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# PROTECTION OF AI- AI-GENERATED WORKS UNDER THE COPYRIGHT LAW

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## ABSTRACT

The rapid development of generative artificial intelligence (AI) has revolutionized creative industries, enabling machines to produce text, images, music, and other forms of media. The use of artificial intelligence (AI) has revolutionized the creation of intellectual property, raising fundamental questions about the legal framework that governs the protection of works generated solely by AI. Copyright law, which has traditionally hinged on the concept of human authorship, faces significant challenges as AI-generated works i.e. works created without any human intervention become more prevalent. This research proposal seeks to explore the complex relationship between AI-generated works and copyright law, focusing on the protection or lack thereof of such works. The central legal issue at hand is whether AI-generated works can qualify for copyright protection, and if so, who holds the rights to these works. Current copyright laws in most jurisdictions do not explicitly address the issue of non-human authorship. The research will provide a comprehensive analysis of how copyright law is currently applied to AI-generated works under various jurisdictions and to identify emerging trends in AI and copyright regulation. Additionally, the research will examine the legal, ethical, and policy implications of granting copyright protection to AI-generated works, considering the potential impact on innovation, creativity, and the balance of rights between creators and users. The research aims to develop a significant understanding of the current legal landscape, identify gaps in regulation, and propose relevant solutions.

## INTRODUCTION

With the emergence of generative AI the way a creative content is produced has been fundamentally transformed, enabling systems to autonomously generate work across a wide array of mediums, including writing, visual art, music, and drama. While these technological innovations present extraordinary opportunities for automating creativity, they also introduce a host of complex legal and ethical challenges. The main issues surrounding generative AI involve the use of copyrighted materials in the training of AI models, the copyright status of AI-generated works, and the potential infringement on existing copyrighted content. These concerns are becoming increasingly central as AI models, which are trained on vast datasets that often include copyrighted material taken from the internet, books, music, and art, blur the lines between inspiration and replication<sup>1</sup>. The main aspect of this issue comes under the copyright law, which was traditionally designed to protect original works of human authorship. Copyright law grants creators exclusive rights to their work, offering legal protection and incentivizing creativity and innovation. However, the concept of “authorship” becomes increasingly complicated when a machine, without any human intervention produces a work that is difficult to distinguish from the one created by a human. Copyright law, in its current form, is predicated on human authorship<sup>2</sup>. The idea of "authorship" is foundational to the concept of copyright, and human creativity is what the law seeks to protect. However, when AI systems autonomously produce content, the notion of human authorship is disrupted. AI is not capable of independent thought or intent in the same way a human is, and yet the works it creates may be indistinguishable from human-generated works. The existing copyright frameworks do not account for this technological development, leaving a legal grey area where AI-generated content is concerned. As a result, most AI-generated works fall into the public domain, meaning that neither the developers of the AI nor the users who operate it can claim exclusive rights or financial benefits from those creations. This creates a disincentive for investment and innovation in AI-driven creative technologies, as the inability to secure copyright protection undermines the economic value of AI-generated works. The lack of a clear legal framework for AI-generated works has created uncertainty, not only for developers and users of AI but also for policymakers and legal scholars who are grappling with the implications

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<sup>1</sup> Andres Guadamuz, *Artificial Intelligence and Copyright*, *WIPO Mag.* (Sept. 9, 2024), [https://www.wipo.int/wipo\\_magazine/en/2017/05/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html).

<sup>2</sup> Y. Lu, *AI-Generated Content and Its Legal Status Under Copyright Law*, 35 *J. Educ. Humanities & Soc. Sci.* 218 (2024).

of this technological shift. The current legal vacuum leaves AI-generated works in an uncertain position, where they often lack the protection necessary to foster innovation and creativity, yet the potential for legal challenges and copyright infringement claims remains<sup>34</sup>. As AI technology continues to advance, the need for legal reform becomes increasingly urgent. Without adequate legal protection for AI-generated works, there is a risk that innovation in AI-driven creative industries will be stifled. However, any legal reforms that extend copyright protection to a generated content must be carefully considered to avoid undermining the fundamental principles of copyright law. Henceforth the rise of generative AI has brought about keen changes in the way creative content is produced, but it has also exposed significant gaps in the existing legal framework. The use of copyrighted materials in training AI models, the uncertain copyright status of AI-generated works, and the potential for infringement on existing copyrights present complex legal and ethical challenges<sup>5</sup>. As AI technology continues to evolve, copyright law must adapt to address these challenges, striking a balance between protecting human creativity and fostering innovation in AI-driven industries. The current legal void surrounding AI-generated works creates uncertainty for developers, users, and policymakers alike, making it imperative to reevaluate the legal framework and develop new models that can accommodate the unique challenges posed by AI-generated content. Without such reforms, there is a risk that both innovation and intellectual property rights will suffer as AI continues to reshape the creative landscape.

## RESEARCH QUESTIONS

- Whether AI-generated works can satisfy the legal requirement of originality under existing copyright doctrines?"
- Whether various jurisdictions, particularly the US and EU, differ in their treatment of authorship, ownership, and copyright eligibility for AI-generated content?
- Whether legal reforms or hybrid models could be adopted to accommodate AI-generated content while preserving the core values of copyright law?

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<sup>3</sup> J., G., Lu, T., Wang, Y., & Zhao. (2024). *From the perspective of originality: Analysis of the legal nature of artificial intelligence products. Highlights in Business, Economics and Management*, 39, 265–

<sup>4</sup> . <https://doi.org/10.54097/r3a35344>

<sup>5</sup> Copyright protection for AI-generated works: Exploring originality and ownership in a digital landscape. (2023). *Asian Journal of International Law*, 13

## RESEARCH OBJECTIVE

The primary objective of this research is to critically examine the evolving challenges posed by AI-generated works to traditional copyright frameworks, with a particular focus on the concept of originality. The study seeks to analyze whether current legal definitions of originality, which have historically emphasized human creativity and intellectual effort, can accommodate creations produced independently by artificial intelligence systems. Further, it aims to explore how various jurisdictions, particularly the United States, European Union, and India, approach the copyrightability of AI-generated content and to identify gaps in the existing regulatory structures. The research also endeavors to assess the philosophical and legal theories underpinning originality, tracing their evolution from early human-centric models to contemporary debates surrounding computational creativity. Ultimately, the study aspires to propose feasible legal reforms or hybrid models that balance the protection of human creativity with the promotion of innovation in AI-driven creative industries, ensuring that copyright law remains relevant in the face of rapidly advancing technological capabilities.

## LITERATURE REVIEW

1. *Kalin Hristov, Artificial Intelligence and the Copyright Dilemma*, 57 *J. Franklin Pierce Ctr. for Intell. Prop.* 431 (2017).

The paper addresses the complex relationship between artificial intelligence (AI) and copyright law, with a special focus on the growing concern as AI technologies have become more capable of generating creative works. This paper explores the implications of AI's ability to create art, literature, music, and other forms of intellectual property works, which poses significant challenges to traditional copyright frameworks. The focus on the question of AI generated works and the ownership of those works, Raises the question of human involvement. The paper helps in understanding the impact of AI generated works on various copyright works and the involvement of human input.

2. *Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape*, 13 *Asian J. Int'l L.* (Cambridge Univ. Press 2023).

This paper talks about the challenges of granting copyright protection to AI- generated works due to the legal requirement of human creativity. Under a few jurisdictions including the EU

the concept of originality is the central to the copyright eligibility. It has been seen that any AI-Generated work without any human involvement often fails to meet the threshold of originality. The article talks about the inclusivity approach to authorship, recognizing collaborative human-AI efforts that may be necessary to adapt copyright laws to the changing digital landscape. The paper deals with the concept of adoption of copyright laws to incorporate the AI-Generated works.

### **3. *Kaushik Banerjee, AI and Copyright Infringement: Can AI Be a Creator? (2024).***

The author explores the legal challenges surrounding AI-generated content and its implications for copyright law. The paper discusses the principle of originality as a key feature of copyright protection that traditionally requires human authorship. AI-generated works which do not include any direct human creativity raise questions about whether they can be considered original under the existing copyright laws. The author explores the several challenges related to authorship and ownership especially in instances where the AI operated independently. The concept of human authorship is not clear. Legal frameworks of various countries are struggling to keep pace with the capacity of content generated by the AI. The article touches on topics such as copyright infringement issues during AI training as AI systems highly rely on vast data bases which often include copyright material in order to generate new content. The author concludes that the current copyright laws are insufficient to address the complex system of AI.

### **4. *Andres Guadamuz, Artificial Intelligence and Copyright (2024).*<sup>6</sup>**

The author explores the challenges in the context of AI-Generated works with the existing copyright frameworks. The author explores the legal implications of neural networks being able to create literature works, raising the main question about authorship and originality. According to traditional aspects of copyright laws human involvement in the net is very much required, but the use of AI is blurring the lines, as it is now creating works with minimal human involvement. This shift has led to various uncertainty regarding whether such works can receive legal protection under the intellectual property laws. The author talks about the rapid growth of AI technologies, particularly in the creative industry, and also challenges the long held

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<sup>6</sup> WIPO. Retrieved September 9, 2024 from [[https://www.wipo.int/wipo\\_magazine/en/2017/05/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html)]

principles that only human made works can be protected under copyright. He talks about countries such as the US, where the copyright law still strictly defines authorship as a human made creative work, which can have significant commercial and legal consequences. The author also provides approaches to the challenges mentioned in the paper as denying copyright to AI-generated works attributing ownership to the creators of the Ai systems. The paper deals with two important issues one regarding the ownership of the copyright and second the legal status or implication of an AI generated work

**5. *Yu Lu, AI-Generated Content and Its Legal Status Under Copyright Law, 35 J. Educ. Hum. & Soc. Sci. 218 (2024).***

The paper talks about the legal landscape in regard to AIGenerated works. The paper focusses on the key questions of originality, authorship and copyright protection in terms of AI generated works. The author agrees that on one hand some AI- generated content, especially the works created by very technical prompts given by the human and is very different from the training database, could be deemed original, it still remains very early to grant AI human status. The paper suggests the potential growth of AI towards the contribution in the creative industries and the uncertain in protecting the intellectual property. The article deals with the authorship and ownership claims should be assessed on a case by case basis, reflecting the challenges in adopting current copyright framework towards the AI-technology.

**6. *Peter Zurth, Artificial Creativity? A Case Against Copyright Protection for AIGenerated Works, 25 UCLA J.L. & Tech. 2 (2021).***

The paper puts forward a strong argument against the extension of copyright protection to any works created by AI. He talks about the core principle that copyright law was designed to protect human intellect, effort and creativity and expression. He argues that the AI system generate outputs based only on algorithms and databases without any independent creative intention or originality which are the key features of a traditional copyright framework. The article discusses about how granting protection to AI-generated works undermine the incentive structures that copyright laws aim to promote. Copyright exists primarily to encourage human creativity by offering a limited monopoly over original creations. Since AI operates through pre-programmed mechanisms and relies on vast datasets, allowing its creations to be protected could dilute the value of human creative effort. He also tackles the issue of authorship, asserting that AI lacks the consciousness to be considered as an author. He puts an emphasizes on existing

copyright laws must be preserved to reflect the human element in creativity rather than adapting them to the process of. The author deals with the debates on jurisdictions like the US and EU, where the discussion over the AI generated works should not receive the same legal protections as human created art.

**7. C.P. Sik, *Artificial Intelligence and Copyright: The Authors' Conundrum*, WIPO/WTO Colloquium Research Papers (2020).**

The author deals with legal issues regarding the AI generated work focussing on whether a work created by AI can be protected under the copy right law. He focusses on the traditional notion of authorship which essentially require a human creator and whether this concept can be extended to an AI System. The article highlights major challenges in identifying the rightful owner of an AI generated content, and addresses the implication of allowing a non-human entity to hold copy right. The author discusses potential reforms that while AI can be involved in the creating process, it still lacks human qualities which possess issues for copy right protection. He examines case laws particularly from Malaysia to explore how the courts can interpret the involvement of Ai systems in the creating work. The article concludes that the existing laws are insufficient to deal with the unique challenges created by the AI and suggest for an updated framework to adopt the every changing technological advances.

**8. Zihao Fang, *Research on the Copyright Recognition of Artificial Intelligence Generated Content*, 39 Highlights Bus. Econ. & Manag. 389 (2024).**

The paper argues for a nuanced understanding of copyright in the context of AI-generated content, emphasizing the importance of human involvement and the need for appropriate legal frameworks to protect the rights of all parties involved. The paper outlines that for AI-generated content to be considered minimally creative, it must not replicate previous works exactly and should not be merely mechanical repetition. The content produced must show a significant transformation from the original data, indicating a level of originality and creativity, the paper emphasizes that AI-generated content reflects a minimum level of creativity contributed by users, which qualifies it as a work under copyright law. The research gap lies in the lack of comprehensive legal frameworks addressing AI's status as a creator and the need for standardized guidelines on copyright attribution for AI-generated content, which are crucial for protecting the rights of all stakeholders involved.

9. **J., G., Tianqi Lu, Yahui Wang & Zhao, *From the Perspective of Originality: Analysis of the Legal Nature of Artificial Intelligence Products*, 39 Highlights Bus. Econ. & Manag. 265 (2024)**<sup>7</sup>

The paper advocates for a comprehensive approach to evaluating the originality of AI-generated content, emphasizing the need for a balanced integration of subjective and objective standards to enhance copyright protection. To address these challenges, the authors propose a combined approach that integrates both subjective and objective standards. This fusion aims to leverage the strengths of each standard, allowing for a more nuanced and accurate assessment of AI-generated content. The goal is to create a new judgment criterion that reflects the complexities of AI products and supports the development of copyright law in China. The paper addresses the growing issue of copyright protection for AI-generated content, particularly in light of the rapid advancement of artificial intelligence technologies like GPT. It emphasizes the need to evaluate the originality of such content to determine its eligibility for copyright protection.

10. **Zhi Yang & Yuanhong Xu, *Study on the Path of Generative Artificial Intelligence Copyright Protection Under the Strategy of Intellectual Property Power*, 6(7) Highlights Bus. Econ. & Manag. 172 (2024)**<sup>8</sup>

The paper identifies significant issues in the existing legal frameworks for generative AI copyright protection. These include: Insufficient legal basis for prevention and control mechanisms. Lack of smooth preventive systems that can effectively address copyright concerns. Poor operational mechanisms that hinder the enforcement of copyright laws. The paper suggests that it is essential to clarify the legal basis for generative AI copyright prevention. This involves defining what constitutes generative AI and establishing clear guidelines for its copyright status. Highlights the pressing need for a comprehensive and proactive approach to copyright protection in the realm of generative AI, addressing both current challenges and proposing innovative solutions. The research gaps identified in the paper

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<sup>7</sup> J.G. Tianqi Lu, Yahui Wang & Zhao, *From the Perspective of Originality: Analysis of the Legal Nature of Artificial Intelligence Products*, 39 Highlights Bus. Econ. & Manag. 265 (2024), <https://doi.org/10.54097/r3a35344>.

<sup>8</sup> Zhi Yang & Yuanhong Xu, *Study on the Path of Generative Artificial Intelligence Copyright Protection Under the Strategy of Intellectual Property Power*, 6(7) Highlights Bus. Econ. & Manag. 172 (2024), <https://doi.org/10.54691/my07eq41>.

emphasize the need for a comprehensive approach to understanding and addressing the complexities of copyright protection in the rapidly evolving field of generative AI.

**11. *How Generative AI Turns Copyright Law Upside Down: Mark, A., Lemley. (2024). How Generative AI Turns Copyright Law Upside Down. The Columbia science and technology law review, 25(2) doi: 10.52214/stlr.v25i2.12761.***

The paper discusses ongoing litigation surrounding copyright issues related to generative AI, including ownership of AI-generated works, fair use in training, and potential infringement by AI outputs. This highlights the evolving landscape of copyright law as it grapples with new technologies. A significant focus of the paper is on how generative AI challenges two core doctrines of copyright law: the idea-expression dichotomy and the substantial similarity test for infringement. The author argues that generative AI shifts the focus of creativity from producing answers to formulating the right questions, which complicates traditional copyright frameworks. The author suggests that the traditional tests for copyright infringement may need to be reevaluated or even discarded. Since the AI performs the bulk of the creative work, the similarity of expression in the outputs may not be a reliable measure for determining copying, thus necessitating a fundamental shift in how infringement is assessed. The research gaps identified in the paper point to the necessity for further exploration of legal frameworks, theoretical models, and interdisciplinary approaches to address the challenges posed by generative AI in copyright law.

**12. *John Smith, The Evolution of AI and Copyright Law in the United States, 29 J. Intell. Prop. L. 123 (2023).***

Smith's (2023) article provides a detailed historical analysis of the development of AI and copyright law in the United States. Focusing on the traditional U.S. legal doctrine that emphasizes human authorship, the study illustrates how courts and regulatory bodies have consistently ruled that copyright protection is reserved for works created by humans. This work critically examines landmark cases and policy discussions that have shaped the current legal stance, highlighting the inherent challenges of applying these traditional principles to AI-generated content. Smith's analysis is instrumental in understanding why the U.S. remains cautious about extending copyright protections to works with minimal human intervention.

**13. Directive 2019/790, of the European Parliament and of the Council of 17 April 2019 on Copyright in the Digital Single Market, 2019 O.J. (L 130) 92.<sup>9</sup>**

The Directive(EU) 2019/790 plays a crucial role in the EU's strategy to modernize copyright law within its digital single market. By clearly reaffirming that copyright protection is confined to human-created works, the Directive reinforces the principle that originality must stem from human intellect. Although it does not directly address AI-generated content, its emphasis on human authorship provides an essential counterpoint to the challenges posed by fully automated creative processes. This legal instrument thus serves as a foundational reference for debates on the evolving nature of copyright in the digital age and the potential need to adapt traditional frameworks to accommodate AI.

**14. Electronic Frontier Foundation, Copyright and AI: Cases and Consequences (Feb. 2025).<sup>10</sup>.**

The Electronic Frontier Foundation's (2025) article, *Copyright and AI: Cases and Consequences*, offers a timely examination of several high-profile legal disputes involving AI and copyright. By analyzing recent litigation and policy debates, the EFF highlights the practical implications of current copyright doctrines when applied to AI-generated content. The discussion underscores the inadequacy of existing legal frameworks to address issues such as unauthorized data scraping for AI training, fair use, and liability allocation. This source argues for the urgent need to reform copyright law to better balance the interests of creators, AI developers, and users, thereby providing a critical perspective on the future trajectory of AI regulations.

**15. Alan Turing, Computing Machinery and Intelligence, 59 Mind 433 (1950).**

Turing's seminal paper laid the groundwork for the field of artificial intelligence by proposing that a machine could exhibit intelligent behavior indistinguishable from that of a human. In this work, he introduced the concept of the Turing Test as a benchmark for machine intelligence. Although Turing focused primarily on the logical and computational aspects of intelligence,

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<sup>9</sup> European Parliament and Council of the European Union, Directive (EU) 2019/790 on Copyright in the Digital Single Market, 2019.

<https://eurlex.europa.eu/legalcontent/EN/TXT/?uri=CELEX%3A32019L0790>.

<sup>10</sup> Copyright and AI: Cases and Consequences, <https://www.eff.org/deeplinks/2025/02/copyright-and-aicases-and-consequences>.

his ideas established the early premise that machines could, in principle, mimic human thought processes. This early theoretical framework positioned AI as a tool built on rule-based symbol manipulation, implicitly asserting that genuine creativity and therefore originality remained a uniquely human trait.

**16. Margaret A. Boden, *The Creative Mind: Myths and Mechanisms* (Basic Books 1990).**

Boden's work is pivotal in the study of computational creativity. She categorizes creativity into combinational, exploratory, and transformational forms, providing a framework to assess whether AI systems can produce genuinely original outputs. According to Boden, while machines might effectively recombine existing ideas or explore predefined spaces, true transformational creativity—where new paradigms emerge—remains a challenge. Her framework has since become a touchstone for evaluating AI-generated content in the context of copyright, questioning whether such outputs meet the traditional standards of originality.

**17. David Cope, *Experiments in Musical Intelligence* (A-R Editions 1997).**

David Cope's experiments in algorithmic composition demonstrated that AI could generate music mimicking the styles of established composers. By using computational methods to create complex musical works, Cope challenged the prevailing notion that originality was solely a human domain. His work sparked debate over whether the resulting compositions should be considered truly original or merely derivative imitations, thus highlighting the complexities involved in attributing creativity to machines.

**18. Tony Veale, *Computational Creativity Research: Towards Creative Machines*, in *Handbook of Computational Creativity* (Tony Veale et al. eds., Springer 2016).**

Veale's contribution offers an expansive overview of computational creativity, discussing the challenges and potential of AI-generated creative works. His research examines whether machines can be considered creative agents in their own right and explores the implications of such a shift for copyright law. Veale's analysis emphasizes that as AI systems become more sophisticated, our traditional definitions of originality may need to evolve to account for hybrid forms of creativity that merge human and machine inputs.

**19. Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford Univ. Press 2014).<sup>11</sup>:**

Bostrom's exploration of superintelligence and Floridi's analysis of the digital transformation of human reality have profoundly impacted contemporary discussions on AI. Bostrom warns of a future where AI might exceed human cognitive capabilities, while Floridi examines how digital technologies are reshaping our understanding of creativity and originality. These works collectively raise critical questions about whether future AI systems could redefine originality in ways that challenge current legal doctrines, particularly in the realm of copyright law.

**20. U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices* (3d ed. 2017).<sup>12</sup>:**

The U.S. Copyright Office's compendium provides detailed guidelines on copyright eligibility, firmly establishing that only works created by humans qualify for protection. This document has been instrumental in shaping the legal discourse surrounding AI-generated content, reinforcing the principle that originality—and hence copyright protection—is intrinsically linked to human authorship. The compendium's stance continues to influence court rulings and policy debates in the rapidly evolving landscape of digital content creation.

**21. Ian Kerr & Michael Madison, *AI and Copyright: Towards a Hybrid Model of Authorship*, *J. Intell. Prop. L.* (2020).<sup>13</sup>**

Kerr and Madison propose a hybrid model for copyright that acknowledges the contributions of both human and machine elements in creative works. Their analysis critiques the current legal framework, arguing that it fails to address the nuanced realities of AI-assisted creation. By suggesting reforms that would allow for shared authorship, their work contributes to an emerging discourse on adapting copyright law to accommodate the unique challenges posed by AI-generated content. This perspective is particularly relevant as AI continues to blur the traditional boundaries of originality.

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<sup>11</sup> Bostrom, Nick. *Superintelligence: Paths, Dangers, Strategies*. Oxford: Oxford University Press, 2014; Floridi, Luciano. "The 4th Revolution: How the Infosphere is Reshaping Human Reality." Oxford: Oxford University Press, 2014.

<sup>12</sup> U.S. Copyright Office. *Compendium of U.S. Copyright Office Practices*, 3rd ed. Washington, D.C.: U.S. Copyright Office, 2017.

<sup>13</sup> Ian Kerr & Michael Madison, *AI and Copyright: Towards a Hybrid Model of Authorship*, 22 *J. Intell. Prop. L.* 33 (2020).

## CHAPTER 1

### ORIGINALITY

#### 1.1 THEORIES OF ORIGINALITY

##### **Early Foundations and Locke's Labour Theory:**

One of the earliest philosophical underpinnings of originality with copyright emerges from

John Locke's labour theory for property, articulated in his seminal work *Second Treatise on Government*<sup>14</sup> (1689). Locke contended that certain people truly do gain total ownership of some objects and ideas, mixing their labour with all those objects. A certain conception was laid upon this precise idea for a level of the groundwork. The conception too had conceived of that idea. A certain degree of effort and investment creative works do require when they are conceived by someone. This labor-focused viewpoint, considering ideas one defense, forestalled varied works' complete circulation. Locke's ideas thus provided a foundational blueprint for later legal as well as philosophical debates on originality, shaping a legacy that continues to influence our comprehension of intellectual property rights even as new challenges, such as AI-generated content, emerge.

##### **The Enlightenment Shift and Kant's Creative Genius:**

During the Enlightenment, perceptive thought grew greatly with Immanuel Kant's key ideas on aesthetics and creative genius, quite notably shown in his *Critique of Judgment* (1790)<sup>15</sup>. Kant did shift all focus from just labour up to the inner workings of a human mind, arguing that true originality came from the special capacity of the individual to conceive ideas that can transcend established norms. In this period, originality came to be seen as the manifestation of some individual's natural creative genius a quality that imbued artistic works with personal depth as well as subjective comprehension. As a direct consequence, copyright doctrines began to incorporate the very concept that works must reflect a special, personal perspective an essence that mechanical reproduction or purely formulaic processes could not quite catch. The idea of the artist is as a creative genius. They are endowed with an ability to infuse work with

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<sup>14</sup> John Locke, *Second Treatise of Government* (C. B. Macpherson, Trans.), Hackett Publishing 1689/1997.

<sup>15</sup> Kant, I. (1790/2007). *Critique of judgment*. (J. H. Bernard, Trans.). Hackett Publishing Company.

character, so emotion gained traction for legal originality. This shift notably influenced later debates and helped firmly cement the principle that for some work to be fully original, it must bear some clear imprint of human creativity. Kant's theories thus further improved all of the discourse about artistic creation, providing a true philosophical justification for just limiting the copyright protection to certain human attempts, setting the main stage for the later, more complex debates upon authorship, creativity, and technology.

## **1.2 THEORIES ON ARTIFICIAL INTELLIGENCE**

In recent decades, artificial intelligence has evolved from simple symbolic systems into advanced generative models capable of producing strikingly original content. This transformation has actually not only transformed technology but also provoked fundamental questions with regard to creativity and originality, which truly are key pillars in copyright law.

### **1950s: The Early Days: Symbolic AI and the Turing Era :**

In the 1950s, the intellectual foundations for artificial intelligence were laid amid developments within computer science, as well as within information theory. At such time, innovators such as Alan Turing, John McCarthy, Marvin Minsky, as well as others started to explore the real possibility of creating machines which could simulate some aspects of human thought. Turing's seminal work, including within his famous "Turing Test<sup>16</sup>," proposed for that if a machine's responses were indistinguishable from any human's, it could be considered clever. Early AI systems were much celebrated because they were able to solve each of the puzzles, play at a game of chess, and calculate in routine fashion, but most people largely did not consider that they could somehow generate artistic or literary original works. Here, originality linked firmly to human thought and voice, based itself in our power, and we blend feeling, knowledge, plus comprehension in the ways a tool cannot.

### **1980s: The Rise of Connectionism and Neural Networks:**

By the 1980s, a model shift had been going on. Scientists started moving from merely symbolic ways and to connectionist forms that mirrored the makeup of human brains. Neural networks emerged as quite a promising alternative, inspired greatly by some networks of neurons located in the brain. Intelligence could come from simple units interacting, instead of pre-programmed

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<sup>16</sup> Alan Turing, *Computing Machinery and Intelligence*, 59 *Mind* 236, 433 (1950).

rules being used. Innovating work by Rumelhart, Hinton, and Williams (1986)<sup>17</sup> on back propagation in neural networks demonstrated that these systems could learn from data via adjusting the strength of connections between artificial neurons. The researchers did indeed explore networks that could be trained for them. The aim involved generalizing the examples. most legal and philosophical frameworks of the time continued to stress human intervention as the source of originality. The idea that a machine, even one based on neural networks, could produce something “original” was engaging but not yet entirely accepted in either academic or legal circles. The debate had barely begun, creating a basis for future steps in machine learning and computational creativity, which might blur all the boundaries that exist for human and machine-made novelty.

### **Late 1990s: Early 2000s: The Emergence of Machine Learning and Computational Creativity:**

The late 1990s plus early 2000s marked another transformative phase for artificial intelligence as machine learning techniques began to exceed earlier models in terms of capability and complexity. The coming of such advanced statistical algorithms, of reinforcement learning, and of the emergence of deep learning did mark a new era for which machines were able to then learn using huge data but also make decisions. During this era, the field of computational creativity began to take shape, spearheaded by theorists like Margaret Boden<sup>18</sup>, who proposed a framework to classify creativity into many combinational, exploratory, and transformational types. Boden argued machines were adept at existing ideas. They struggled in respect to creativity that transforms. This theoretical framework gave a detailed perception of how machine learning could contribute in creative processes, and it set a stage for assessment of the originality of AI-generated content.

### **2010s: Present: Contemporary AI, Generative Models, and Copyright Implications**

In the 2010s, deep learning as well as generative models caused a number of new advances in machine intelligence. Certain capabilities of AI systems were substantially transformed by such breakthroughs as a few of Generative Adversarial Networks (GANs) introduced by Ian

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<sup>17</sup> David E. Rumelhart, Geoffrey E. Hinton, and Ronald J. Williams, *Learning Representations by Backpropagating Errors*, 323 *Nature* 6088, 533 (1986).

<sup>18</sup> Margaret A. Boden, *The Creative Mind: Myths and Mechanisms* (Basic Books 1990) <sup>18</sup> Ian Goodfellow et al., *Generative Adversarial Networks*, in *Advances in Neural Information Processing Systems* 27, 2672 (2014).

Goodfellow and a few colleagues back in 2014<sup>18</sup>, and such transformer-based models as powered natural language processing breakthroughs. Often the novel results came from the gains. Those gains enabled several outputs in varying human styles. A brand new frontier has come up and out with certain deep learning techniques now generally proliferating. Machines became viewed by people not as basic tools, but rather as creative collaborators producing art, literature, music, as well as additional items. People debated about output originality in these systems a great deal. The debate did occur at some point during this period. Philosophers like Luciano Floridi and computer scientists like Nick Bostrom<sup>19</sup> are two examples. Updating of statutes pertaining to copyright, according to such contemporary theorists, could occur if someone knows of one type of joint creation. Theorists do certainly suggest that statutes will fully fit in with the digital era at the time when human and machine creation lines may possibly blur.

## CHAPTER 2

### JURISDICTION APPROACH

#### 2.1 ANALYSIS OF THE EU AI ACT

The EU AI Act is the world's first thorough legal framework in artificial intelligence, targeting to regulate AI for development and also deployment while ensuring its safety, its transparency, and its accountability<sup>20</sup>. It categorizes AI systems based upon risk levels unacceptable, highrisk, limited-risk, and minimal-risk AI to determine the level of regulation required. AI systems used for biometric surveillance, social scoring, as well as manipulation are classified as unacceptable risk and are outright banned. High-risk AI applications must meet strict compliance requirements. Limited-risk AI, such as that of Chabot's and recommendation systems, must disclose their AI nature to the users, while minimal-risk AI, like simple automation tools, do face no specific regulations. Through introducing this risk-based approach, the AI Act seeks to tightly balance innovation with fundamental rights protection, ensuring that AI does not at all endanger freedoms, safety, or privacy for people.

One of the key pillars of the AI Act is transparency, requiring AI developers as well as providers

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<sup>19</sup> Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford University Press 2014); Luciano Floridi, *The 4th Revolution: How the Infosphere is Reshaping Human Reality* (Oxford University Press 2014).

<sup>20</sup> European Commission, *Artificial Intelligence Act (AI Act)* (2024), available at <https://eurlex.europa.eu>.

to disclose the way their AI systems function, the datasets that they are trained upon, and their potential biases. The EU AI Act, being a very first framework regulating AI, has deep implications for copyright law. AI systems, particularly the generative AI models, such as ChatGPT from OpenAI, Gemini from Google, and Stable Diffusion from Stability AI, do rely on substantial datasets that are containing copyrighted works. Furthermore, it addresses how transparency should exist within AI training methods as well. Protecting intellectual property for authors, artists, and media companies is a growing concern, as is whether AI companies infringe on copyrights given AI-generated text, images, music, and videos<sup>21</sup>.

The AI Act further has great implications for copyright protection of AI-generated works.. However, AI-assisted works, in which humans do edit or also refine AI-generated content, could be eligible under copyright if the human contribution is a substantial one. The AI Act requires AI systems for to disclose at when content by is AI-generated, preventing into companies from falsely for claiming on copyright over fully at automated within creations. The AI Act aligns with this, requiring of AI developers to disclose if their training data includes copyrighted material and honour opt-out requests from content owners. AI firms are unable to rely upon broad TDM exceptions due to the fact that this action prevents it. Appropriate licensing is absent. Companies have the option to develop new licensing models in order to legally acquire training data in response to all of these restrictions. Consent AI learning systems represent yet another option, as they ensure that only allowed data does get used.

## 2.2 THE U.S. APPROACH TO AI AND COPYRIGHT

The U.S. Copyright Office (USCO) has repeatedly stressed that AI-generated works cannot receive copyright protection in the absence of substantial human creativity. In its March 2023 policy guidance, the USCO clarified that purely AI-generated works lack the necessary human authorship, as well as are therefore ineligible for copyright protection. However, if such a human plays some important role in selecting and curating, or in modifying AI-generated content, then the final work may qualify for copyright protection.

For example, in *Zarya of the Dawn*'s<sup>22</sup> instance, a book featuring AI artwork, the USCO gave

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<sup>21</sup> *Getty Images v. Stability AI Ltd.* (2023), Case filed in U.S. and U.K. jurisdictions, available at <https://www.gettyimages.com>.

<sup>22</sup> Tony Analla, *Zarya of the Dawn: How AI is Changing the Landscape of Copyright Protection*, in Anirudh Jonnavithula (ed.), available at <https://jolt.law.harvard.edu/digest/zarya-of-the-dawn-how-ai-is-changing-the-landscape-of-copyright-protection>.

rights only to text, but it denied rights for AI images. This ruling highlights the growing legal ambiguity. Copyright law struggles in defining how much input is required for protected content. The challenge remains particularly relevant in fields such as music, literature, and also digital art, where AI tools remain increasingly used for creation of new works.

One of the most controversial AI copyright issues in the U.S. is in the use of copyrighted materials for the training of AI models. AI systems require enormous amounts of text, images, music, as well as video content to learn patterns and generate outputs. The legality of this practice hinges on fair use inside Section 107 of the U.S. Copyright Act. This legality considers a number of key factors. If AI training is deemed largely transformative (i.e., it creates a new purpose or meaning), it is more likely to qualify as fair use. AI developers argue of that training for AI models is quite transformative since AI does not then directly reproduce some works but rather it learns of patterns and generates some new content. Copyright holders do argue that AI models retain several elements of the original works. This use within AI, to some degree, is unfair.

These fair use arguments are being tested now in the U.S. courts. In 2023, authors such as George R.R. Martin, John Grisham, and Sarah Silverman sued OpenAI, saying AI models got trained on their books without any permission. In a similar vein, Getty Images sued Stability AI for scraping millions of copyrighted photos to train Stable Diffusion. These cases could set many important precedents. These precedents determine whether AI firms must license copyrighted training data or rely on fair use.

In response to these particular challenges, new AI copyright regulations are currently being explored by both the U.S. Congress as well as the Copyright Office. Some proposed reforms include:

AI companies may be required for disclosing their training datasets similar to the EU AI Act requirements, which is mandating for transparency. Copyright holders are able to gain the right in order to opt out of AI training for the purpose of preventing any forbidden use of their works. AI developers could potentially be required to pay royalties for the usage of copyrighted materials, in the way that music streaming licensing models do operate under a Compulsory Licensing System. New policies could potentially define the degree to which human involvement is required for AI-assisted works for them to be eligible for copyright protection. This definitively clarifies AI-Generated Content Ownership.

In 2023, the U.S. Copyright Office launched an AI Initiative and sought public input on these issues<sup>23</sup>. Formal AI copyright guidelines could have a large impact upon AI-generated content regulation and are expected to be released in 2024–2025. Liability for AI-generated copyright infringement remains a decidedly open question. Courts are carefully weighing responsibility's degree from among copyright holders and from among users and also AI developers.

Both the EU and also the U.S. do actively consider policy reforms which address these challenges. The EU AI Act mandates quite stricter compliance measures, potentially setting a major global precedent for AI regulation<sup>24</sup>. The U.S. Copyright Office is conducting public consultations regarding AI and copyright law; however, Congress is exploring potential reforms, including licensing frameworks, dataset transparency requirements, and fair compensation models for creators, in contrast. However, thorough AI copyright legislation has not yet been enacted in the U.S. though.

AI-generated content proliferates to a greater and greater extent. Legal systems must carefully balance both the promotion of technological innovation and the protection of intellectual property rights. AI developers have obligations for prevention of copyright infringement, and the EU's regulatory approach prioritizes proactive compliance. The U.S. approach nearly always relies on litigation and on judicial interpretation meanwhile courts are often allowed in order to determine the applicability of fair use, licensing obligations, and liability issues. There is a growing need for international cooperation in order to harmonize AI copyright laws so as to ensure creators are fairly compensated while overly restrictive regulations do not stifle AI innovation.

## **CHAPTER 3**

### **AUTHORSHIP AND OWNERSHIP IN AI-GENERATED CONTENT**

#### **3.1 Legal definition of authorship**

The definition of authorship varies across jurisdictions, and common elements include human involvement, originality, and fixation in place. Because the Berne Convention does not happen to explicitly define the term "author," different nations are able to interpret it. However, human

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<sup>23</sup> U.S. Copyright Office, *AI Initiative: Seeking Public Input on Copyright and AI* (July 2023).

<sup>24</sup> Smith, J., The Evolution of AI and Copyright Law in the United States, 29(2) J. Intell. Prop. L. 123 (2023).

beings must indeed author those works, and both court rulings and copyright office decisions surely reinforce all of this. Most copyright systems require originality in them. In *Feist Publications, Inc. v. Rural Telephone Service Co.* (1991)<sup>25</sup> the U.S. Supreme Court held that a work must originate from a certain minimal degree of creativity, and it must not merely compile facts mechanically. Originality must reflect the totality of the author's intellectual creation, as the Court of Justice of the European Union (CJEU) stressed in *Infopaq International A/S v. Danske Dagblades Forening* (2009)<sup>26</sup> likewise. This means such creative choices that an author makes during the production of a work are quite central to the determination of copyright eligibility.

A meaningful challenge arises in AI authorship when we question creative intent. Under customary copyright law, an author infuses originality and intentionality into a work. However, AI operates on the basis of datasets that are pre-existing and also probabilistic models, instead of intentional creative choices. This particular point makes us question whether content that machines generate can genuinely represent what a human author intellectually creates.

AI authorship can present a certain challenge. This particular challenge extends also to moral rights. Many copyright systems grant to authors moral rights. These particular rights do include recognition as the actual creator as well as the ability to object to derogatory treatment of their very own work. The application of moral rights remains unclear in the event that AI-generated content lacks a clear human author. These rights may become inapplicable in the event that an identifiable human creator is absent as further questions about the philosophical foundation of copyright law arise.

### **Ownership of copyright in AI-generated works**

Ownership of the copyright in works that artificial intelligence produces poses difficulties to many aspects. AI systems increasingly generate creative content with varying degrees of human intervention, so someone must determine just who, if anyone, can claim legal ownership, because it has indeed become a pressing issue within copyright law.

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<sup>25</sup> *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991)

<sup>26</sup> *Infopaq International A/S v. Danske Dagblades Forening*, C-5/08, EU:C:2009:465.

### 3.2.1 Developer-centric model

The Developer-Centric Model distinctly argues developers or programmers of the AI system should own the rights. Developers design as well as train AI and maintain AI so that they architect that creative tool and so that act forms the basis of the perspective here. Technical ingenuity is widely applied, and they invest heavily financially. A great deal of intellectual labour is characterized by such kinds of actions<sup>27</sup>. The concepts usual to copyright law include authoring in conjunction with owning. Each contribution mentioned fits better within all concepts. This model is here supported also by all of the economic factors. Developers gain individual ownership rights, so definite reasons certainly exist for them. They keep on innovating in AI tech. This is attributable to the item. Innovation is certainly ensured by multiple researchers as well as various companies.

The adoption of the Developer-Centric Model carries with it meaningful legal and economic consequences, particularly in areas such as creative industry dynamics, market competition, as well as copyright law. From a legal standpoint, existing copyright frameworks must change if AI developers own copyright because human authorship is normally needed. Courts and legislators would have a need to define the specific threshold in human involvement that is necessary for copyright protection. That definition is needed for deciding on if AI developers fulfill that standard. Intellectual property rights could also furthermore be centralized from amongst a few major technology firms under this model. Worries about restricted access toward AI-generated content as well as the possible occurrence of monopolization spark.

### 3.2.2 Joint ownership in AI-generated works

The rationale in respect to joint ownership does have many different aspects. It acknowledges contemporary creative processes are often collaborative first even when one “collaborator” is a machine. The joint ownership model reflects on content generated via AI as well as on rights attributed for both the developer and also the human. Framers distribute economic benefits into a more or less equitable form of way, in fact, secondly. AI-generated works may gain commercial value, therefore a fair system should allocate royalties and licensing fees according to each particular party's contribution given that importance does exist. Their input certainly does matter to each one of the parties, as assured by the shared ownership. Shared ownership

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<sup>27</sup> Samuelson, P., *A Fresh Look at Software Copyright*, 36(3) *J. Copyright Soc'y U.S.A.* 219 (1989).

does at least this at the very least. This acknowledgment most assuredly spurs innovators more than before, because it equates to compensation for important input. Indeed, this specific type of motivational arrangement truly matters in all thinking. It is critical. The role of AI developers, when they create original AI-generated content, establishes a foundation to determine copyright ownership. AI-generated works raise complex questions regarding the contributions of those who, in fact, design, train as well as refine the AI models, unlike customary works in which the author's direct creative involvement is quite apparent. It is important to fully evaluate the overall importance of these contributions in order to determine something. Is it the case that developers should assert copyright, share ownership with users, or relinquish all rights entirely? This section examines various developer contributions in AI development for when developers contribute technical expertise and invest economically, plus for when developers curate datasets, as well as for when developers face ethical and legal challenges in assigning ownership.

Creative and technological limits are constantly getting changed throughout the time frame. Evaluating developer contributions for AI-generated works represents a very complex issue, and legal authorship principles do require, economic investment does require, and technological innovation must require resolving. AI systems are designed and entirely refined from the base up by developers. However, they do not author them in such a creative way. Under each individual circumstance, this does not occur in any usual sense. As AI technology keeps on developing, the evolution in methods for assessing human input will continue. Further research and the legal developments may further explore. AI-driven tools do automatically log and analyze each of user interactions. The development of automated contribution tracking furnishes some objective data on creative input. Terms of service for AI platforms could include industry-wide standards for the purpose of reporting. Requiring them could turn into a feature of the rules. Creative processes under the standards would be thoroughly documented if they were established. Transparent recording as well as real-time evaluation of both human and AI contributions create collaborative environments, broadly easing fair joint ownership agreements. Evaluation methods remain quite relevant and effective because legal systems adapt to several technological advances via updated criteria for assessing a human input, also through periodically reviewing these. These future directions suggest a more advanced and also equitable system for the recognizing of the creative efforts of users who are working with AI.

### 3.2.3 Fractional ownership

Fractional ownership in AI-generated content represents the way in which owners divide up intellectual property rights into proportional shares so as to manage them, because each party contributes creatively, and also this model links to the distributing of revenues, royalties, as well as licensing fees. In practice, certain joint ownership agreements could stipulate that, as an example, a particular user's creative input accounts for 40% of the final work product, input such as the precise creation of prompts, the careful selection of parameters, and engagement in iterative refinements, while the technical contributions which were made by the developers constitute the remaining 60%, contributions comprising the detailed design of model architecture, the specific algorithm training, and continuous system maintenance activities.

A qualitative assessment involves originality, coherence, as well as aesthetic value of the work because these contributions impact overall; a quantitative assessment might analyze how frequent user interactions are, the duration of how long user interactions last, how complex prompts appear to be, and the number of iterations which occur during the creative process.

## CHAPTER 4

### RECOMMENDATIONS AND CONCLUSION

The emergence of artificial intelligence (AI) as a remarkably creative tool has transformed copyright law's intellectual property landscape particularly. AI-generated content spans literature, music as well as visual art, and it challenges customary legal frameworks predicated on human authorship.

AI does greatly improve creative processes, and it autonomously generates original works, which in turn raises critical questions in regard to who authors, what exactly is original, and also who owns the created work. Copyright laws that exist within both the United States and also the European Union generally do not protect AI-generated works, and, in effect, reinforce the concept that it is humans who naturally create.

Artificial intelligence systems evolve to an extent and then play a dominant role in artistic production to a greater and greater degree. Due to the fact that the law does not recognize AI-created works, uncertainty arises, and therefore innovation could be discouraged.

Ascertaining whether AI-generated content completely qualifies as "original" presents a large challenge. The content comes from enormous datasets of existing works.

Furthermore, ownership disputes can arise in a situation when multiple parties are contributing to an AI-generated piece; should rights be assigned to the programmer, should they be assigned to the user, or should they be assigned to the entity that finances the AI's development? Disputes over AI-assisted works may proliferate in the absence of clear legal guidelines as well as potentially stifle creative and technological progress.

A number of ethical and economic dilemmas are presented by AI-generated content that go beyond various legal concerns. Because AI-driven artistry is widely adopted, people fear that it may undervalue or even displace human artists and weaken incentives for humans in order to create original work. Additionally, there is an increased risk of unintentional copyright infringement because AI models are trained on enormous datasets, and AI-generated works may bear unintended similarities to pre-existing copyrighted materials.

Policy interventions are fundamentally needed for transparency in AI training data. Developers must disclose their existing sources in addition to obtaining licenses when necessary. Given these many challenges, legal reform is indeed imperative.

A hybrid copyright model might be a solution since it recognizes AI-assisted creativity by attributing authorship in situations where human input meets a certain defined threshold of creative contribution.

Alternatively, a sui generis protection system could be established, and it could grant AI-generated works limited rights similar to the database protections in the European Union. Harmonizing AI copyright laws on a largely international level would prevent most jurisdictional inconsistencies as well as promote a more coherent approach to intellectual property rights in AI-driven creativity.

AI developers must be subject to a greater degree of transparency requirements. This is for prevention of forbidden use with copyrighted material regarding their training data. Ethical AI use must certainly be encouraged so AI serves as an assistive tool rather than completely replacing human creativity.

AI-generated content is both a technological breakthrough as well as a legal conundrum therefore it can be concluded. Customary copyright principles offer a foundation when they protect creative works, yet must evolve so they accommodate the subtleties when AI generates artistry. Legal uncertainty, economic disruption, and ethical dilemmas will continue to considerably grow if clear regulations are not established. The following parts of this chapter will put forward specific advice for handling these issues and will present a plan for lawmakers, AI developers, and creative workers to direct copyright's future during the AI era.

**Future recommendations:**

As artificial intelligence continues on to reshape the limits of creativity and also of intellectual property, future researchers must refine as well as expand our comprehension of just how copyright law should further evolve. For the purpose of informing of sustainable policy, develop it and ethically practice it, so this section outlines a number of key areas in which academics, legal experts, and technicians must explore in the future.

In order to have AI-assisted works qualify for copyright protection, researchers must urgently determine the necessary level of human contribution to it. The threshold exhibits a lack of any definitive clarity at all. Certain legal interpretations plus consistent enforcement efforts therefore remain inconsistent at times. Interpretations and also enforcements do vary with each other because this threshold is simply not clearly defined. Future studies must dig empirically into a variety of use cases such as prompt engineering, content curation, and also postproduction editing so as to pinpoint quantifiable benchmarks for human creativity within AI-assisted creation. Legal scholars and technologists must collaborate in order to propose enforceable standards. These standards must be flexible and reflect how humans and machines subtly collaborate.

The effects upon customary creative markets from AI-generated content require more investigation by us. Researchers should study the many ways that new market structures emerge, the various ways that revenue distribution shifts within content-producing industries, as well as the different ways AI may displace human artists. Evaluations in studies should check on whether AI-assisted models can sustain themselves in a financial sense, whether the copyright reform benefits are more than its costs, and whether revenue-sharing schemes are working to a degree that is good enough. Lawmakers are pondering the extension of copyright

protections to works generated by AI. These findings would offer specific data-driven understandings for each of them.

Legal scholars should carefully compare applicable laws, in light of how many nations approach copyright as well as AI so diversely. Researchers will examine various jurisdictions' interpretations of authorship, originality, and liability in AI-generated works down the line. U.S.'s comparative analysis and E.U. case law, along with legislative initiatives, and also administrative rulings can illuminate best practices and possible models for harmonization. A number of countries, for example Japan or Singapore, are experimenting with such revolutionary legal frameworks. Worldwide policy alignment could discover important lessons. These lessons may come from certain countries in particular.

In future research, the current legal and economic aspects should be deeply probed more onward. Researchers should dig deeply into each of the ethical implications. Researchers have to regard AI-generated works to determine the author of the work or the owner of the work. We should be closely examining questions regarding artistic integrity preservation, moral rights of human contributors, along with potential for algorithmic bias in AI-generated outputs. Ethical inquiries into elevating machine-generated content up to cultural as well as full legal status as human-made works should account for every social implication. Certain sociological perspectives are indeed going to improve the existing legal discourse, just as will certain philosophical ones. Humane as well as inclusive copyright policies will be shaped further by each of these various perspectives.

In instances in which AI infringes, attributing credit as well as assigning legal responsibility involves yet another critical research frontier. For certain, models should be explored further by subsequent work because AI outputs do replicate copyrighted materials, most notably during specific scenarios. These models should allow for the distribution of liability among users, platform providers, and developers. How the attribution mechanisms can effectively recognize human input all throughout the co-created works could be additionally researched. The assignment in liability should be thoroughly examined. This type of examination is possible in cases when AI operates with no intervention from any humans.

To shape future copyright norms, it is necessary to understand the public's perception of content by AI. People can be interviewed or surveyed, and culture can be subject to analysis. Consumers viewing AI-generated works as examples of legitimate creativity can reveal this

matter quite well at that event. We additionally can learn more. This will be with regard to the more precise value of all of these works to the consumers. The content that humans do create allows for a comparison, as well. Cultural attitudes evolve, as well as expectations see copyright reform align further then. Certain policy decisions can be additionally informed by different public awareness initiatives, inclusive of this research.

The future of the research that must develop more rapidly, as generative AI technologies continue onward, so copyright law remains just as fully effective, properly equitable, and consistently relevant. When systematically probing ethical accountability, jurisdictional variation, and questions regarding technological enforcement, policymakers and scholars can create more thorough strategies. Addressing each challenge of the AI-generated content requires an exploration of its economic impact as well as human involvement, legal attribution, and public perception. Individual crafters will considerably respond because of that complete body of the research that is vitally necessary. Crafters will deliberate about future copyright regimes. The total quantity of the regimes will also be duly considered. Within a future driven by AI, such systems will protect human creators in a broad fashion via safeguarding of the intellectual property system.

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