope that this journal will serve as a valuable resource for researchers, practitioners, and policymakers, and will inspire further inquiry and debate within the legal community.

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Description

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AUTHORSHIP AND OWNERSHIP OF AI-GENERATED WORKS: A COMPARATIVE STUDY OF US, EU AND INDIAN COPYRIGHT REGIMES

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Abstract

With the breakthrough in AI technologies that produce creative content, there are important legal issues concerning copyright ownership and control. The traditional copyright concepts that are grounded in human creativity and originality are being called into question by the products with minimal or no human intervention. This study aims to explore the question of whether AI-generated works are eligible for copyright and if so, to whom the rights belong. The research takes a doctrinal and comparative approach to examining the legal frameworks of United States, European Union and India. Copyright law in the U.S. places a heavy emphasis on human authorship and allows for only AI-generated works with substantial human intervention to be protected. Likewise, the E.U. standard of “intellectual creation,” which is closely related to human creativity, may be somewhat flexible in cases of AI-assisted creations. On the other hand, the Indian copyright regime takes a relatively wide-angle view and applies it to computer-generated works which may provide a basis for dealing with AI-generated works. The study highlights significant differences and legal uncertainties between these jurisdictions notably with regard to who is considered the creator of non-human work and who owns such rights. The limitations of current laws to cope with the changing face of AI-generated creativity. Finally, the analysis highlights the need for a forward-thinking and coherent legal strategy that allows for the protection of human intellectual effort while fostering technological innovation, promoting clarity and certainty in the field of copyright in the age of artificial intelligence.

Keywords

Artificial Intelligence (AI), AI-Generated Works, Copyright Law, Authorship, Ownership, Originality, Intellectual Property Rights, Comparative Copyright Law and AI Regulation.

Introduction

Artificial Intelligence (AI) has a significant impact on the way global, creative works are created, shared and consumed. Artificial Intelligence systems can now create literary texts, music, paintings, photos, computer programs and other creative expressions without any or very little human intervention.¹ The advanced generative AI solutions can process large sets of data, learn patterns and produce results that are similar to human creativity. These technological advancements have enabled greater innovation and efficiency but have also given rise to the questions of numerous legal issues, especially with respect to copyright. Copyright law has traditionally been rooted in the concept that creative works are a product of human intellect. Authorship, ownership and originality are the concepts that underlie copyright protection in most legal systems. The term 'author' has traditionally been applied to an individual person who applies skill, judgment and creativity in creating an original work.² But the new era of AI creations brings a fresh paradigm with its creations that can be created by machines without significant human input. This poses significant issues of whether AI-generated content is subject to copyright protection and who could be considered the creator or proprietor of it. The issue becomes more complex because there is no common international legislation that regulates creations made by AI. Various jurisdictions have taken a range of different steps to address these concerns. In the United States, copyright law places a great emphasis on the human creator as a necessary element of copyright protection. As a result, copyright is typically not afforded to works created entirely by AI, unless the human element is deemed sufficient. Also, in EU, originality and authorship are given much importance in establishing originality and the principle of “author's own intellectual creation” is also observed.³ However, the Indian copyright regime considers the creator who causes the work to be created as the author of a computer-generated work, thus giving a relatively liberal

¹ Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Pearson Education, 4th edn., 2021).

² Copinger and Skone James, *Copinger and Skone James on Copyright* (Sweet & Maxwell, London, 19th edn., 2022).

³ World Intellectual Property Organization, *Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence*, available at: https://www.wipo.int/about-ip/en/artificial_intelligence/ (last visited on July 9, 2026).

definition for computer-generated works. There has been much discussion about whether or not this applies to new technologies in the field of AI.

As AI becomes more prevalent in the creative sector, the question of ownership rights, liability and economic interests becomes even more pronounced. The attribution of ownership of any product of AI can become arduous in scenarios with multiple owners that are Programmers, developers, users and corporations running the AI systems. Lack of legal certainty can cause conflicts on matters of exploitation rights, licensing, commercial use and infringement liability. Additionally, protecting AI-created works under copyright also poses broader policy questions on the balance between technological innovation, safeguarding human creativity and intellectual effort.⁴ Making a comparative analysis of copyright systems of USA, EU and India in this context is essential as this helps to understand how the various systems are addressing the difficulties posed by AI-generated works. A comparative analysis can highlight the strengths, weaknesses and insights from the current legal frameworks as well as question the effectiveness of the copyright principles in the new era of AI. The study also aims to examine how the doctrine of originality has developed and the importance of human authors in modern copyright law.

1. Concept of Copyright, Authorship and Ownership

Copyright is one of the intellectual property rights that gives protection to the authors of original literary, artistic, musical, dramatic and other creative works. The basic purpose of copyright is to facilitate creativity and innovation by allowing the creator to have a monopoly over a creative work for a finite time. Typical rights are those to copy, publish, distribute, communicate, adapt and commercially use the protected work.⁵ The copyright protects an original work as soon as it is created, without any registration being required. Copyright registration is only used to help establish ownership in litigation. Originality and human creativity are fundamental concepts of copyright law. In the traditional approach to copyright law, protection has been awarded exclusively to the work of human authors who can be regarded as the products of their intellectual effort, skill, labour and judgment. This protection aims to encourage cultural and scientific

⁴ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence* (2023).

⁵ P. Narayanan, *Intellectual Property Law* 271-273 (Eastern Law House, New Delhi, 5th edn., 2017).

development and at the same time to stimulate human creativity. Hence, copyright law is traditionally based on the premise that creative expression is a result of human mind.

The authorship is a central issue in copyright law because copyright is generally deemed to be the first right of the author. In general, the author is considered the person who produces a work with their own ideas and imagination. Authorship is a concept in which different jurisdictions have different interpretations but most would agree that the human element is a critical requirement to claim authorship.⁶ When it comes to traditional creative processes, it's easy to identify the author, since the work was created by a human being's hands. The understanding has become complicated with technological developments and the ability to increasingly rely on artificial intelligence to create works with little or no human involvement. Ownership in copyright law is defined as rights that can be exercised and controlled by the legal owner of the copyrighted work. In general, copyright is held by the author as the original owner, unless the work was created under an employment contract with a specific contractual arrangement or under the terms of the law. Ownership means that the person who is the right holder has the authority to give license, transfer, sell or use it for commercial purposes in a manner that is protected by the right.⁷ The ownership of the copyright can be an important factor in people getting the economic benefit of using creative content and in those who are seeking the right to pursue infringers.

The advent of AI-generated work has unsettled the dynamics of copyright, authorship and ownership. The fact that AI can produce creative outputs raises doubts about whether such works meet the demands of human creativity required to qualify for copyright protection. Additionally, there is a degree of uncertainty surrounding the identities of the author and the owner of AI-generated outputs. AI-generated works should be attributed to the programmer, user, developer or the corporation that developed the AI system. The problems in these cases highlight the shortcomings of traditional copyright theories in solving technological problems of the digital age.

⁶ Copinger and Skone James, *Copinger and Skone James on Copyright* para. 3-01 (Sweet & Maxwell, 19th edn., 2022).

⁷ The Copyright Act, 1957 (Act 14 of 1957), s. 14.

2. United States Copyright Regime

The U.S. copyright system is extremely conservative in media such as artificial intelligence (AI) works, where the emphasis is on the need for human authorship. The Copyright Act of 1976 protects original works of authorship made in any tangible medium of expression but the definition of author is not provided in the Act. It has always been understood that a work can only be protected by copyright if it is the product of human creativity. The doctrine of human authorship has always been a part of American copyright law. In *Burrow-Giles Lithographic Co. v. Sarony*,⁸ United States Supreme Court recognised principles that have remained influential in the interpretations of copyright law in the context of the development of new technologies. Under U.S. law, originality further demands that a work be produced independently by the copyright owner, i.e., the creator and express at least some minimal degree of creativity.⁹ Therefore, works which are merely produced by a machine and lack a sufficient human touch may be difficult to gain copyright protection. As the technology of generative AI becomes more widespread, the legal implications of its creation have ramified into a wide debate around the traditional interpretation of copyright law and its current application to AI-generated work. The United States Copyright Office has issued numerous statements stating that copyright covers only works created by human authors. Where AI has simply assisted a human creator, the Copyright Office has held that copyright may exist in the human creator's contributions, but not in the AI's.¹⁰ But content created autonomously by an AI system is not subject to copyright protection.

There have also been judicial developments concerning the human authorship requirement in the United States. Relying on previous Supreme Court decisions, the United States District Court ruled that creative works created using AI could not be registered alone by AI without some human effort.¹¹ The court concluded that the Copyright Office's interpretation of the law was correct and that the law does not grant copyright protection to works made exclusively by a machine. The U.S. approach shows a conservative stance on the recognition of copyright in AI-generated works. This approach maintains the traditional focus on the role of human creativity, but also introduces legal

⁸ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884).

⁹ *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).

¹⁰ U.S. Copyright Office, Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16,190 (Mar. 16, 2023).

¹¹ *Thaler v. Perlmutter*, 687 F. Supp. 3d 140 (D.D.C. 2023).

ambiguity about who owns and can benefit from AI-generated products. Problems remain with determining, for example, the level of human creativity required to warrant copyright protection, especially when using AI tools for creative endeavours. Moreover, the lack of legislation dedicated to AI-generated works has led to growing reliance on administrative guidance and judicial interpretation.

The copyright regime in the United States has come far from such difficulties and continues to be one of the clearest positions in the world to take the line that human intellectual contribution is essential to the concept of copyright. In the context of increasingly advanced artificial intelligence technologies and the increasing autonomy of creative products by artificial intelligence. However, pressure is building that legislative changes are necessary that are capable of dealing with the legal and economic consequences of the creation of artificial intelligence.

3. European Union Copyright Framework

The European Union copyright system is based on a relatively harmonised method of copyright protection, which prioritises the idea of the human intellectual creation as a principal element of originality and authorship. In contrast to the United States, the European Union does not have a single uniform copyright law; rather, protection for copyright is defined by a series of directives, regulations and judicial interpretations that have been synthesised by the Court of Justice of the European Union (CJEU). The EU framework has a strong connection with the personal intellectual contribution of the author, rather than emphasising the technical creation of the work itself and establishes that human creativity is an element of academic work which is crucial to copyright recognition.¹² One of the main points in the European Union when it comes to copyright protection is the concept of the “author's own intellectual creation.” The Court in *Infopaq International A/S v. Danske Dagblades Forening*¹³ ruled that originality is present only if the work stems from the author's own intellectual creation through free and creative choices made by him in the creation of the work. This standard is very much focused on the human intellectual resources and creative freedom and not only on labour or investment.

¹² Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, 2001 O.J. (L 167) 10.

¹³ Case C-5/08, *Infopaq Int'l A/S v. Danske Dagblades Forening*, 2009 E.C.R. I-6569.

The European approach carries significant implications for the question of the originality of works produced by AI, as originality continues to be closely tied to human creativity under EU law. Given the fact that AI systems create content using algorithms and machine learning processes, there is a concern about whether AI-generated content meets the criteria of minimal or no human contribution and is considered an intellectual product. There are currently no clear rules on the legal status of works created with AI in the European legal framework, leading to uncertainty in this field. Works created with the help of AI that have a meaningful and substantial human contribution might be protectable but works created entirely by AI are unlikely to satisfy the EU case law originality threshold. The CJEU has also confirmed the anthropocentric nature of European copyright law, in that respect protecting only works which express the personality of the creator and reflect his or her intellectual work.¹⁴ Thus, the ability of the autonomous machine to produce content, without direct human creativity could lead to the creation of content that falls even outside the scope of existing EU principles of copyright.

In the regulatory landscape, the European Union (EU) has started to take more account of the wider implications of artificial intelligence for the field of intellectual property and digital governance. While the proposed measures cover transparency, accountability and risk management for AI and not copyright ownership, they suggest the Union is becoming increasingly aware of the legal issues of AI-generated content.¹⁵ EU copyright policy thus stands somewhere between the extremes of fully protecting and fully embracing AI-created works. The regime does a good job of protecting the originality and copyright of human creations but it also has a problem keeping up with the increasingly common fact of machine-made content. Because these things are not explicitly legalised, there is uncertainty in the legal landscape about the ownership rights, commercial use and copyright protection of AI-generated works in the digital world. A recent proposal to rethink originality and authorship in copyright law under the influence of generative AI technologies could have a greater impact on the EU in the future as this technology develops.

¹⁴ Case C-145/10, *Painer v. Standard VerlagsGmbH*, 2011 E.C.R. I-12533.

¹⁵ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), COM (2021) 206 final (Apr. 21, 2021).

4. Indian Copyright Regime

The Indian copyright system has followed a relatively liberal and flexible stance on computer-generated works compared to certain other copyright systems. While the Copyright Act, 1957, does not explicitly include AI-generated works, it does provide provisions relevant to AI technologies, such as computer-generated works.¹⁶ This seems to be a unique aspect of the Indian copyright law which assigns the "author" as the person who caused the computer-generated literary, dramatic, musical or artistic work to be created, thereby exempting the Indian law from the more rigid concept of human authorship employed in the United States, among other jurisdictions. The provision was originally made to deal with technological developments of computer-assisted works but the legal implications of the application of this to contemporary autonomous AI systems have yet to be determined.

According to Indian copyright law, originality is also a requirement for copyright protection. In the beginning, Indian courts adopted what was called the "sweat of the brow" theory, according to which the protection of copyright was mostly contingent on labour and skill. However, this judgment, in *Eastern Book Company v. D.B. Modak*,¹⁷ followed a more nuanced approach establishing that copyright demands a minimum degree of creativity as well as skill and judgment. This move brought Indian copyright law in tune with the international trend that prioritises intellectual creativity. With the advent of AI-generated content, there has been confusion with respect to who may be considered the author or owner of the original work. AI-generated content has raised questions about who is the author or owner of the original content under Indian law. AI systems themselves are not recognised as legal entities, thus cannot be the owners of copyright. This raises the question of who should have the control of the ownership: the programmer, the developer, the user or the organisation using the AI system.¹⁸ Although Section 2(d)(vi) seems expansive enough to cover AI-generated works, courts have yet to grapple with autonomous AI-generated content, creating legal uncertainty.¹⁹

¹⁶ The Copyright Act, 1957 (Act 14 of 1957).

¹⁷ *Eastern Book Co. v. D.B. Modak*, (2008) 1 SCC 1.

¹⁸ World Intellectual Property Organization, "Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence" 18-21 (2020).

¹⁹ The Copyright Act, 1957 (Act 14 of 1957), s. 2(d)(vi).

There is currently no specific legislation or regulation in India that is dedicated to copyright protection of AI-generated work. However, the development of the use of generative AI technologies in creative industries has put a new focus on policy discussions concerning AI and IP rights. The Indian framework implies flexibility and ambiguity: while it includes the possibility of recognising computer-generated works, the existing provisions are uncertain about what will apply to more sophisticated AI tools that can create content with little or no human involvement.

5. Comparative Evaluation of the Three Copyright Regimes

By comparing the copyright regimes in the United States, the European Union and India, it was found that all three jurisdictions still emphasise the role of the human in generating works of human creativity as the basis of copyright protection. But they have marked differences with regard to how each views authorship, ownership and originality of AI-generated work. In the United States, copyright protection is limited to works created by human beings and demands that the work be a human work. Such a stance, demonstrated in judicial rulings and by the U.S. Copyright Office, ensures that works created exclusively by AI are not protected by copyright, yet it restricts the ability to acknowledge AI-generated work.²⁰ While such a stance provides legal certainty, it simultaneously decreases flexibility in recognising AI-generated works.

The European Union associates the protection of copyright with the notion of the “author's own intellectual creation,” whereas in this context a work must mainly reflect the intellectual and creative choices of its human creator.²¹ Therefore, works that are entirely created by AI systems are unlikely to meet the requirements of the existing European system. However, works created with the aid of AI may be eligible for copyright protection if they are human creations and there is a significant human contribution. The Indian copyright law is also quite liberal as it allows anyone who has caused a computer-generated work to be created as an author under Section 2(d)(vi) of the Indian Copyright Act, 1957, a law that predates the proliferation of modern generative AI.²² This approach is less rigid than those of the EU and the United States. However,

²⁰ *Thaler v. Perlmutter*, 687 F. Supp. 3d 140 (D.D.C. 2023).

²¹ Case C-5/08, *Infopaq International A/S v. Danske Dagblades Forening*, [2009] E.C.R. I-6569.

²² The Copyright Act, 1957 (Act 14 of 1957), s. 2(d)(vi).

Indian laws do not explicitly provide a definition of AI-generated works and without judicial interpretation, there is uncertainty around the application of those laws.

Equity issues with determining ownership, originality and liability for works created with the use of AI tools remain a shared problem across all three jurisdictions. At present, there is no explicit recognition of AI as an author or a legal person in any of the existing copyright systems. With the rise of more autonomous AI systems, the conventional copyright rules which rely solely upon human creativity may be found to be insufficient. Hence, the requirement for a clear and well-balanced legislative framework including international cooperation, to set the technological development and the copyright fundamentals.

6. Challenges and Need for Legal Reforms

As AI technology rapidly develops, it is evident that current copyright law is lacking in some areas. The copyright concepts originated under the assumption that creative products are created by the human intellect and creative effort. However, the emergence of AI systems now makes it hard to conceive of authorship, ownership, and originality in the context of AI-generated literary, artistic and musical works.²³ Determining ownership and who has written AI-generated content is one of the main difficulties. The Indian Copyright Act, 1957, has taken a more liberal stance by recognising the person behind the computer-generated work as its author but has not further clarified the position of the AI system itself. This approach creates uncertainty around who is the owner of the copyright of the AI generated work.

The doctrine of originality is another obstacle that arises. AI's content production relies on algorithms and machine-learning processes and it is unclear whether the resulting creations meet the originality requirement set forth by current copyright laws, as it is unlikely that they are the products of original thought. Additionally, copyright violations, licensing issues and liability concerns have emerged due to the exploitation of copyrighted content for training AI models which

²³ World Intellectual Property Organization, "Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence" 13-21 (2020).

in turn have sparked various legal conflicts globally.²⁴ These challenges highlight the need for legal reforms capable of addressing AI-generated creativity. Legislation going forward must make it clear what constitutes authorship and ownership, set rules of liability and offer increased legal clarity for creators and users of AI technologies. Cooperation and alignment of copyright principles between countries will also be crucial for having a proper and balanced copyright framework for AI-created content.

7. Conclusion

The invention of artificial intelligence has revolutionised the world of art, allowing for the creation of every type of art from literature to music and even to digital creations with hardly any human effort. These developments have enabled new forms of innovation and efficiency, but they have also questioned the core tenets of copyright law and notions of authorship, ownership and originality. Current copyright laws were conceived with the understanding that creative expression stems from human minds so they have been struggling with the concept of creative ideas produced by robots. The comparative overview of the copyright regimes of the United States, EU and India has revealed that none of these jurisdictions has yet to formulate a comprehensive legal framework specifically for AI-generated works. The Indian Copyright Act, 1957 is more flexible in its requirements for copyright protection of computer-generated works under copyright protection, though it remains unclear due to the absence of judicial interpretations and specific legislative provisions concerning automated generation of content by AI. While the European Union enforces a strict requirement for human authorship in copyright protection, limiting works solely to AI creation.²⁵ the Indian Copyright Act, 1957 imposes comparatively less stringent conditions under the copyright protection for computer-generated works, leaving the level of protection of works created through AI-type authorship unadorned by judicial interpretations or specific legislation.²⁶ The current legal frameworks prove to be inadequate in meeting the changing dynamics of AI-enabled creativity. Questions of ownership, originality, liability and infringement have yet to be answered, especially when multiple stakeholders are involved in the development of AI systems

²⁴ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16,190 (Mar. 16, 2023).

²⁵ Case C-5/08, *Infopaq Int'l A/S v. Danske Dagblades Forening*, 2009 E.C.R. I-6569.

²⁶ *Eastern Book Co. v. D.B. Modak*, (2008) 1 SCC 1.

and their functioning. There are also gaps in uniformity around legal processes in other nations for cross-border copyright protection and enforcement, introducing a range of challenges for creators, technology providers and copyright owners. Given these developments, there is a pressing need to reform the law and policy to make authorship and ownership of AI-generated works more transparent and to ensure that the core principles of copyright are maintained. In the future, it is important that the law acknowledges the reality of AI-powered creations, sets clear rules for attribution and allows innovation while safeguarding human creativity. International collaboration and copyright principles harmonisation will also be fundamental to provide legal certainty in the new digital and interconnected world. This will not only foster responsible innovation but also help protect the interests of creators in the new age of AI.

