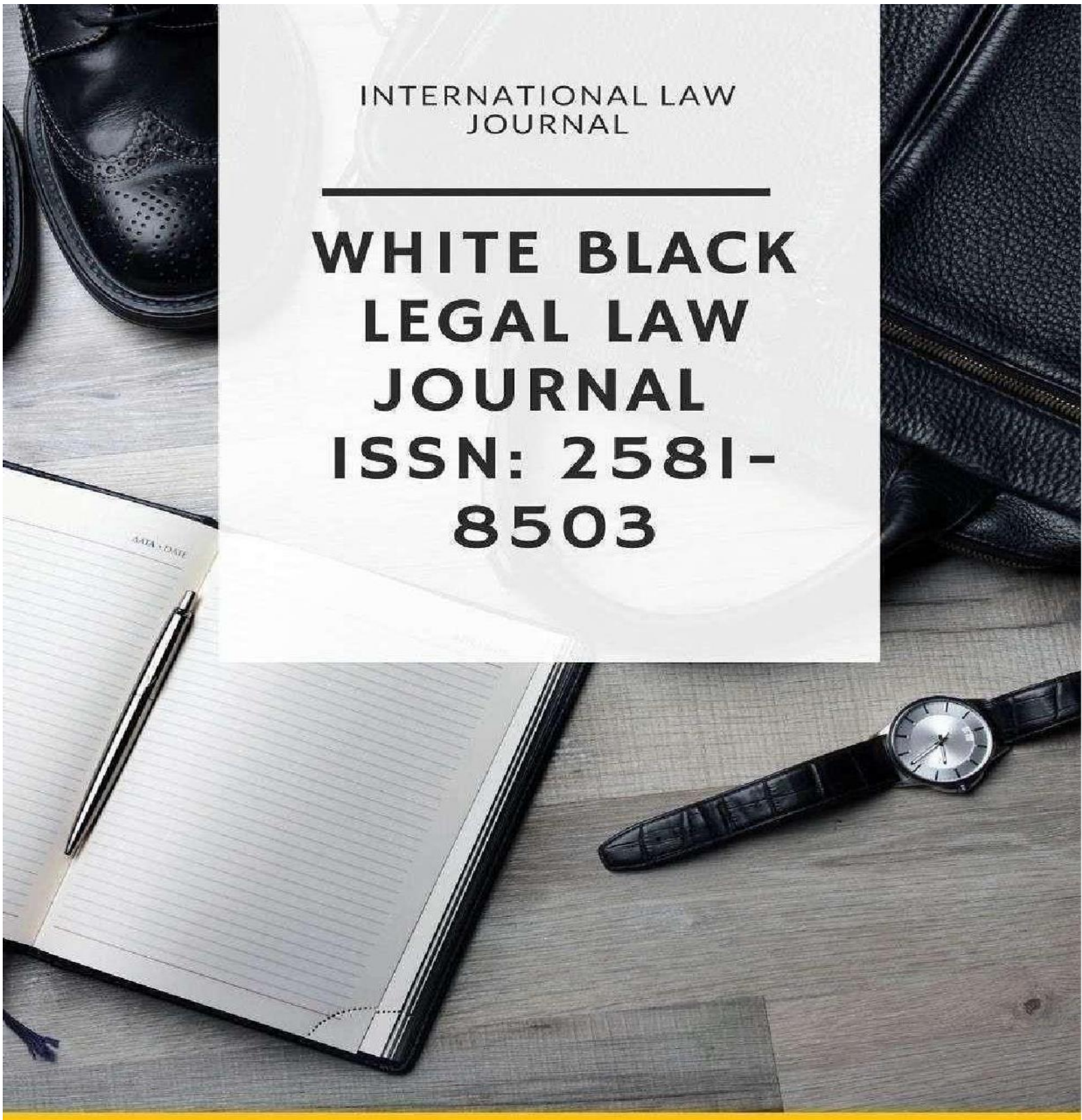

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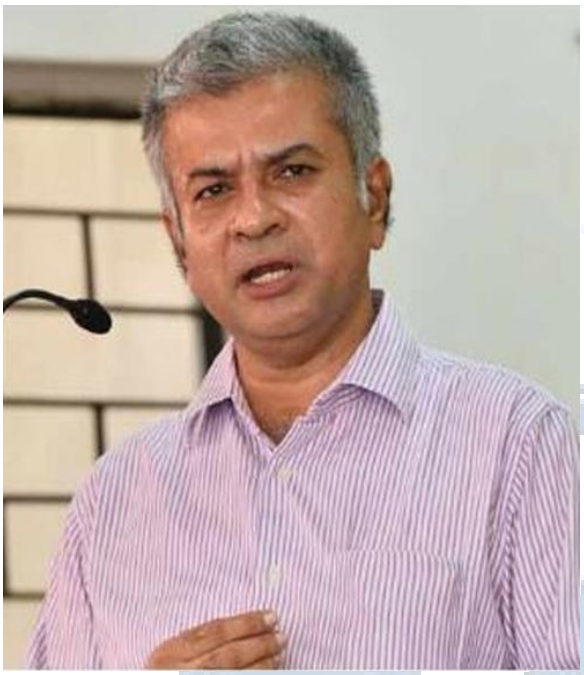

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ABOUT US

WHITE BLACK LEGAL is an open access, peer-reviewed and refereed journal providededicated to express views on topical legal issues, thereby generating a cross current of ideas on emerging matters. This platform shall also ignite the initiative and desire of young law students to contribute in the field of law. The erudite response of legal luminaries shall be solicited to enable readers to explore challenges that lie before law makers, lawyers and the society at large, in the event of the ever changing social, economic and technological scenario.

With this thought, we hereby present to you

ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY RIGHTS IMPLICATIONS: CONTEMPORARY JURISPRUDENCE AND CHALLENGES

AUTHORED BY - DR. SUMAN MAWAR
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ABSTRACT

Artificial intelligence, which appeared to be a distant dream at one point, hasnow emerged from science fiction films to become a reality, gaining momentum over the last few years and resulting in numerous developmentsin almost every sector. Artificial intelligence will affect every sector, and intellectual property rights will be no exception. The impact of Artificial Intelligence in the field of Intellectual Property Rights will be two ways. Onthe one hand, Artificial Intelligence will prove to be an asset in the areas of patent and patent search tools, accurate and timely research, providing a mechanism to sort out inventions and ideas and provide with a mechanism to the innovator on the patents already existing similar to his idea, and manyother things. On the other hand, Artificial Intelligence might also prove to be a threat to innovation and creativity which is the heart and soul of Intellectual Property Rights.

The research paper will go into detail about the impact of Artificial Intelligence on Intellectual Property Rights, the benefits and drawbacks of AI on creativity and innovation in IPR, and the future scope of AI in IPR.

INTRODUCTION

Throughout the ages, artificial intelligence (AI) systems or machines have existed and continueto advance, with the fusion of new and more potent software and intricate code. These ingenious creations have evolved from mere calculating devices to cutting-edge game enginesthat provide remarkably realistic visuals and audio. The realm of artificial intelligence has made substantial progress over time, permeating various fields such as mathematics, computers, engineering, cybernetics, logic, languages, and beyond. In recent times, the intersection of intellectual property rights and AI has garnered attention, as these intelligent machines possess a unique

ability to generate innovative and imaginative works, ranging fromart and poetry to graphics and geometrical patterns. Thanks to machine learning, computer- assisted visuals, scenarios, and even robotic procedures in medical settings have become achievable, alongside the utilization of robotic arms in industrial assembly processes. One wonders, though, can these computers truly conceive groundbreaking ideas independently, freefrom the constraints of their programmed instructions?

The creative outputs of AI systems have sparked a significant discussion about the ownershipof intellectual property: Does it belong to the machine or the creator of the machine? This dilemma highlights the ethical challenges AI technology introduces, emphasizing the importance of identifying the rightful author of AI-generated content. As we navigate the complexities of this field, it's essential to examine various viewpoints and brace for the possiblelegal and ethical implications of granting AI the same intellectual property rights as humans. Given the growing integration of AI into daily life, understanding and addressing this issue is vital for staying abreast of future trends and implications.

RESEARCH PROBLEM

AI is increasingly being used in a variety of sectors around the world. This includes its use not only in IP-related administrative tasks, but also in the creation of works or inventions that canbe protected by intellectual property rights. However, current intellectual property laws are typically interpreted narrowly to exclude humans as authors or inventors of creations that can be protected under IP laws.

SIGNIFICANCE OF RESEARCH

AI has already begun to be used in the field of intellectual property, and its scope of application will only grow in the future. It is an omnipotent phenomenon that has become an essential component of our progress and growth. AI-powered creation of IP-protected works is now a reality, albeit not yet widespread. As a result, it is critical to reconsider existing intellectual property laws and include new dimensions or market segments within their scope. The law will need to redefine concepts such as ownership, inventor-ship, and who can be granted intellectual property rights. The importance of AI in the future is so great that it must be controlled beforeit can be exploited freely, especially given the rate at which it is being deployed in significant applications.

RESEARCH OBJECTIVES

1) To examine the evolution of AI and its capabilities;

2) To explore ethical and policy considerations of AI;

3) To analyse existing legal frameworks related to intellectual property rights (IPR) like Patentsand Copyright and how they apply to AI-generated works;

4) To propose recommendations for future legal and ethical frameworks;

RESEARCH QUESTIONS

1) How has artificial intelligence evolved in terms of its capabilities and applications over thelast few decades?

2) What are the primary ethical concerns associated with the deployment of AI technologies invarious sectors?

3) How do current intellectual property rights frameworks, such as patents and copyright laws,accommodate AI-generated works?

4) What recommendations can be made for future legal frameworks to better encompass AI-generated works?

RESEARCH METHODOLOGY

The research adopted doctrinal method to review and analyse existing legal statutes, judicial precedents, and scholarly articles. The research will primarily rely on secondary data sources, including legal databases, academic journals, books, and commentaries on AI and IPR. A systematic approach has been employed to examine the evolution of AI, its ethical and policy considerations, the application of current IPR frameworks to AI-generated works, industry perspectives, and stakeholder views. The findings will inform the development of recommendations for future legal and ethical frameworks. This research will ensure a thorough understanding of the contemporary jurisprudence and challenges posed by AI in the realm of intellectual property rights.

LITERATURE REVIEW

BOOKS AND COMMENTARIES

"Artificial Intelligence and Intellectual Property Law, edited by Jyh-An Lee, Reto Hilry, Kung- Chung Liu"[1]

[1] "Jyh-An Lee & Reto Hilry & Kung- Chung Liu, Artificial Intelligence and Intellectual Property Law, Oxford University Press (1st ed. 2021)."

This book is a collection of articles by various contributors. The article revolves around technology, business, and AI.

ARTICLES

1) "Artificial Intelligence and Authorship Rights, by Raquel Acosta and edited by Adam Lewin"[2]

This article talks about Origin and evolution of AI. It also examines its capabilities and contribution and applications over the few decades.

2) "The art of artificial intelligence: a recent copyright law development, by Joel Feldman"[3]

This articles comments on how do current copyright laws accommodates AI-generated works.

3) "How to Overcome the Two Biggest Challenges of Patenting AI Technologies, by Shabbi ***S. Khan and Nikhil T. Pradhan[4]"***

This article talks about Patenting of innovations created by AI and the challenges of interpreting the definition of "innovator" under different Patent regimes.

4) "Legal Ethics: The Ethical Dilemma of Artificial Intelligence, by Jaliz Maldonado"[5]

The article highlights the ethical and moral concerns regarding granting Intellectual Property Rights to AI generated contents and innovations.

WHAT IS ARTIFICIAL INTELLIGENCE?

The concept of "Artificial Intelligence" was coined by Professor John McCarthy in 1955, leading to his recognition as the "father of Artificial Intelligence." McCarthy, along with Marvin Minsky, initiated the Dartmouth Summer Research Project on Artificial Intelligence in 1956. This conference was crucial in shaping the AI field, as it convened experts from aroundthe world to engage in comprehensive discussions about artificial intelligence, representing a foundational event in its evolution. At this conference, McCarthy defined artificial intelligenceas "the science and engineering of creating intelligent machines, particularly intelligent computer programs. It involves tasks similar to understanding human intelligence through computers, yet AI is not limited to methods that are biologically observable.".[6]

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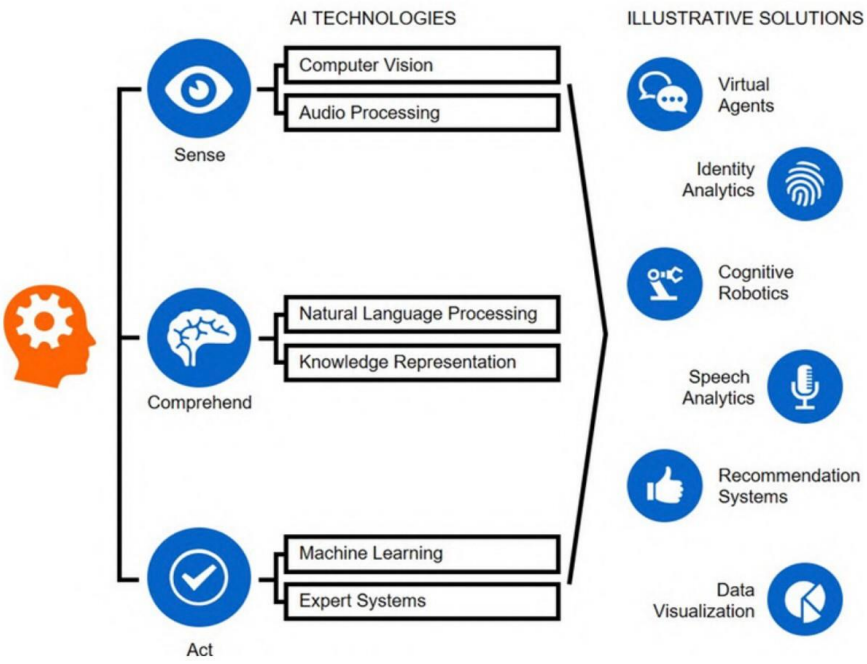
[2] Raquel Acosta, Artificial Intelligence and Authorship Rights, Harvard Journal of Law and Technology, 2012. Available at: https://jolt.law.harvard.edu/digest/artificial-intelligence-and-authorship-rights.

[3] "Joel Feldman, The art of artificial intelligence: a recent copyright law development, Attorney Analysis from Westlaw Today, a part of Thomson Reuters (2022), available at https://www.reuters.com/legal/legalindustry/art-artificial-intelligence-recent-copyright-law-development-2022-04-22/"

[4] "Shabbi S. Khan, Nikhil T. Pradhan, How to Overcome the Two Biggest Challenges of Patenting AI Technologies, Foley and Lardner LLP publications (2020), available at https://www.foley.com/insights/publications/2020/02/how-overcome-challenges-patenting-ai-technologies/"

[5] "Jaliz Maldonado, Legal Ethics: The Ethical Dilemma of Artificial Intelligence, The National Law Review, Volume XIV, Number 50 (2024), available at https://www.natlawreview.com/article/legal-ethics-ethical- dilemma-artificial-intelligence"

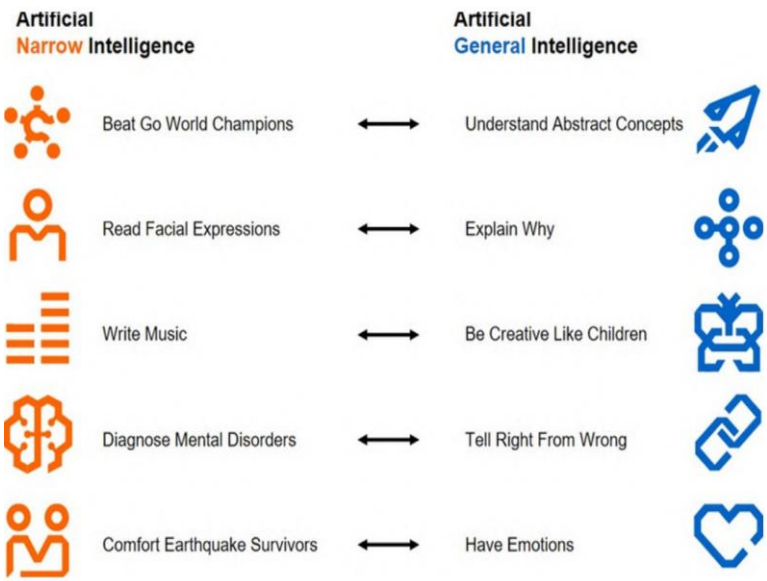
[6] "John McCarthy, Basic Questions, What isArtificial Intelligence?, Stanford University, available at http://jmc.stanford.edu/articles/index.html"



The figure above pictorially illustrates some of the solutions that are emerging AI products/technologies.[7]

Based on the given description, artificial intelligence refers to computers programmed to emulate human-like intelligence and autonomously make decisions. Professor McCarthy's vision for artificial intelligence centered on creating programs that analyze and respond to information similarly to how humans would react to comparable stimuli.[8] This concept established the groundwork for future AI researchers who envisioned pursuing AI projects thatcould result in machines exhibiting 'creative' abilities akin to humans. Narrow AI refers to artificial intelligence systems designed to handle only a specific task or a limited range of tasks.A prime example is IBM's Deep Blue, the chess-playing computer that famously beat the world champion Gary Kasparov in 1997. Deep Blue was solely capable of playing chess and lacked the capability to engage in or win at other games like tic-tac-toe, highlighting its focused and limited functionality. General AI refers to AI that can perform a wide range of tasks in a varietyof environments. As a result, it approaches human intelligence much more closely.[9]

[7] "Himadri Pandya, Grishma Nair, Technical Advance and Economic Significance of Artificial Intelligence, IPR NEWSLETTER "Intellectual property isthe fuel that drives innovation & creativity... protect it fiercely." April - May, 2023, available at https://ipindia.gov.in/writereaddata/Portal/Images/pdf/Final_CG_News_Letter_.pdf"
[8] "Raquel Acosta, 'Artificial Intelligence and Authorship Rights', [February, 2012] , Harvard Journal of Law and Technology , available at https://jolt.law.harvard.edu/digest/artificial-intelligence-and-authorship-rights."
[9] Supra note 2



The figure above pictorially illustrates tasks performed by Artificial Narrow Intelligence and Artificial General Intelligence[10]

Modern algorithms and programs aim not only to mimic human responses but also draw from extensive research on the human brain and its cognitive capabilities. The brain's structure comprises neurons that form a complex network, known as a neural network, responsible for transmitting electrical signals throughout the body and facilitating various bodily functions. Inspired by this biological neural network, scientists have developed computerized versions called Artificial Neural Networks (ANNs). These ANNs are designed to enable computers to process information in a manner akin to human thought, marking a significant advancement in the field of artificial intelligence.[11] Therefore, Artificial Neural Networks (ANNs) serve as computational analogs to the human brain, translating biological cognitive processes into computerized formats. The application of ANNs has become a standard in the field, demonstrating considerable promise and laying the groundwork for future innovations in machine learning.

COPYRIGHT AND ARTIFICIAL INTELLIGENCE - THE QUESTION OF OWNERSHIP

The dynamic nature of the AI sector presents numerous challenges for copyright law, particularly in defining the ownership of content generated by modern technologies like machine learning and deep learning algorithms. A notable instance in 2023 involved legal action against companies for allegedly training AI devices with copyrighted materials, highlighting the

[10] Supra note 2

[11] "M.C. Nwadiugwu, 'Neural Network, Artificial Intelligence and the Computational Brain', [2015], 3, available at https://www.researchgate.net/publication/281374291"

complexities surrounding intellectual property rights in the age of AI-driven content creation.[12]Furthermore, when the US Patent Office rejected to register Thaler's patent applications[13] for AI-generated concepts, he sued the USPTO and its acting director.[14]These legal disputes illustrate the challenges courts face in adjudicating ownership claims related to AI-generated output. While companies may assert copyright over such works, the complexityof these cases has prompted the copyright office to acknowledge the need for a reevaluation of existing copyright laws to better address the unique issues presented by AI-driven creations.[15]Ifa court finds that the AI's works are unlawful and derivative, severe infringement fines may be imposed. Because of the intricacies of this developing technology, politicians and lawyers must rethink current copyright rules and design a framework that effectively accounts for ownershipof AI-created works. This will be important in the future to safeguard the authors and owners of protected content. Copyright law is an important aspect of intellectual property law that protects artists' work by allowing exclusive rights to reproduction, distribution, and adaptation. This includes human-created works like books, films, music, and art. However, as artificial intelligence (AI) technology progresses, the issue of how copyright law applies to Al's creations becomes more pressing.

The US Copyright Office has initiated an endeavor to look into copyright law and AI-generated work.[16] Under federal law, computer-generated works are often ascribed to the source code developer. This implies that the copyright only pertains to Al's creator, not the work he generates. As a consequence, copyright law may protect AI-generated works in the same waythat it does other types of works.

According to the Copyright Office, "AI-generated works involve other copyright issues that still need to be addressed. The Copyright Office, for example, received an application for a work characterized as being autonomously created by a computer algorithm running on a machine. The Copyright Office had to assess not only the copy of the work, but also the Al system that made it, as well as whether the developer of the Al system might be regarded a co-author."[17]

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[12] "Gil Appel, Juliana Neelbauer, and David A. Schweidel, Generative AI Has an Intellectual Property Problem, Harvard Business Review, 2023, available at https://hbr.org/2023/04/generative-ai-has-an-intellectual-property-problem"

[13] "Stephen Thaler v. Shira Perlmu er, Register of Copyrights and Director of the United States Copyright Office, et al. Civil Ac on No. 22-1564 (BAH)."

[14] Supra note 4

[15] "Copyright and Artificial Intelligence U.S. Copyright Office, https://copyright.gov/ai/"

[16] "Copyright Office Issues Notice of Inquiry on Copyright and Artificial Intelligence, Issue No. 1017 - August 30, 2023, U.S. Copyright Office, available at https://copyright.gov/newsnet/2023/1017.html"

[17] "Copyright Office Launches New Artificial Intelligence Initiative, Issue No. 1004 - March 16, 2023, U.S. Copyright Office, available at https://copyright.gov/newsnet/2023/1004.html"

In the realm of intellectual property in India, an intriguing turn of events has unfolded. The esteemed copyright office, in its initial assessment, erroneously acknowledged an AI system by the name of RAGHAV as a co-author of a splendid creative endeavor, granting it the coveted copyright protection. However, let it be known that the brilliant mind behind this AI marvel, Ankit Sahni, faced disappointment when his application, which rightfully credited the AI system as the sole author, was met with denial. Yet, fate had a different plan in store. The copyright office, recognizing their inadvertent error, promptly dispatched a notice to rectify this misstep, urging Mr. Sahni, the human co-author, to delve into the intricate legal standing of this extraordinary system. As we eagerly anticipate the forthcoming court ruling, one cannothelp but note that the copyright office's website, at present, intriguingly maintains the application's status as 'registered'.

The court's decision is significant for the intersection of AI systems and IP laws in India, settinga precedent for future cases as AI technology continues to advance.

Diary Number	Class of Work	Title of Work	Applicant Name	Communication Address	Status
13646/2020-CO/A	Artistic	Suryast	Ankit Sahni	31/42 Punjabi Bagh West, New Delhi-110026	Registered

***Work Awaited:** Work yet to be received.

***Waiting:** Payment Accepted,Application in mandatory waiting period of one month(Copyright Act 1957).

***Documents not received, formality check failed:** Documents/works not received only after making payment.

***Abandoned:** Reply to Discrepancy letter issued not received/works not received after filing.

***Scrutiny:** Application is under process.

***Re-Scrutiny:** Application is under process .

***Pending for Hearing:** Pending for Hearing process.

***Hearing:** Hearing process.

***Sub-Judice:** Pending decision of the competent court of law.

***Registered:** ROC is Generated.

As AI continues to evolve, it introduces complex legal challenges, particularly concerning the recognition and protection of copyrighted works created by AI. Intellectual property rights are crucial, yet they must be carefully balanced with considerations surrounding the ownership of AI-generated content. With the increasing prevalence of AI-generated material, it's imperative for the Copyright Office to adapt the Copyright Act to mirror the shifting technological landscape. The way copyright law applies to AI has significant potential to influence both traditional creative endeavors and the motivation for further innovation. Granting copyright protection to AI-generated works could motivate authors to pursue new levels of creativity and originality. Additionally, AI can be harnessed to enhance the identification and protection of

existing copyrighted works and their creators, thereby supporting the maintenance of intellectual property rights. This, in turn, could encourage more innovators to develop new products and services that utilize elements of older works within the boundaries of modern copyright laws, fostering a culture of innovation and respect for intellectual property.

The employment of generative AI holds the capacity to both augment and disrupt artistic creativity. Works produced by AI, spanning from literature to visual arts, often surpass those crafted by humans in terms of innovation and complexity, given AI's proficiency in assimilating vast datasets and discerning intricate patterns. Other artists, however, regard it asa threat, fearing that their work would be perceived as out of date and less innovative when compared to AI-created masterpieces.[18]

The examination of copyright's role in AI is crucial, as it significantly impacts public engagement with creativity, innovation, and production. Grasping the nuances of copyright lawand its effect on these domains is vital for addressing ethical considerations. The landscape of copyright challenges introduced by AI is intricate and often elusive. On one side, AI advancements have streamlined the detection and sanctioning of copyright violations, potentially enhancing protection and commercialization for copyright owners. Conversely, a dilemma emerges when AI technologies generate derivative works with minimal or no humaninput, complicating the enforcement of copyright laws as such AI-generated content might notbe easily classified under existing copyright frameworks.

JUDICIAL INTERPRETATIONS

1) "Burrow Gilles LithographicCo. v. Sarony" [19]

The lawsuit in question revolved around the eligibility of an image for copyright protection, marking a pivotal moment in distinguishing between creative and mechanical outputs. The Court scrutinized the possibility of extending copyright protection to products created by machines, ultimately narrowing the scope of protection by asserting that work which is purelymechanical does not inherently possess creativity. Consequently, adopting such a stringent stance towards AI systems poses challenges in granting copyright for their outputs.

[18] "avid De Cremer, Nicola Morini Bianzino, and Ben Falk, How Generative AI Could Disrupt Creative Work, Harvard Business Review, 2023, available at https://hbr.org/2023/04/how-generative-ai-could-disrupt-creative-work."

[19] "Burrow Gilles Lithographic v. Sarony, 111 U.S. 53 (1884)."

2) "Bleistein v. Donaldson Lithographing Co."[20]

In this particular instance, which dealt with a comparable legal issue to the one before it, the Court established a definitive boundary between creations made by humans and those produced artificially. Writing for the majority, Justice Holmes emphasized the importance of the individual's unique character as a key factor in qualifying for copyright protection. The Court's mention of 'an element that is uniquely an individual's' underscored the significance of human innovation, highlighting the essential worth and distinctiveness of individual creative contributions within copyright law.

3) "Alfred Bell & Co. v. Catalda Fine Arts, Inc."[21]

In a landmark ruling, the courts took a more lenient approach towards copyrights. The criteria for originality were relaxed, stating that a work must not be directly copied from another similar work to be considered unique. The court also acknowledged that unintentional changes can stillbe claimed as the author's own. This decision is a relief for those seeking to protect AI- generated work, as it was created using specialized techniques and programming. These casesshed light on the complexities of copyright protection for AI systems, but the lack of a definitive stance still poses challenges for potential rights holders.

4) "Navigator's Logistica Ltd v. Kashiq Qureshi & Ors"[22]

The Delhi High court rejected the copyright claim for a computer-generated list because it lacked human interaction.

This is consistent with the stance in the United States, where authorship cannot be exclusively credited to AI.

PATENT AND ARTIFICIAL INTELLIGENCE - CLASSIFICATION OF TRUE AND THE FIRST INVENTOR

Patents are becoming an increasingly significant instrument for preserving ownership and capitalizing on emerging technical developments like artificial intelligence (AI). Patentsprovide many benefits, including monetization possibilities and acknowledgment of technical accomplishments. Companies and colleges may reward AI developers financially or intellectually.

However, patenting Al poses difficulties and has become a controversial subject. Intellectual

[20] "Bleistein v. Donaldson Lithographing Co., 188 U.S. 239 (1903)."
[21] "Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99 (2d Cir. 1951)."
[22] "Navigators Logistics Ltd. vs Kashif Qureshi & Ors, AIRONLINE 2018 DEL 1483"

property rights against Al are becoming more difficult to enforce because to their complicated, algorithmic character. Many robots may educate people and assist them produce unique ideas, but it is unclear who owns such ideas. This has spurred significant discussion among legislators, lawyers, and engineers regarding the proper patenting restrictions for AI, and it mayhave an influence on industry innovation.

Patenting Al may provide both obstacles and rewards, and it is becoming a major part of the legal system governing artificial intelligence. Patenting these complicated technologies may offer intellectual property rights and reward creators, but it can also strain the legal environment and restrict future innovation if not managed properly. Patenting artificial intelligence (AI) poses various obstacles. This is largely due to the difficulty of establishing whether algorithmsare patentable and which company should hold such discoveries. "HITACHI, a technology business accelerator, first differentiated technical factors from simply creating a computer program to carry out a task. However, in 2011, the TBA reversed a previously refused patent for a data processing technique, stating that Al had technically and concretely addressed a technological issue".[23] To effectively patent AI innovations, two interrelated problems must be overcome. "According to Foley & Lardner, LLP, the initial problem is to develop claims whoseviolation can be recognized despite the black box nature of Al technology. The second problemis to ensuring that any patent claims do not prevent continued updates and enhancements to theAl over time."[24] Bennett Jones, a multinational legal firm, has identified several frequent obstacles for Al patent holders.[25]These include evaluating if patentable subject matter exists, adequately disclosing the Al invention for enforcement, and responding to Section 101invalidity arguments.

As the intricacies of obtaining a patent for artificial intelligence become increasingly apparent,it is clear that a thorough examination and understanding of both the legal and technical aspectsof the process is essential. The benefits of patenting AI are numerous, as securing patents for AI inventions can help to fuel innovation in the field. Patenting enables firms to protect their intellectual property and discourage infringement, therefore increasing their market competitiveness and offering a shield against rivals. Furthermore, it may foster creativity by paying innovators who create new ideas and technology, leading to greater technical growth.

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[23] "Katarina Foss-Solbrekk, Three routes to protecting AI systems and their algorithms under IP law: The good, the bad and the ugly, *Journal of Intellectual Property Law & Practice*, Volume 16, Issue 3, 2021, Pages 247– 258, https://doi.org/10.1093/jiplp/jpab033."

[24] Supra note 5

[25] "Ahmed Elmallah, Artificial Intelligence Patenting: Top Challenges and Key Considerations, Bennet Jones Blogs, 2022, available at https://www.bennettjones.com/Blogs-Section/Artificial-Intelligence-Patenting-Top-Challenges-and-Key-Considerations."

Furthermore, a patent system would encourage the development of high-quality AI by increasing competition.[26]

In contrast to other patent offices such as the USPTO, EPO, and JPO, the Indian Patent Office handles AI-related inventions using the guidelines established in 2017 for Computer-Related Inventions. These advancements are evaluated against the stipulations in Section 3(k) of the Indian Patents Act, which specifies that particular groups, including mathematical methods, business methods, computer programs, and algorithms, are exempt from patent eligibility. The guidelines for Computer-Related Inventions (CRI) offer clear demarcations on the patentabilityof mathematical methods, business strategies, computer software, and algorithms.

One issue frequently encountered by individuals seeking patents in the field of artificial intelligence revolves around determining the true and original inventor of any AI-generated product or technique. The question arises as to whether credit should be given to the AI itself or to the human who initially programmed the AI system. Various countries, including India, find themselves facing a legal dilemma in this regard. For example, the EPO has asserted thatan inventor must be a 'natural person', thus excluding AI systems from being considered inventors. The USPTO aligns with this perspective, with the Supreme Court elucidating that the term 'person' pertains to a 'human' and not a machine. On the other hand, the Australian patent framework initially accepted the notion of AI machines being recognized as inventors, a ruling subsequently reversed by their Federal Court. In a notable contrast, the South Africanpatent authority has sanctioned DABUS as an inventor, indicating a possible shift towards AIsystems gaining eligibility. Consequently, it appears that the majority of patent offices are against designating AI computers as inventors. With an increasing number of AI patent applications being submitted, the issue of inventorship will likely become more defined in theyears to come. To conclude, patenting AI has the potential to deliver significant advantages and driveadditional relevant advancements, but the legal and ethical concerns must be carefully studied before completely adopting it. The intersection of patent law and artificial intelligence presentsa realm of both opportunities and challenges that demand thorough examination. The utilization of AI has the capacity to significantly improve the patent application process, exemplified by the

[26] "Liz Gray, Patenting the AI pipeline: intellectual property for AI before standardisation, I AM Innovation & Invention Yearbook, 2022, available at https://www.iam-media.com/global-guide/innovation-invention-yearbook/2022/article/patenting-the-ai-pipeline-intellectual-property-ai-standardisation#:~:text=AI%20standardisation%20of%20some%20form,with%20a%20specific%20technical%20standard."

effectiveness of machine-learning algorithms in streamlining patent evaluations.[27]Al technology may also assist assess suspected infringement, increasing the accuracy of patent determinations. Furthermore, Al may potentially result in speedier patenting timelines and a reduction in the workload for application processing offices.[28]The incorporation of artificial intelligence poses certain challenges in the realm of patent law, including the formulation of claims that accurately pinpoint infringements and the determination of whether AI-generated inventions should receive equal legal protection as those created by human inventors.[29]There'salso the potential necessity for a novel regulatory structure tailored to the duration AI-related intellectual property (IP) should be protected. Implementing shorter protection spans than thosetypical for patents might facilitate the more rapid utilization of AI-driven IP. Moreover, the question of whether the advantages of patenting AI innovations outweigh the challenges remains unresolved. Does the act of patenting merely result in a deadlock among rival innovators, or could it pave the way for new forms of exploration? An answer to this dilemmamight have to be deferred until AI patenting gains widespread traction and its consequences can be thoroughly assessed. Navigating the patenting landscape for AI innovations involves intricate challenges, particularly due to the opaque nature of AI systems, which complicates the drafting of patent claims that are clear and enforceable.

CONCLUSION

The paper explores the complexities of granting intellectual property rights to artificially intelligent systems. It emphasizes the importance of considering the legal, economic, and ethical implications before making any decisions. While there are clear benefits to providing AI systems with intellectual property rights, there are also significant legal hurdles to overcome. Additionally, the use of generative AI technology in creative industries presents itsown set of challenges regarding intellectual property. Despite these obstacles, it is crucial to carefully weigh the ethical and legal considerations of granting intellectual property rights to AI systems. Just as with any new technology, there are potential risks and concerns that must be thoroughly evaluated. Ultimately, a deeper understanding of the implications of granting intellectual property rights to artificial intelligence is essential in determining the best course of action.

Al has a rich and extensive history that spans across centuries and persists to the present day.

[27] "Rob Srebrovic, Jay Yonamine, How AI, and specifically BERT, helps the patent industry, Google Cloud Blog, 2020, available at https://cloud.google.com/blog/products/ai-machine-learning/how-ai-improves-patent-analysis."

[28] "Douglas R. Nemec, Laura M. Rann, AI and Patent Law: Balancing Innovation and Inventorship, Skedden publications, 2023, available at https://www.skadden.com/-/media/files/publications/2023/04/quarterly-insights/ai_and_patent_law_balancing_innovation_and_inventorship.pdf?rev=4bf3d044b5244043961e0ae9bf7c34eb#:~:text=The%20issue%20of%20inventorship%20in,competitive%20edge%20in%20the%20marketplace."

[29] Supra note 28

The chronology of Artificial Intelligence encompasses its evolution from early experimentationto the advent of the first electronic computer in the 1940s, the introduction of Claude Shannon's robotic mouse, Theseus, in the 1950s, and the current prominence of AI-driven technology. From the remarkable array of AI-based products such as chatbots, virtual assistants like Siri and Alexa, to automated industrial machinery and autonomous vehicles, the breadth of AI applications is truly astonishing. Additionally, there is a considerable interest among individuals in the potential utilization and advancement of Al, including forecasts for Al trendsin 2023 and existing real-world implementations. Al holds the promise of unparalleled growthand progress, yet it also engenders ethical and philosophical quandaries concerning theimplications of sentient machines and the prospect of residing in a society influenced by Al. Consequently, Al has become a subject of great anticipation and debate, as it possesses the capacity to revolutionize our existence and fundamentally alter our perception of the world.

BIBLIOGRAPHY BOOKS

- Jyh-An Lee & Reto Hilry & Kung- Chung Liu, Artificial Intelligence and Intellectual Property Law, Oxford University Press (1st ed. 2021)\

ARTICLES

- Jaliz Maldonado, Legal Ethics: The Ethical Dilemma of Artificial Intelligence, THE NATIONAL LAW REVIEW (Volume XIV, Number 50 2024).
- Himadri Pandya, Grishma Nair, Technical Advance and Economic Significance of Artificial Intelligence. IPR NEWSLETTER 19-25 (April - May 2023).
- Raquel Acosta, Artificial Intelligence and Authorship Rights, HARVARD JOURNAL OF LAW AND TECHNOLOGY (February, 2012).
- Alan Turing, ComputerMachinery and Intelligence, MIND QUARTERLY REVIEW OF PSYCHOLOGY AND PHILOSOPHY, (Vol. LIX. No.236 1950)
- Varol Akman and Patrick Blackburn, Alan Turing and Artificial Intelligence, J. OF LOGIC, LANGUAGE AND INFORMATION, 391, 391-95, (2000)
- James H Moor, The Turing Test: The Elusive Standard of Artificial Intelligence, KLUWER ACADEMIC PUBLISHERS, 115-116 (Vol 30 No. 1 2004)
- Robert M French, The Turing Test: The First Fifty Years, In trends in Cognitive Sciences 115-121 (2000)

INTERNET SOURCES

- Joel Feldman, The art of artificial intelligence: a recent copyright law development,Attorney Analysis from Westlaw Today, a part of Thomson Reuters (2022) https://www.reuters.com/legal/legalindustry/art-artificial-intelligence-recent-copyright- law-development-2022-04-22/
- Shabbi S. Khan, Nikhil T. Pradhan, How to Overcome the Two Biggest Challenges of Patenting AI Technologies, Foley and Lardner LLP publications (2020) https://www.foley.com/insights/publications/2020/02/how-overcome-challenges-patenting-ai-technologies/

CASE LAWS

- Burrow Gilles Lithographic v. Sarony, 111 U.S. 53 (1884).
- Bleistein v. Donaldson Lithographing Co., 188 U.S. 239 (1903).
- Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99 (2d Cir. 1951).