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Artificial Intelligence and IPR over its Artistic Creations

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ABSTRACT

The question of whether AI should be treated as a legal person and hold intellectual property rights (IPR) over its artistic creations is a complex and controversial issue. The rise of AI-generated art has led to a debate over who should own the rights to these works. While some argue that AI-generated works should be attributed to the creator of the AI, others believe that the AI itself should be recognized as the creator and hold IPR over its creations.

According to some, generative AI has an intellectual property problem, and granting legal personhood to AI could help address this issue by allowing AI to hold IPR over its creations. The current legal framework is not equipped to handle the unique challenges posed by AI-generated works.

According to some, it is argued that granting legal personhood to AI could have unintended consequences and lead to ethical dilemmas, and ownership of AI-generated works should be attributed to the user of the AI or the creator of the software used to generate the work. Granting legal personhood to AI could lead to a loss of accountability and responsibility for actions taken by machines. It is argued that granting legal personhood to AI could lead to a shift in power dynamics between humans and machines.

While some argue that granting legal personhood to AI could help address the challenges posed by AI-generated works, others believe that such an approach could lead to unintended consequences and ethical dilemmas. As we continue to explore this topic, it is important to consider all perspectives and ensure that any legal framework developed is fair and equitable for all parties involved.

I. INTRODUCTION

The question of whether AI should be treated as a legal person and hold intellectual property rights (IPR) over its artistic creations is a complex and controversial issue. The rise of AI-generated art has led to a debate over who should own the rights to these works. While some argue that AI-generated works should be attributed to the creator of the AI, others believe that the AI itself should be recognized as the creator and hold IPR over its creations.

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According to some, generative AI has an intellectual property problem, and granting legal personhood to AI could help address this issue by allowing AI to hold IPR over its creations.[2] The current legal framework is not equipped to handle the unique challenges posed by AI-generated works.[3]

According to some, it is argued that granting legal personhood to AI could have unintended consequences and lead to ethical dilemmas[4], and ownership of AI-generated works should be attributed to the user of the AI or the creator of the software used to generate the work.[5] Granting legal personhood to AI could lead to a loss of accountability and responsibility for actions taken by machines.[6] It is argued that granting legal personhood to AI could lead to a shift in power dynamics between humans and machines.[7]

While some argue that granting legal personhood to AI could help address the challenges posed by AI-generated works, others believe that such an approach could lead to unintended consequences and ethical dilemmas. As we continue to explore this topic, it is important to consider all perspectives and ensure that any legal framework developed is fair and equitable for all parties involved.

(A) Hypothesis

AI will become public domain and no one will own any rights to it if copyright protection is not provided.[8] Because the creations won't be protected in the public market, leaving machine-generated works in the public domain runs the danger of discouraging artists, investors, and innovators.[9] Thus, a balanced jurisprudence is required for AI-generated/created/implemented/assisted works.

(B) Research Questions

1. How should ownership of AI-generated work be defined in the context of intellectual property law?

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[2] Kretschmer M, 'Artificial Intelligence and Intellectual Property: Copyright and Patents—a Response by the CREATe Centre to the UK Intellectual Property Office's Open Consultation' (*Academic.oup.com*, 18 March 2022) <https://academic.oup.com/jiplp/article/17/3/321/6550465> accessed 24 October 2023

[3] *Id*

[4] Ahuja VK (*Ili Law Review winter issue*, 2020) <https://ili.ac.in/pdf/vka.pdf> accessed 26 October 2023

[5] *Id*

[6] Aplin T, 'Artificial Intelligence and Copyright Protection' (*SSRN*, 15 July 2019) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3419481> accessed 26 October 2023

[7] Mik E, 'AI as a Legal Person?' (*Oxford University Press*, February 2021) <https://academic.oup.com/book/39560/chapter-abstract/339436053?redirectedFrom=fulltext> accessed 20 October 2023

[8] White C and Matulionyte R, 'Artificial Intelligence Painting the Bigger Picture for Copyright Ownership' (*SSRN*, 12 December 2019) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3498673> accessed 29 October 2023

[9] *Id* 40

2. Should it be attributed to the creator of the AI, the user of the AI, or the AI itself?

(C) Scope and limitations

The paper aims to look who should be granted Intellectual Property Rights over AI-generated work. It also looks into what can be a valid balanced approach towards granting Intellectual Property Rights over such work, if any.

II. AI-GENERATED OR CREATED INVENTIONS

AI-generated or created innovations use an automated process that consists of an algorithm, the AI application, the database structure, the algorithm's training, and the process's result to construct an AI output autonomously or semi-autonomously with some human involvement. The historical and basic belief that patent laws and statutes were created to safeguard people and that giving artificial intelligence systems patent rights and protection will fundamentally alter the patent system is one that the European Union and others firmly uphold. They contend that before evaluating and awarding AI systems and computers lacking human judgement inventorship and patent ownership rights, there are significant and crucial conversations and assessments that are necessary due to the legal, regulatory, security, and ethical ramifications.[10]

Computer-generated art has gained significant attention since the 1970s. The programmer that provides the input for development of the piece is mostly responsible for the majority of these computer-generated artworks. But as technology has advanced, artificial intelligence has grown to the point where it can now comprehend and produce outcomes/outputs without human intervention.[11]

The notion of extending copyright standards to AI-generated works seems challenging given the current state of Indian intellectual property laws, particularly copyright. Two categories apply to the works produced by AI: "works created by AI with human interference" and "works created by AI without any human interference."

When artificial intelligence (AI) creates a piece of work with human intervention, the originality of the work can be attributed to the human contribution. In these situations, the human authorship can be acknowledged. The authorship legal landscape is unclear in cases when artificial intelligence (AI) creates a work without human participation. In these circumstances, the following strategy may be used:

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[10] Aplin T, 'Artificial Intelligence and Copyright Protection' (*SSRN*, 15 July 2019) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3419481> accessed 26 October 2023
[11] Guadamuz A, 'Artificial Intelligence and Copyright' (*WIPO*) <https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html> accessed 25 October 2023

- When AI creates a piece of work without human input, the creator of the AI—the person who created the programme that made the AI—may claim authorship.

- When an AI creates a piece of work without human assistance, it can be assumed that the AI's programming is made such that it can independently identify and create equations to produce a result; as a result, the programmer who created the AI may be the creative one, with sufficient programming.

III. AI-IMPLEMENTED OR AI-ASSISTED INVENTIONS

What constitutes an AI-implemented or AI-generated invention is also unclear from a legal, technical, and policy standpoint. However, based on my research into the numerous, recent, scholarly publications on this topic, I believe that AI-implemented or aided inventions use AI as a tool or method in the development of the concept, design, weight, structure, and execution of an algorithm that produces an output. In order to model machine learning and generate data-driven predictions based on input data and output, training data is a crucial component of algorithm development. The creative method involves designing training data so that a computer can recognise patterns in it and cross-validate the data to guarantee effectiveness and accuracy of algorithm.

All output, applications, or works produced by or with the aid of AI systems are to be referred to as 'AI-assisted output'. The role that humans play in the AI-assisted creative process is what drives the analysis that follows, not the intelligent computer. Does this function go far enough to make the output produced by this process—the AI-assisted output—qualify as a work protected by a copyright?

The use of computers and software to produce intellectual works is not a recent development. A 1991 WIPO conference held at Stanford University examined how artificial intelligence (AI) can affect intellectual property laws. Self-learning systems that are growing more and more sophisticated and capable of producing creative or unique performances are becoming commonplace in daily life. Therefore, it would appear possible that innovations and creations may exist without a significant amount of human involvement. With the aid of self-learning simulation programmes, new items are already being produced in 'intelligent laboratories' with little to no human participation. IP law is predicated on the idea that, according to the natural right principle, intellectual property rights are bestowed as compensation for human accomplishments.[12]

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[12] (*WIPO - World Intellectual Property Organization*) <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_9 01_2020.pdf> accessed 29 October 2023

Artificial intelligence systems may be eligible for copyright protection, which is provided for software that is original. However, the concepts and guiding principles of computer programmes are not protected by copyright; rather, it only covers the creative manifestation of those programmes. Therefore, "ideas and principles comprised in logic, algorithms, and programming languages are not protected to the extent that they do."[13] As a result, copyright should only apply to the expression. This indicates that although the algorithm's underlying idea cannot be protected, the algorithm's original code may.

IV. WHO IS THE AUTHOR OF THE SUCH WORKS?

Originality is a prerequisite for copyright law that has been difficult to define legally. However, the idea is still essential as only pieces exhibiting even a minimal degree of this quality are shielded.[14] Originality and the degree of originality necessary to get copyright protection are not specifically defined in any of the main international copyright treaties.[15] 'Protected works' are the subject of Article 2(1) of the 'Berne Convention', which also offers a non-exhaustive list of examples of works that fall under this expansive description. Both Article 2(3) and Article 14, which address cinematographic works, define the term 'original'. One helpful criterion for originality is that works must be 'intellectual creations', as stated in Article 2(5). It's a common argument that artificial intelligence (AI) and computer-generated art do not need incentives to produce; consequently, they are not subject to the same conventional stimulations that drive human writers to pursue diverse advances.[16]

The risks of AI totally replacing human labour, since programmes may be able to produce higher-quality work than human workers and do not experience fatigue, are cited in opposition to the idea that works created by AI should be protected.[17]

It just widens the gap between the produced work and the author (the programmer), who developed the method that made the work possible. It merely "transports the author to a different location during the work's creation process."[18] So, if less explicitly, the humanist essence of the 'Berne Convention' is nevertheless protected.[19] The necessity of having a humanist aspect does

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[13] 'Copyright Protection of Computer Software' (*WIPO*) <https://www.wipo.int/copyright/en/activities/software.html> accessed 29 October 2023

[14] L Bentley and B Sherman, *Intellectual Property Law* (OUP 2014)

[15] Margoni T, 'The Harmonisation of EU Copyright Law: The Originality Standard' (*SSRN*, 30 June 2016) <https://ssrn.com/abstract=2802327> accessed 20 October 2023

[16] P Samuelson, 'Allocating Ownership Rights in Computer-Generated Works' (1986) 47 University of Pittsburgh Law Review 1185, 1199.

[17] JMN Zatarain, 'The Role of Automated Technology in the Creation of Copyright Works: The Challenges of Artificial Intelligence' (2017) 31(1) International Review of Law, Computers & Technology 91, 95.

[18] *Id*

[19] (*Ai-generated creations: Challenging the traditional concept of copyright*) <http://arno.uvt.nl/show.cgi?fid=148002> accessed 29 October 2023

not always mean that authorship in AI cannot be recognised.

The first problem with the idea that the AI itself should be considered the author of the work it creates has to do with how hard it is to define what exactly constitutes a 'AI-generated copyright work'. This specifically has to do with how much effort AI must do to create a piece of art in order for it to be granted copyright.[20]

At a deeper level, machines are not autonomous, which means they "cannot use their ownership rights at their sole free discretion".[21] As a result, AI machinery is unable to use legal recourse to enforce its rights through infringement claims. In terms of economics and society, giving authorship to AI fails to fulfil the goal of intellectual property is to encourage writers to produce more works and broaden their expression of creativity for the good of society.[22] Machines lack incentives to produce and will not compensate stakeholders for their labour.[23]

The question of whether the person who constructed the AI should be considered the "owner or creator of the AI" also surfaces as the author in cases when AI is not considered to be an author. It is undeniable that developing an AI involves a significant financial commitment, and it is crucial that the person who created it has a chance to recover those costs.[24] Evan H. Farr argues that copyright should be granted to the 'programmer' because they are the sole source of the creative idea, the primary contributor of intellectual effort, and such ownership incentivizes and supports the ongoing development of computer-generated works.[25] In British case of Nova Productions Ltd v. Mazooma Games Ltd (Nova Productions),[26] the UK High Court noted that the majority of computer-generated artistic creations significantly depend on the creative contribution of the programmer which is subject to protection under copyright.

Giving the user ownership even in cases when their doctrinal and policy contributions have been negligible is that the user intended to make the work, and that giving them ownership of the rights would motivate them to make use of the software and produce more works in the future.[27] If the application is only a means for the user to express their creativity, the user may

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[20] *Id*

[21] P Manolakev, 'Works Generated by AI – How Artificial Intelligence Challenges Our Perceptions of Authorship' (Master Thesis, Tilburg university 2017) 38.

[22] *ibid* 38

[23] Manolakev (n 18) 38

[24] Kariyawasam K, 'Artificial Intelligence and Challenges for Copyright Law' (2020) 28 International Journal of Law and Information Technology 279

[25] Sorjamaa T, 'I, Author – Authorship and Copyright in the Age of Artificial Intelligence' (*Semantic Scholar*, 5 September 2016) <https://www.semanticscholar.org/paper/I%2C-Author-%E2%80%93-Authorship-and-Copyright-in-the-Age-of-Sorjamaa/14774b7891abd6e3c6c038fc85feff10c0a6f4a6?p2df> accessed 19 October 2023

[26] *Nova Productions Ltd v Mazooma Games Ltd & Ors* (2007) Civ 219 (EWCA)

[27] Sorjamaa T, 'I, Author – Authorship and Copyright in the Age of Artificial Intelligence' (*Semantic Scholar*, 5 September 2016) <https://www.semanticscholar.org/paper/I%2C-Author-%E2%80%93-Authorship-and-

be the exclusive owner of the copyright.[28] It's possible that the user imagined the result, provided the required guidance, made the required inputs, put in effort, and created something that the programmer had not expected.[29] In this case, the finished product might also reveal the user's personality requirements.[30]

But the logic and reasoning above only hold true for work that is helped by a machine.[31] The job becomes minor or inconsequential the more sophisticated the programme is and the less input the user must provide (such as by hitting a button). It might be hard to defend giving the user legal rights in such a circumstance.[32]

Section 9 of the UK Copyrights, Designs and Patents Act, expressly states that "in the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken," represents the optimal approach for conferring intellectual property rights upon the programmer responsible for developing the AI system, as a 'computer-generated work' is defined as "work generated by a computer in circumstances such that there is no human author of the work" under Section 178 of the CDPA.[33]

However, there are instances in which it may be difficult to differentiate between human-authored works and computer-produced works that are generated automatically.[34] For instance, contemporary AI may be capable of or free to choose for itself, and in such cases, human involvement in the AI tool's results is limited. To put it another way, while an algorithm used in artificial intelligence is probably the result of programming, certain current computers are programmed without the need for predefined rules or basic instructions, allowing the machines to programme themselves.[35]

V. CONCLUSION

The Statute of Anne (1709) codified copyright act for the first time, and is credited for starting

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Copyright-in-the-Age-of-Sorjamaa/14774b7891abd6e3c6c038fc85feff10c0a6f4a6?p2df> accessed 19 October 2023

[28] *Id*

[29] *Id*

[30] *Id*

[31] Kariyawasam K, 'Artificial Intelligence and Challenges for Copyright Law' (2020) 28 International Journal of Law and Information Technology 279

[32] *Id*

[33] S. 9, 178 Copyrights, Designs and Patents Act 1988

[34] Welcome to the Jungle, 'Can Artificial Intelligence Be More Creative than Humans?' (*Can artificial intelligence replace humans for creative work*, 8 February 2023) <https://www.welcometothejungle.com/en/article/en-can-artificeal-intelligence-be-more-creative-then-humans> accessed 29 October 2023

[35] *Id*

the legacy of robust copyright protection.[36] The primary objectives of the Statute were to discourage unapproved duplication and to promote the development of publications that would benefit society. The legislation embodied Locke's concept of personal property rights and paid homage to the philosophy endorsing artistic creativity and open public availability of diverse creations, thereby merging the "Lockean discourse on property with the aesthetic discourse of originality" in the United Kingdom.[37] Therefore, the one whose effort resulted in the creation of work and in whose copyright protection work would be placed shall be the creator, according to Lockean labour theory.[38] According to this theory, it is impossible to dispute that the development of complex AI software required many hours of labour and effort on the part of the programmer. The actual creative labour that goes into creating the final product is done by the coder.[39]

Undeniably, the demanding intellectual labour necessary to craft a sufficiently sophisticated program capable of independently generating intelligent content establishes the principle that the individual who exerted the greatest effort in producing the work should be granted rights to it, with the original programmer who initiated the work considered its author, despite the absence of direct human input from the AI, as they are the closest human contributor.[40] Since programmers and creators are the ones closest to the creative process and have dedicated a significant amount of time and energy to building the software that produces the final piece, it is reasonable to attribute authorship to them. Analysing the contribution of a programmer and existence of a personal touch in the finished product should be done case-by-case.

However, the exemption shouldn't apply just to programmers because modern AI technologies are capable of seeing beyond what programmers perceive. If copyright law only addresses programmers who create 'arrangements', then self-programmed AI-generated works will fall outside of its purview. Therefore, it is imperative to expand the definition of 'arrangements' to include everyone, not only programmers, like project managers working on AI-related projects. The best method for determining which human being is the lucky recipient of copyright protection for works that are fundamentally created by a highly developed non-human entity is

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[36] Sorjamaa T, 'I, Author – Authorship and Copyright in the Age of Artificial Intelligence' (*Semantic Scholar*, 5 September 2016) <https://www.semanticscholar.org/paper/I%2C-Author-%E2%80%93-Authorship-and-Copyright-in-the-Age-of-Sorjamaa/14774b7891abd6e3c6c038fc85feff10c0a6f4a6?p2df> accessed 19 October 2023

[37] *Id*

[38] Kariyawasam K, 'Artificial Intelligence and Challenges for Copyright Law' (2020) 28 International Journal of Law and Information Technology 279

[39] E. Dorotheou, 'Reap the Benefits and Avoid the Legal Uncertainty: Who Owns the Creations of Artificial Intelligence' (2015) 21 Computer and Telecommunication Law 85–93.

[40] *Id*

on a case-by-case basis.[41]

The "one size fits all" approach to Artificial Intelligence and AI-generated works does not provide protection for these types of works. Contemporary technological advancements, especially those involving artificial intelligence and computer-generated content, provide a formidable obstacle to the current methodology. The rate at which these changes are progressing and changing has demonstrated that authorship issues must be looked into subjectively. Changes to copyright regulations that include motion pictures and audio recordings are pertinent when discussing computer- and AI-generated content. How the "maker of such works is afforded exclusive rights, such as neighbouring rights," is particularly intriguing.

It is significant to remember that, depending on how they are compiled or structured, artificial intelligence work may occasionally be considered unique work. It is still up for debate whether the work produced in this way demonstrates skill and judgement, however because of the programming and parameters used to compile and generate the work, the AI may be seen as having used skill and judgement, and in such instances, it may be categorised as original work.

A counterargument to this impact might also be made, claiming that human intervention provides the programming and parameters that AI uses to develop works. This argument is valid to some extent, however just configuring codes does not make a human the creator of every AI production, particularly when the AI generated the work without human intervention at its creation.

Concerns concerning culpability in the event of a violation brought about by AI also surface. Setting aside the Act's limits, it's critical to first determine what remedies may be offered to remedy each of the concerns raised above regarding AI-generated works. The following options might be investigated in an effort to provide a potential solution; AI-related tasks can be classified as a distinct class of work. ***In situations where AI is involved in generating content with human input, the ownership of the work can be rightfully attributed to the person contributing their creativity, while the authorship can be designated to the AI. Conversely, in instances where AI independently produces content, the ownership of the work can be vested in the AI's owner, and authorship be ascribed to the AI itself.***[42]

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[41] *Sorjamaa T, 'I, Author – Authorship and Copyright in the Age of Artificial Intelligence' (Semantic Scholar, 5 September 2016) <https://www.semanticscholar.org/paper/I%2C-Author-%E2%80%93-Authorship-and-Copyright-in-the-Age-of-Sorjamaa/14774b7891abd6e3c6c038fc85feff10c0a6f4a6?p2df> accessed 19 October 2023*

[42] Rana L, 'Artificial Intelligence and Copyright – the Authorship - Copyright - India' (*Artificial Intelligence and Copyright – The Authorship - Copyright - India*, 18 December 2019) <https://www.mondaq.com/india/copyright/876800/artificial-intelligence-and-copyright--the-authorship> accessed 29 October 2023

(A) Recommendations

Thus, it can be concluded, although it would take changes to the Copyright Act to explicitly recognise AI as a separate entity or create a special category for works created by AI, I think giving authorship to AI is a feasible alternative. This acknowledgment comes with a big responsibility because it makes the AI's owner liable for any copyright violations resulting from the AI-generated work as well as responsible for the material the AI creates. Since AI follows the rules and guidelines that are established for it, content that it produces on its own without human assistance may be categorised as the product of skill and judgement and is therefore the legitimate author or creator. [43]

Expanding recognition to AI makes sense given the speed at which technology is developing and the increasing effectiveness of AI. A comprehensive framework outlining the rights and restrictions of AI-generated content is necessary as the creative environment gradually moves towards AI-generated content in order to preserve a harmonious coexistence alongside other copyright-protected products.

Thus, the hypothesis presented in the paper has been substantiated, demonstrating that if AI is not afforded copyright protection, the resulting works will enter the public domain, posing a risk of discouraging creators, investors, and developers due to the lack of protection in the public marketplace. Consequently, it underscores the necessity for a balanced jurisprudence to address AI-generated, created, implemented, or assisted works. Notably, a way forward for achieving this balanced jurisprudence has been deduced in the course of the paper and subsequently presented in the conclusion.

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[43] *Id*

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12. Nova Productions Ltd v Mazooma Games Ltd & Ors (2007) Civ 219 (EWCA)

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14. Copyrights, Designs and Patents Act 1988

15. Sorjamaa T, 'I, Author – Authorship and Copyright in the Age of Artificial Intelligence' (Semantic Scholar, 5 September 2016) https://www.semanticscholar.org/paper/I%2C-Author-%E2%80%93-Authorship-and-Copyright-in-the-Age-of-Sorjamaa/14774b7891abd6e3c6c038fc85feff10c0a6f4a6?p2df accessed 19 October 2023

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