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“AI ASSISTED CREATIVE WORKS IN THE DIGITAL WORLD: RETHINKING COPY RIGHT LAWS”

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ABSTRACT

The advancements in AI technology has made it easier for individuals to utilize artistic AI to create images, music, and literature, deeply embedding it within their personal professions and hobbies. At the same time, this raises concerns about existing copyright laws focusing on the use of AI technology in creative processes. This research asserts that the form of creativity which merges the contribution of AI technology with human ingenuity should be protected under intellectual property rights, in which the human being is the sole originator of the idea.

This study balances traditional views with new realities and focuses on human originality regardless of the level of AI intervention to further devise strategies for detailing protected works. This paper focused, first, on contrived disparity in the dividing line issue of AI-assisted and AI created works of art, and then proposed existing criteria defining originality and authorship to evaluate U.S., Indian, and EU Copyright law. It designs the case law framework of oppositional proceedings on international borders as in *Thaler v. Perlmutter* and reviews respective national approaches.

In response to some concerns regarding AI supremacy and minimal human involvement, the research suggests a comprehensive legal reform which includes: the implementation of a Human Origination Test, sufficient human creative control, and AI credit disclosure. These reforms seek to ensure that legal protections are granted only to works created through human efforts.

As a final point, this paper argues that in order to allow dynamism in the digital landscape, while sustaining the principles of copyright law, it is necessary to recognize and protect human-originated creative works that AI technologies assist in completing.

I. Introduction

The extraordinary growth of artificial intelligence (AI) technologies such as the generative models, machine learning systems, and content-suggestion engines has helped humans in the creation of works of art, literature, and poetry, thus leading to the emergence of new frontiers for expression. The previously held beliefs regarding issues like intellectual property claims of AI's aid in the creation of 'works' now filed at the center of cognitive and legal discourses. Under the traditional formulation of copyright law, because creation is regarded as exclusively a human endeavor, there are difficulties associated with determining the authorship or originality of works created with the assistance of the composition system or intelligent systems accompanying a person (i.e., integration of human and machine capabilities).¹ Now the position of law is represented by decisions of the U.S. Copyright Office and *Thaler v. Perlmutter* where, in case of dispute, the ruling indicates a lack of consideration for anything other than a human-created work.² Same is true for the Indian law of copyright as provided under the Copyright Act of 1957, where focus on protection is restricted only to original, authored works of a human.³ The Act defines an author in its own words as a natural person who creates literary, dramatic, musical or artistic works. This kind of understanding, seemingly suiting the intentions of the legislature, stands the risk of underestimating the fundamentally changing situation in which AI stands as a mere tool — a camera, typewriter, paint brush — in the hands of a original source.⁴

This paper argues that AI-assisted creative works should be protected under Copyright Law provided that the essence of originality rests with the human author and the AI plays a subordinate role as a mere tool. Even when advanced technology is utilized, "originality" has to emanate from a human mind in terms of intellectual conception and personal creativity. Not awarding copyright in such situations defeats the justification of the copyright system, which aims at fostering human creativity and innovation.⁵ This paper seeks to establish the distinguishing features of AI-assisted and fully AI-generated works. It analyzes the legal concepts of originality and authorship in copyright law in the United States, India, and the European Union.⁶ Important judicial precedents such as *Thaler v. Perlmutter* and administrative precedents like *Zarya of the Dawn* are examined under the existing constraining frameworks to show the implications of the various interpretations of the evolving questions of AI-assisted creative works.⁷ The research also defends some important claims on the extreme blurring of the lines of authorship, possible copyright abuse, and the measuring of the human element in the work. To address the issue, the paper suggests a reform framework that revolves around the

imposition of a Human Origination Test and mandatory disclosure of AI participation regarding authorship to protect integrity while guaranteeing transparency and preserve the integrity of authorship.⁸

Ultimately, this research supports a balanced development of copyright law that respects the humanity of innovation and the use of AI as a shaper of creative output. Safeguarding human originality in AI-enabled works lies beyond legal obligation. It is necessary to ensure an authentic synergy between technology and creativity nurtured by an equitable legal framework.

II. Conceptual Framework: AI, Creativity, and Copyright

AI is often thought of as a game changer in relation to the creative sectors. However, analyzing its interaction with human creativity and copyright law requires a more profound mental separation of different types of AI involvement. Not all creative outputs involving AI are the same the legal frameworks need to appreciate these differentiations while determining the threshold of copyright protection.¹

2.1 Works Created With AI And Works Created by AI The difference that separates AI-assisted from AI-generated works is fundamental. Human creators employing AI as a tool to help them create or compose is termed as AI-assisted works. Here, it is the human creator who undertakes all creative efforts, including making major artistic choices: the decisions are capturing, conceptualization, themes, and elocution of the work. In these examples, AI is no different from a camera, brush, or computer program. AI does not supplant human intellectual input, but facilitates achieving pre-defined goals.²

On the contrary, works consisting of AI-generated content are predominantly produced by systems without significant human contribution or interaction at any step. Rather, the human's role is to offer prompts or outlines, and the AI completes the task, unrestricted and unaltered by human creative influence.³ These outputs pose far more intricate challenges of authorship and originality as they contest the notion of creation-centric authorship copyright law has

¹ Niklas Kühl and others, 'Artificial Intelligence or Machine Learning? Untangling Concepts and Terminology' (2022) 32(1) *Electronic Markets* 73

² Robert Denicola, 'Ex Machina: Copyright Protection for Computer-Generated Works' (2016) 69 *Rutgers UL Rev* 251

³ Zach Naqvi, 'Artificial Intelligence, Copyright, and Copyright Infringement' (2020) 24(1) *Marquette Intellectual Property Law Review* 25

always safeguarded. To appropriately broaden legal protection and restrictions “appropriately-aimed” to the methods of human innovation reserved for true human ingenuity gets stifled by works devoid of authentic human creativity.

2.2 The Importance of Originality in Copyright Law The essence of copyright law rests within originality. As a general rule, a work should be original in the sense that it has emanated from the author’s intellectual efforts, including judgment, skill, and/or labor. In most cases, making a work original does not require any innovative or brilliant ideas; it simply needs effort towards creation and some level of creativity, however minimal.⁴ For some jurisdictions such as the United States, originality is a constitutional prerequisite for any form of copyright protection. Also, emphasis on the work being an outcome of intellect and creativity is important, which is stated in the Indian Copyright Act. The European Union operates under the “author’s own intellectual creation” test, which focuses more on affirming that originality stems from choices based on creativity and human authorship.⁵ For cases where AI is included, the most important question becomes, does the end product embody any intellectual work of the human creator? If a human has control over the creative procedure and the AI enables output selection, customization, or modification into a human-designed structure, then there is no doubt the work will fulfill the originality criterion as a result.

2.3 The Role of Human Creativity in Works Using AI Technology Even when AI tools provide technical or generative assistance, something has to be created first by the author. As for AI-assisted works, creativity is present in the design and implementation steps from the human author, where they decide how to guide the AI, what aesthetic measures to apply, and how to narrate the piece. For example, an artist may utilize an AI program that generates numerous visual patterns, but only select those which resonate with their ideas. A writer may wish to prompt a language model to suggest several themes for a book, but they write, edit, and organize the entire book themselves. Both examples do not lack originality, for it is not found in the automation, but in the intellect and art of the person. Hence, the use of AI cannot be an excuse for claiming the work is no longer original as long as there is still a human being who has a decisive creative influence on the work.

⁴ Stef van Gompel and Erlend Lavik, ‘Quality, Merit, Aesthetics and Purpose: Copyright Protection of Works of Art and Art-Like Products under European Copyright Law’ (2013) 5(2) *JIPITEC* 116

⁵ Infopaq International A/S v Danske Dagblades Forening (C-5/08) [2009] ECR I-6569

2.4 Models on the Blended Human-AI Collaboration It is becoming more frequent to come across dynamic intertwining ex-creative processes, in which humans team up with AI systems. These processes demonstrate how AI can enhance imitative creativity without eliminating human inventive thought. People in hybrid models guide AI outputs, provide edits for the work-in-progress, incorporate personal stylistic flourishes, and make final curatorial decisions that embody the character of the custom work. All these types of interactions strengthen the argument for considering AI-assisted outputs under the algorithms as copyrightable works of authors for purposes of intellectual property law. Such collaboration requires the adoption of more flexible legal frameworks for the concept of authorship that acknowledge legal frameworks that appreciate human artistic initiative, intellectual handiwork, and authoritative control over the work.

III. Current Legal Landscape and Key Cases

The intersection of law and technology emerges and evolves with the question of copyright protection for AI-assisted creative works. Different jurisdictions' existing copyright frameworks stem from the belief that an act of creation is exclusive to a human. Because of that, legal systems have had difficulties accommodating the multifaceted challenges presented with AI integration in the creative process.⁶ This chapter looks into the system's particular aspects in the United States, India, and the European Union, and examines how selected case laws underscore the approaches developed by judicial and quasi-judicial institutions.

3.1 United States: Strict Human Authorship Requirement

In the U.S., the copyright system operates under the Copyright Act, which protects "original works of authorship".⁷ U.S. Copyright Office's unofficial policies have perpetually excluded, and continue to do so, any AI-generated work from qualification for copyright protection on the basis of authorship, which has to be human.

A noteworthy example demonstrating this position is *Thaler v. Perlmutter*. In this case, Stephen Thaler tried to file a copyright application for artwork produced by his AI system called the "Creativity Machine."⁸ The registration was rejected by The U.S. Copyright Office, a decision also supported by the District Court, which underlined the necessity of a human creator for copyright protection. The court decided that the "bedrock requirement" of authors for creation

⁶ Mark A Lemley, 'Machine Learning and the Law' (2019) 41(1) *Communications of the ACM* 46

⁷ Copyright Act 1976 (United States) 17 USC § 102.

⁸ *Thaler v Perlmutter* No 22-1564 (DDC 2023)

in American copyright law is still “fundamental” to human authorship. The copyright office has insisted AI elements in documents don’t disqualify them given a human drives the creativity, but a person being in control of AI does not preclude use of AI technology. This remains a borderline issue concerning what defines unacceptable independent creation versus acceptable human creativity. Supplemental assistance needs review on an individual basis.

3.2 India: Focus on Human Intellect Labor.

The Indian Copyright Act of 1957, as outlined and discussed above, also stresses the importance of an individual creator. An “author” according to the Act is a living individual who produces literary, dramatic, musical or artistic works.⁹ Indian legal scholarship has underlined the premise that the scope of copyright is limited to the outcomes of intellectual activity, including creation, which has to be performed by a natural person.

Indian courts have been silent on landmark cases involving works generated from the use of AI technologies. Nonetheless, there is a statutory framework which indicates that works which do not contain significant contribution of a human mind would be left unprotected. In contrast, if a person take on AI as only an additional or backup instrument while actively participating in the creative process, Indian copyright law would probably uphold the resulting product as copyrightable.

The absence of clear legislative provisions on creation with the help of existing technologies provides freedom of choice and indicates that the focus of dispute resolution in India on this particular subject will be determined by judicial practice.

3.3 European Union: The Standard of Intellectual Creation

The European Union has attempted to coordinate copyright law by relying on directives which formulate protection around “the author’s own intellectual creation.” This standard, originating from the *Infopaq International A/S v. Danske Dagblades Forening* case, pays more attention to the elements of personalization and the free creative choices of the author. The EU’s focus on intellectual creation is quite compatible with the advocacy for recognizing works of authorship that have AI assistance at the final stages of design and execution. In this sense, it can be argued that AI tools do not remove originality of a work as long as a human has exercised significant creative control through personal expression. No major European has adjudicated on AI-

⁹ The Copyright Act 1957 (India) s 2(d)

assisted works of authorship, but there are principles of law available. It is reasonable to argue that legal protection would be granted, considering the works are created with a significant degree of human guidance reflective of the author's contribution.

3.4 Summary of Important Case Studies

Thaler vs Perlmutter (USA) ¹⁰

This case remains important for the legal position surrounding AI and copyright. Thaler's applications to register a work which was created in totality by an AI system were rejected. The ruling in this case made it clear that copyright, in this case, is only afforded to the legal person or author. In any event, it left some scope for works that are made with human ingenuity and the help of Artificial Intelligence.

Zarya of the Dawn (USA) ¹¹

This is the case in which the US Copyright Office dealt with a graphic novel containing images that were created by AI. Although the Office denied protection for the images with AI, the copyright for the creative arrangement of the images into a story, as the human author had original claim, was protected. This ruling represents a middle ground between human creativity and automation, for the output of an automated process is not creativity.

International Changes. Other states have started to look at similar problems. The UK's Copyright, Designs and Patents Act has provisions for the protection of works created by computers, giving authorship to the person who "makes the arrangements."¹² Australia, on the other hand, is more restrictive lenient, only allowing human authors to claim copyright.

From these comparative observations, it can be concluded that despite the differences across jurisdictions, there is a common understanding that the human contribution, in whatever form, is fundamental to copyright protection, even with the use that AI systems implement.

IV. Argument: Why AI-Assisted Works Should Be Copyrightable

The incorporation of advanced technologies such as artificial intelligence into the creative practice amplifies the discourse around authorship and copyright law. Although several scholars hold the view that AI's engagement makes assigning credit to originality problematic, upon closer examination, it becomes clear that when AI is utilized as an instrument, a human

¹⁰ *Thaler v Perlmutter* No 22-1564 (DDC 2023)

¹¹ United States Copyright Office, 'Zarya of the Dawn Registration Decision' (2022)

¹² Copyright, Designs and Patents Act 1988 (United Kingdom) s 9(3).

being acts as the original source of expression.¹³ The position taken here is that works created with the help of AI should have copyright protection so long as the fundamental work is shaped by the thought processes, originality, and imagination of the human author.

4.1. Human Creativity as the Basis for Copyright Copyright law is concerned with safeguarding the creativity and originality of works. Copyright motivates further contributions to culture through exclusive rights to tangible works of originality.¹⁴ In this manner, the originality does not require exceptional ingenuity, but rather that the work was created independently and has some degree of originality.¹⁵ When an AI application is employed during the creative process, the most critical AI-enhanced features are integrated at the design stage where the intelligence is based on human input. The decisions made by the creator include content, form, expression, structure, and to a large extent, the AI's outputs. Therefore, even where AI provided some mechanical assistance in forming raw materials, the labor of the intellect and therefore deserves copyright protection.

4.2 AI as a Creative Instrument Similar to Modern Tools Used in the creative process, artificial intelligence should be treated like any other tools or modern instruments used by an artist, writer, or musician.¹⁶ New inventions throughout time like photography, computer graphic design, and musical synthesizers did expand human ingenuity but did not eliminate authorship claims. The invention of the camera did not reduce the originality of capturing a photograph, and neither did the invention of word processors lessen the creativity behind writing novels. The same reasoning can be applied to the use of AI programs capable of creating drafts for documents, designs, or even musical compositions.¹⁷ The application of AI does not eliminate creativity; rather, it enhances the capacity to seek expression in new ways. The most important aspect is the degree to which a human factors into, controls, and expresses themselves within the work's final product. If the principal author who comes up with an idea, plans, instructs, and polishes the work is given the authorship, then in that case, the work stands in need of copyright protection.

¹³ Zach Naqvi, 'Artificial Intelligence, Copyright, and Copyright Infringement' (2020) 24(1) *Marquette Intellectual Property Law Review* 25.

¹⁴ Robert Denicola, 'Ex Machina: Copyright Protection for Computer-Generated Works' (2016) 69 *Rutgers UL Rev* 251.

¹⁵ *Feist Publications, Inc v Rural Telephone Service Co*, 499 US 340 (1991).

¹⁶ Mark A Lemley, 'How Generative AI Turns Copyright Law Upside Down' (2024) 26(1) *Columbia Science & Technology Law Review* 1.

¹⁷ Niklas Kühl and others, 'Artificial Intelligence or Machine Learning? Untangling Concepts and Terminology' (2022) 32(1) *Electronic Markets* 73.

4.3 Practical Real World Examples The creative sectors showcase what are arguably the best uses of AI together with human imagination, creativity, and innovation proving that AI can effectively augment human creativity. Imagine an artist leveraging an AI program, such as MidJourney, which assists in creating numerous visuals.¹⁸ The artist cybernetically curates specific elements, changing them into a cohesive work of art. The AI only modifies aspects and offers basic assistance. Similarly, writers have begun taking advantage of AI language models to conduct some preliminary brainstorming. The artificially generated draft, however, will only contain the bones of a story. The intellectual work of constructing the plot, developing characters, maintaining coherence, and setting the prose falls to the writer. Composers also utilize AI for melody and harmony suggestions, but leave the arrangement and emotional intention in the final piece to be created by people. In each of these scenarios, human creators utilize judgment, originality, and aesthetic taste—distinct features protected through copyright law, to craft something new. The resulting creative expression, facilitated by AI, does not change the human origins that first conceived the idea.

4.4 International Best Practices Supporting Human-Centered Protection The world allows for the integration of new technologies while creating a security system for when tangible concepts like AI intertwine with human. For instance, in the UK, the 1988 Copyright, Designs, and Patents Act states a person taking responsibility for producing a computer-generated work is recognized as its author.

4.5 Maintaining the Incentive for Human Creativity Copyright law, in fact, is primarily about encouraging human creativity by granting authors exclusive rights. If works of human originality-i.e. AI assisted works- would not be protected, then such exclusion would hold disincentives against the use of innovative tools in creative processes. And such a situation would mean that the self-created penalty for adopting new technological tools hampers progress in both art and innovation.¹⁹ By extending coverage to AI-assisted works displaying a good dose of human creativity, therefore, the copyright system achieves its objective. It encourages creators to embrace technologically employed tools without the fear that something they conjure up might not take part in protection.

¹⁸ Theatre Deli, 'AI and Creativity Residency Program' (2023).

¹⁹ WIPO, 'Artificial Intelligence and Intellectual Property Policy Considerations' (2020).

V. Counters and Critical Analysis

Now, even if copyright protection for AI-assisted creative works sounds most convincing, one must also consider, critique, and really consider counterpoints. Some skeptics raised eyebrows against this idea, such as the claim that securing mechanical outputs through protections would somehow risk diluting the originality standard, go to the other end towards protectionism, and would complicate enforcement under copyright law. The following chapter discusses these counterarguments, along with reasoned responses, to show why careful legal standards in dealing with them are possible without damaging the objectives of copyright law.²⁰

5.1 Fear for the Dilution of the Originality Standard

The foremost issue with this is the recognition of AI-assisted works as copyrightable because that would lower the traditional requirement for originality. Critics would say that if AI contributed significantly to the formation of a work, attribution to a human author would violate the requirement that the work should be produced by the author's independent intellectual effort.²¹ However, this concern could be solved by stating that only works where the human creator exercised considerable creative control would be safe. The action of AI itself is not the key but whether the human made viable creative decisions so as to shape the final outcome. After a Human Origination Test, it would just be necessary for the courts to reply whether the originality stems genuinely from the human creator, thereby preserving the integrity of the originality standard.

5.2 Fear of Overprotection of Mechanically

Produced Works Another argument states that the granting of copyright protection to works aided by AI may lead to overprotection of products mostly mechanical and with only minimal human creative contribution.²² This could fill the copyright system with nonhuman-producing works, resulting in a devaluation of actually original works. A structured approach may help reduce this risk. It is mandatory that AI involvement be declared, and that contributions by humans also be documented; authorities may use this to evaluate what constitutes the extent of human creativity.²³ This, in turn, ensures that only those works truly bearing evidence of human intellectual labor are granted protection but prevents the unfair enrichment of an automatic

²⁰ Mark A Lemley and Bryan Casey, 'Fair Learning' (2020) 99 *Texas Law Review* 743.

²¹ *Feist Publications, Inc v Rural Telephone Service Co*, 499 US 340 (1991).

²² WIPO, 'Artificial Intelligence and Intellectual Property Policy Considerations' (2020).

²³ □ Alex Hristov, 'Authorship of Copyrightable Works in the Age of AI' (2017) SSRN Electronic Journal.

generation.

5.3 Dilemma of Human Contribution Assessment

The skeptics further contend that determining the degree of human involvement in AI-assisted works might prove burdensome and might cause some ambiguity and inconsistent legal results.²⁴ Unlike the traditional works such that the creative process is apparent with humans, works done using the AI usually require an elaborate form of interaction, both human and machine.

There is a point to this phrase, which is by no means insuperable. Courts and copyright offices have historically probed complex cases involving collaborative works, ghostwriting, and derivative creations involving authorship.²⁵ Such principles may well be valid in this area. In developing guidelines and best practices, requiring authors to explain their creative process and role of AI tools, legal systems can build open and fair standards for evaluating issues involved.

5.4 Moral Rights and Attribution: There is another important critique, involving the fear for moral rights, which would usually mean the right to have one's name attached to the work produced, and the right to the integrity of the work. The critics are worried that with AI playing a big role, there will be few meaningful moral rights protections since AI entities cannot have moral rights.²⁶

This concern of the critics serves to underscore the point that the only protection should be given to works authored and controlled by human beings. Only by seeing to it that the human creator of the work retains final responsibility for the arrangement of the material can the law maintain the coherence of moral rights. By recognizing AI as a mere tool, countries preserve the traditional moral rights framework compromising human dignity and creative expression.

5.5 Safeguarding Public Domain Values: Some argue that AI outputs should be released freely to the public domain to help the sharing of knowledge and innovation. Otherwise, private ownership of AI-enabled works could make it difficult to access culturally significant materials.²⁷

Although public domain values remain important, protection of AI-augmented works does not erode them. The doctrine of copyright, already encompassing the essential tradeoff between

²⁴ Zach Naqvi, 'Artificial Intelligence, Copyright, and Copyright Infringement' (2020) 24(1) *Marquette Intellectual Property Law Review* 25.

²⁵ Stef van Gompel and Erlend Lavik, 'Quality, Merit, Aesthetics and Purpose' (2013) 5(2) *JIPITEC* 116.

²⁶ Robert Denicola, 'Ex Machina: Copyright Protection for Computer-Generated Works' (2016) 69 *Rutgers UL Rev* 251.

²⁷ Niklas Kühl and others, 'Artificial Intelligence or Machine Learning? Untangling Concepts and Terminology' (2022) 32(1) *Electronic Markets* 73.

private rights and the public good, should not cause any further mischief by fair use, limited protection of duration, and promotion of transformative works. Striving to protect solely human creations will, in fine, rightly balance rewarding creativity with the broad access of knowledge.

VI. Copyright Reform Proposal

In addition to artificial intelligence, another reason to rethink copyright law is the evolution of a creative industry. The existing legal doctrines here considered were designed for works created entirely by human hands but are now becoming increasingly irrelevant in the dynamically evolving environment of artificial intelligence-driven creative processes. This chapter therefore proposes carefully structured and principled copyright reform to recognize and protect human-intervened AI-assisted works, without endangering the core principles of copyright law.²⁸

6.1 The Human Origination Test Should Be Adopted

The future copyright eligibility of works that will be subjected to these reforms for AI-assisted works must be based on assessing Human Origination Test. Theoretically, work under this test will be protectable if it will mostly be proved that the human author conceived and directed the pertinent creative choices, which have, in substantial part, determined the final output.²⁹ Merely operating the AI alone will not suffice, but, rather, the emphasis shall be on human intellectual involvement.

The Human Origination Test will serve well to accentuate human creativity from the copyright perspective. Moreover, it will offer a comprehensible and functional framework to both the judges and the regulators for establishing the boundary separating human creative works and those that are fundamentally machine-generated.

6.2 Substantial Human Control Requirement

In addition to the Human Origination Test, another factor that should serve as a complementary element to this reform is a Substantial Human Control Requirement. This requirement requires human control of and direction during the primary creative choices regarding the work's

²⁸ Mark A Lemley, 'How Generative AI Turns Copyright Law Upside Down' (2024) 26(1) *Columbia Science & Technology Law Review* 1.

²⁹ Robert Denicola, 'Ex Machina: Copyright Protection for Computer-Generated Works' (2016) 69 *Rutgers UL Rev* 251.

specific elements.³⁰ Such elements include theme, design, style, and arrangement. The human creator should at all times retain ultimate authority on the decision for directing the creative process and synthesis of AI output into an artistic whole.

This provision ensures the prevention of situations where works associate at the most superficial level with a human author while being in reality purely products of AI design. It thus emphasizes mostly human involvement, therefore rewarding human intellectual labour through copyright.

6.3 Mandatory AI Disclosure Obligations

In light of that reason, a disclosure obligation must be instated given the need for transparency in copyright claims where AI was involved. A mandatory disclosure obligation should be set to force the copyright applicants to declare which AI tools were used and to characterize the AI's involvement and how the human author has exercised creative control.³¹

The saying would allow copyright offices and potentially also the courts to know the scale of human originality. The same will lend the community assurance that there is an open framework documenting that difference between human creativity and machine assistance.

6.4 International Harmonization of Standards

Given the worldwide dimension of creative industries, international harmonization of standards for works generated by AI assistance is necessary. Although different jurisdictions may adopt contrasting approaches, there is a convergence of opinion that human intellectual input should remain central.³² International organizations, such as WIPO, could spearhead the formulation of model guidelines or treaties promoting standardization.

By reducing legal uncertainty for creators operating in multiple juridical territories and ensuring that human creativity enjoys consistent protection across the globe, international harmonization would serve to promote uniformity in treatment across jurisdictions.

6.5 Encouraging Best Practices for AI-Assisted Creativity

In addition to reforms in law, policymakers, and industry leaders must encourage leading best practices for the ethical and responsible use of AI in creative work. These best practices can include encouraging creators to keep records of the processes leading to their creations,

³⁰ Zach Naqvi, 'Artificial Intelligence, Copyright, and Copyright Infringement' (2020) 24(1) *Marquette Intellectual Property Law Review* 25.

³¹ Alex Hristov, 'Authorship of Copyrightable Works in the Age of AI' (2017) SSRN Electronic Journal.

³² WIPO, 'Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence' (2020).

conversely, they could encourage explicit authorship agreements in collaborative works, and ethical use of AI-generated material.³³

Such initiatives would nurture a culture of transparency, accountability, and respect for human creativity, thereby reinforcing the societal values attached to originality in artistic expression, even on the threshold of advancements.

VII. Conclusion and Future Directions

While the infusion of artificial intelligence into creative processes has blurred the boundaries of traditional notions of authorship and originality under copyright law, this research affirms that when an AI system is viewed solely as an instrument in the hands of a human operator, the activity of creativity, intellectual effort, and originality subsists entirely in human authorship. Therefore, to deny copyright protection to works produced with AI support further subverts the purpose underlying the very charter of copyright law, which is to encourage and reward human creativity.³⁴

To lend support to the argument, a detailed examination of the relevant legal standards of the United States, India, and the European Union has shown that though the prevailing systems afford weight to human authorship, they paradoxically hold no clear standards to assess AI-assisted works. The cases of *Thaler v. Perlmutter* and *Zarya of the Dawn* encapsulate both the challenges and opportunities in crafting a more nuanced and principled approach.³⁵

Key Findings of the Research

- AI can solely serve as instrument for humankind without losing the original shape of humanity itself³⁶
- There is currently no clear set of legal guidelines in copyright law for AI-assisted works.
- The authorship determination must center on human creativity and substantial control.³⁷

³³ Theatre Deli, 'AI and Creativity Residency Program' (2023).

³⁴ Mark A Lemley, 'Machine Learning and the Law' (2019) 41(1) *Communications of the ACM* 46

³⁵ Mark A Lemley, 'Machine Learning and the Law' (2019) 41(1) *Communications of the ACM* 46

³⁶ Niklas Kühl and others, 'Artificial Intelligence or Machine Learning? Untangling Concepts and Terminology' (2022) 32(1) *Electronic Markets* 73.

³⁷ Robert Denicola, 'Ex Machina: Copyright Protection for Computer-Generated Works' (2016) 69 *Rutgers UL Rev* 251.

- International practice (UK, EU) provide useful models where human intellectual heritage is emphasized.³⁸

Proposed Legal Reforms:

- Adoption of a Human Origination Test to determine whether the work originated with the human generator and is, therefore, directed by the human creator. Alex Hristov, 'Authorship of Copyrightable Works in the Age of AI' (2017) SSRN Electronic Journal.
- Imposition of a Substantial Human Control Requirement whereby essential creative decisions during the creation must be made by a human being.
- Mandatory AI Declaration by Copyright-Holders has followed through with the new requirements brought within registration of copyright.³⁹
- Another such avenue was the promotion of international harmonization furthered by model guidelines from global agencies such as WIPO.⁴⁰

Future research ought to look into:

- those aspects where increased legal innovation will be required; the meanings of AI-assisted works with respect to moral rights, in particular the rights of attribution⁴¹
- Integrity; how these fair use doctrines would apply to datasets training AI models and generative models; and the new legal frameworks meant to manage this increasingly complicated co-creation action with human and AI authorship.⁴²
- That there shall be human persons and machines in future creativity will be the harmonious working together of those two elements. Then, copyright law can be changed to consider that human originality in its connection with AI can be preserved to facilitate future culture via invention without abandoning the core principles governing the artistic and intellectual expressions.

³⁸ Directive 2001/29/EC of the European Parliament and of the Council [2001] OJ L 167/10; Copyright, Designs and Patents Act 1988 (United Kingdom) s 9(3).

³⁹ United States Copyright Office, 'Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence' (March 2023).

⁴⁰ WIPO, 'Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence' (2020).

⁴¹ Stef van Gompel and Erlend Lavik, 'Quality, Merit, Aesthetics and Purpose' (2013) 5(2) *JIPITEC* 116.

⁴² Mark A Lemley and Bryan Casey, 'Fair Learning' (2020) 99 *Texas Law Review* 743.