EXPLORING THE FUTURE LANDSCAPE AND CHALLENGES OF IP COMMERCIALIZATION IN THE REALM OF ARTIFICIAL INTELLIGENCE

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Abstract

In the era of Artificial Intelligence, intellectual property rights have gained paramount significance. These rights possess the potential to bolster a country's economy, mitigate competition among competitors, and safeguard our innovations through various means such as trademarks, patents, copyrights, and other mechanisms. As a result, intellectual property rights have assumed a pivotal role in the Artificial Intelligence era. In the era of artificial intelligence, for intellectual property, AI is an asset. Artificial Intelligence (AI) has become essential across industries like healthcare, business, and intellectual property (IP). It enhances customer management, data analysis, and innovation. In the realm of IP, AI proves invaluable for patents, copyrights, and trademarks. Regarding the commercialization of Intellectual Property (IP) rights within the realm of AI, there exists a need to expand the horizons of IP commercialization. This expansion involves not only broadening the conventional avenues but also unlocking opportunities for innovative business models. These actions encompass diverse strategies such as licensing arrangements, strategic partnerships, collaborative ventures, and technology transfers. The convergence of Artificial Intelligence (AI) and intellectual property rights (IPR) has ushered in a new era of commercialization possibilities and challenges. This research delves into the intricate landscape of IP commercialization in the AI era. By analysing the symbiotic relationship between AI and IPR, this study aims to illuminate the potential opportunities and obstacles that lie ahead in this evolving domain. Through the examination of emerging trends and case studies, we explore how AI technologies are leveraged, protected, and monetized. The paper also addresses unique challenges arising from the amalgamation of AI and IPR,

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including ownership complexities and the equilibrium between fostering innovation and ensuring equitable access. Research involves finding out the challenges of AI-generated IP and research analysis of why AI should hold the IP rights and how it would help in economy through its commercialisation, Ultimately, this research offers insights into the dynamic interplay between AI and IPR, guiding stakeholders and policymakers in navigating the uncharted territory of IP commercialization in the age of AI.

Keywords: *Intellectual property, commercialisation, innovation, avenues, artificial intelligence, era, stakeholders, policies, accessibility, protection, monetization*

AI AND IPR CURRENT SCENARIO

"*The deployment and use of AI technologies will have implications both for intellectual property law and policy and the administration of IP systems around the world*",[1]

- says Francis Gurry.

"*When we try to trace the historical origin of the word 'Artificial intelligence' we can see it in the year 1956 when it was first coined at Dartmouth College. Artificial intelligence is essentially the intelligence produced by machines. The human can give commands to them and from that command artificial intelligence responds with answers. It is a fantastic innovation for human beings, but we know the coin has two sides, so the positive and negative implications are also there concerning Artificial intelligence*."[2]

Works of art, literature, science, technology, and other real creations of human intelligence are all considered forms of intellectual property (IP). These are mostly the intangible attributes that were in the initial concept of the creator and were then converted into physical attributes that exist in reality. On the other hand, intellectual property rights, or IPRs, are the legal rights granted to the creator or inventor to safeguard his work for a set period.[3]

[1] Artificial intelligence and intellectual property: an interview with Francis Gurry, WIPO Magazine, *available at:* https://www.wipo.int/wipo_magazine/en/2018/05/article_0001.html (Last visited on October 5, 2023)
[2] The History of Artificial Intelligence, *available at:* https://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/ (Last visited October 10, 2023).
[3] Harshit Dayal, "Artificial Intelligence (AI) and Intellectual Property Rights (IPR)- Legal status and the future" Indian Journal of Corporate Law and Policy, (2022).

These days, there are many instances of how human inventions and robotics developed from human intellect and are always striving to create new things and develop new ideas from their algorithms that are crucial to daily life and continuously improve our quality of life. Artificial intelligence is one of the emerging areas of technology and jurisprudence wherein debates around copyrights, patents and other intellectual property issues are still under development with the major concern surrounding the issue of human efforts and AI-generated responses. [4] When we understand the landscape of the IPR in an AI-driven era, then we understand due to AI there are lots of which arise for that our existing laws which are not capable enough to regulate them. So, we can see that the current relationship between AI and IPR is evolving and it is in a very budding stage.

Impact of AI In IPR-

When we talk about the impact of AI-enabled technologies on innovation and creativity related to the IPR, it is too early to predict such kind of impact on traditional IP concepts. In the AI realm commercial AI-generated music and other AI-generated inventions are not far away from our sight but they will help to transform concepts like composer, Author and inventor.

"The wide use of AI technologies will also contribute to the transformation of traditional IP concepts, designs, literary and artistic work and so on. This is already going on but it is due to the digital economy not due to AI alone. We can take the example of life science creating a lot of quantities of data that have important values but it isn't considered an invention in the classical sense. So, we need to pay attention to the rights and obligations which associated with them."[5]

"Data and algorithms raise several fundamental IP-related issues. For example, how can you create property rights in an algorithm which is constantly varying, to the extent that your invention is not the same even one year after you have applied for a patent?" Such kind of issues and impacts are associated with AI and IPR.[6]

Global Legal Position Concerning Protection IP in the AI Era-

[4] IPR and Artificial intelligence*, available at:* https://ksandk.com/ipr/ipr-and-artificial-intelligence/ (Last visited on October 12, 2023).
[5] WIPO Begins Public Consultation Process on Artificial Intelligence and Intellectual Property Policy, PR/2019/843, World Intellectual Property Organization (WIPO), Geneva, *available at:* https://www.wipo.int/pressroom/en/articles/2019/article_0017.html (Last Visited on October 12, 2023).
[6]AI and intellectual property rights, Newsletter, India, A meity Initiative, *available at:* https://indiaai.gov.in/ai-standards/ai-and-intellectual-property-rights (Last visited on October 12, 2023).

"It is an upcoming digital frontier; it is shown that AI will have a significant impact on current laws and practices. The current regime of IP only allows the 'person' to be the proprietor and or owner of an IP which shows that any form of IP that is generated or invented by an AI cannot be subject matter for registration under the current laws.[7] Recently, The United States Patent and Trademark Office (USPTO) declined a petition involving Artificial Intelligence (AI) systems and inventors."[8]

"There is a contrary view concerning the AI-generated article wherein tech giant TenCent claimed copyright infringement against a local company, but the court held that an article generated by AI is protectable under the Chinese copyright law.[9] In another case where European Patent Office (EPO) about patent applications filed by the 'DABUS' an AI technology, this case gave a similar finding to the Naruto Case, wherein the court stated that a patent application has to be filed by the human being.[10] It is the first time a patent application filed without a human inventor[11] It shows that the move towards AI-based IP filing is not far away."[12]

For deciding the matter related to the IPR there is one old principle of "sweat of the brow" on which courts rely directly or indirectly, which indicates the inventors' efforts and hard work in the creation of IP. "However, the application of said principle is complicated when the issue of IP generated by AI comes into the frame. At the same time, the commercialization of AI which also led to a dilution of IP rights, shows that AI is more efficient than human crating in IP. So due to this several issues are likely to arise upon commercialization of AI. Recently World Intellectual Property Organisation (WIPO), has taken the initiative to invite public feedback on

[7] *Naruto Vs. Slater*. No. 16-15469 (9th Cir. 2018).
[8] Tyler Sonnemaker, "No, an artificial intelligence can't legally invent something – only 'natural persons' can, says US patent office", *Business Insider*, Apr 30. 2020 *available at:* https://www.businessinsider.com/artificial-inteligence-cant-legally-named-inventor-us-patent-office-ruling-2020-4?r=US&IR=T (Last visited on October 12, 2023).
[9]Copyright protection for AI-generated works: A landmark Chinese court ruling, *available at:* https://asiaiplaw.com/section/in-depth/copyright-protection-for-ai-generated-works-a-landmark-chinese-court-ruling (Last Visited On October 15, 2023).
[10] EPO refuses DABUS patent applications designating a machine inventor, European Patent Office *available at*: https://www.epo.org/news-issues/news/2019/20191220.html (Last visited on October 12, 2023).
[11] World first patent applications filed for inventions generated solely by artificial intelligence, University of Surrey, *available at:* https://www.surrey.ac.uk/news/world-first-patentapplications-filed-inventions-generated-solely-artificial-intelligence (Last Visited on October 10, 2023).
[12] P. LAVANYA, "A Global Upcoming Issue: Impact of Use/Commercialization of Artificial Intelligence on Intellectual Property Rights", 3, *Law Audience Journal* (eISSN: 2581-6705), 68 to 76 (2022).

the possible impacts of AI on the world of IP regime.[13] by organising press conferences to handle the issues around the IP laws on commercialization of AI."

Current situation till now no law regulates AI-generated IP and other inventions related to it. In the UK and USA, human-generated IP is protected and regulated, but both countries still do not recognise AI as the creator. AI is regarded in China as data and algorithms covered by intellectual property rights. Patents are used to protect the central idea of artificial intelligence. In China, copyright relating to AI includes protection for data compilation as well as algorithmic expression. Patents are used, specifically innovation patents rather than utility model patents, to protect the underlying ideas of artificial intelligence. China has developed a stronger AI protection framework that covers algorithms' creative features as well as their fundamental concepts. Ownership is still unclear, particularly when there are several stakeholders involved. Japan is equally as advanced as China in terms of IPR-based AI regulation. There have been modifications to the Japanese Copyright Act, particularly to Article 30-4. These changes introduced more adaptable limitation provisions, primarily designed to accommodate emerging technologies such as IoT and AI. They come with policy changes, they made some changes in the copyright act and a new strategy concerning the AI regulation with IPR which mainly focuses on the identification of problems and examination in future.

This is the global scenario concerning Artificial intelligence and IPR, still, there is no foolproof law that governs the AI with IPR. In research concerning problem identification and amicable solutions for the regulation of AI-generated IP, ambiguity is still there.

Indian Perspective

In India, there is no specific law which governs the AI specifically. However, India has well-established IP rules that are centred on older, traditional IP, such as books, creative writing, and discoveries and do not address the scope of artificial intelligence. Because of its complexity, AI's scope requires independent consideration. In the Indian Patent Act[14] computer programs and AI-generated inventions are not considered patentable inventions. Even under the Copyright Act,[15] there are rights of copyright over that content who is Author, i.e., it has been implied that it means a legal person, idea of the machine invented are restricted under this act.

[13] WIPO Begins Public Consultation Process on Artificial Intelligence and Intellectual Property Policy, *available at*: https://www.wipo.int/pressroom/en/articles/2019/article_0017.html, (Last visited October 8, 2023).
[14] The Patents Act, 1970 (Act 39 of 1970) s. 2(p) (t).
[15] The Copyright Act, 1957 (Act 14 of 1957) s. 2(d).

The various supreme court judgements and world intellectual property organisation interpretation related the IP ownership. So, through the vast discussions, it can be concluded that intellectual Property (IP) essentially represents a product of human ingenuity. However, it's important to note that the legal framework does not explicitly specify that this intellect must belong to a human, leaving room for consideration of non-human entities as inventors under patent law. Consequently, it's a reasonable conclusion that, unless stipulated otherwise, the fundamental principles of IP law do not inherently preclude granting Intellectual Property Rights (IPR) to artificial intelligence. By taking into account the aforementioned points, it can be easily claimed that if an AI is utilized by the pharmaceutical industry to produce a drug that could save lives, then it would be compared to a regular human being. There are so many questions which are still unclear but we cannot deny the efficiency and feasibility of AI in IP inventions.[16]

Critical Analysis

In many countries, there is currently no legal recognition for AI-generated intellectual property (IP) work. However, this is not the case in every country. China and Japan, for instance, have already started regulating AI in the realm of IP. The current significance of AI and the increasing use of technology are creating a scope for AI in IP, and this future is not far away. It is in a developmental stage, but many countries, international organizations, and other stakeholders are taking positive steps.

Future developments in artificial intelligence may change the nature of intellectual property rules and regulations now in place. These regulations would have to develop a new realm in which AI can possess intellectual property and reinterpret the ideas of inventor, owner, and innovation. For instance, DABUS was just named an inventor in South Africa. New dimensions may bring about changes, but these are still unknown.

Currently, there are a lot of publications that talk about whether AI can create or own intellectual property. None of them, though, offers a comprehensive grasp of the circumstances. Without a doubt, AI systems can produce content that may be protected by intellectual property. Artificial intelligence (AI) computers are capable of producing artwork, literature, designs, and

[16]Shreya and v. Kothari, India: Artificial intelligence in the world of IP, *available at:* https://www.mondaq.com/india/trademark/1132804/artificial-intelligence-in-the-world-of-ip (Last Visted on October 10, 2023).

brand names with ease. It is even possible that these machines will be in charge of producing novel technology or patent-protectable pharmaceutical treatments.[17]

"Recently, an AI was recognized as a co-author. Ankit Sahani, an IP lawyer who owns the AI app, along with RAGHAV (the AI associated with this app), was granted copyright for a painting named "Suryast" in November 2020.[18] This is a significant achievement, which could set a precedent. In an interesting landmark case, Thaler v. Commissioner of Patents (2021), FCA 879, Justice Beach held that Australian law provides no prohibition against an AI submitting an application or being named as an inventor in patent filings, and therefore, it should be allowed."[19] "Future AI ownership of intellectual property cannot be ruled out; thus, nations will need to evaluate their IP laws and integrate a new aspect or market segment in their framework. However, the law will need to reinterpret ideas of ownership, inventorship, and who can be given an IP before AI can thrive as IP owners."

Issues Associated with AI-Generated IP

AI-generated or AI-assisted IP work is in a developing stage, with various issues surrounding it. AI possesses the power to create IP without human intervention. However, what issues could arise concerning AI-generated or AI-assisted IP? A recent survey conducted by Dentons AI survey found that 58% of people believe that users of AI systems should own IP rights, while 20% think that the rights should go to the inventor of the AI system. Only 4% believe that the AI system itself should hold the IP rights. This survey highlights the numerous issues associated with AI-generated or assisted IP. Let's discuss these issues as follows:

Copyright-

In simple terms, copyright is a legal right granted to the creator of an original work, which can include literary pieces, songs, software, and more.[20] The relationship between AI and copyright has been evolving for some time. Initially, there was no dispute because AI acted as a tool, similar to a pen and paper, and the copyright typically belonged to the human programmer. However, with advancements in AI, where machines possess human-like intelligence and can

[17] *Ibid.*
[18]Exclusive: India recognises AI as co-author of copyrighted artwork, *available at:* https://www.managingip.com/article/2a5czmpwixyj23wyqct1c/exclusive-india-recognises-ai-as-co-author-of-copyrighted-artwork (Last visited on October 10, 2023).
[19]R. Currey & J. Owen, In the Courts: Australian Court finds AI systems can be "inventors", *available at*:https://www.wipo.int/wipo_magazine/en/2021/03/article_0006.html (Last Visited on October 11, 2023).
[20]Guadamuz, 2017. Artificial Intelligence and Copyright, *available at:* https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html (Last visited on October 9, 2023).

independently generate original content, questions have arisen about who should hold the copyright. This issue becomes particularly relevant when AI, a subset of which is machine learning, is involved.[21] In machine learning, data is fed to the AI, enabling it to create original content without direct human involvement. This raises questions about whether copyright should be attributed to the programmer or the AI machine itself.[22] The expansion of AI technology has introduced numerous uncertainties in the realm of copyright, emphasizing the necessity for well-defined regulations and policies. Without such clarity, the likelihood of disputes in this domain significantly increases.

"For the copyright of any work, it must fulfil a few essential criteria like firstly work must be a work of human authorship, the work must be independent creation and should be original. It's not as simple as it first appears to grant AI authorship rights in an AI-generated work, and doing so could have significant consequences. The AI cannot enforce its copyrighted work against potential infringement nor can the AI be sued for potentially infringing an already existing copyrighted work, for example, if it is granted authorship rights in an AI-generated work and there is copyright infringement of that work or that work infringes on the already existing copyrighted work. This is true because AI cannot be sued. After all, it is neither a legal entity nor a living being." "Therefore, the legal position of AI must be determined by legislation before the problem of granting writing rights to AI is addressed.[23] Additionally, the 60-year protection period for original literary, dramatic, musical, and artistic works is calculated under Indian law starting the year after the author's passing. The entire purpose of the copyright law's time term of protection is defeated if the AI is given authorship over such work because AI has an endless existence."[24]

Copyright is based on original work and creativity in work, but AI have some limitations and AI generates content based on existing data and patterns, so questions arise about whether AI-created works are genuinely creative and deserving of copyright protection. There is much

[21]Artificial Intelligence, Machine Learning and EU copyright law: Who owns AI? *Available at:* https://www.create.ac.uk/artificial-intelligence-machine-learning-and-eu-copyright-law-who-owns-ai/ (Last visited on October 11, 2023).
[22]Intellectual Property and Artificial Intelligence: A literature review, *available at:* https://publications.jrc.ec.europa.eu/repository/bitstream/JRC119102/intellectual_property_and_artificial_ intelligence_jrc_template_final.pdf (Last Visited on October 12, 2023).
[23]Shradha Prakash, India: copyright ownership of AI-generated content in India, *available at:* https://www.mondaq.com/india/copyright/1295978/copyright-ownership-of-ai-generated-content-in-india (Last Visited on October 12, 2023).
[24] *Ibid.*

scope for the legal liability and implications of certain AI-generated work. We need to think about that as well.

In the US, there is a clear stance regarding whether AI-generated content can be copyrighted, and the answer is no. Non-human entities are not eligible for copyright protection. When generative AI is used to produce artistic creations, issues may arise concerning copyright infringement, especially if the results resemble previously published works online.[25] Copyright infringement is a significant issue when granting copyright protection to AI-generated content. One major issue, prevalent across all aspects, is the absence of specific laws that govern the issues arising from AI generative content.

Patent

Inventorship and Ownership

The convergence of Artificial Intelligence and Patent Laws is gaining traction in contemporary times. While AI has the potential to be a valuable resource for patent protection,[26] Patent searches, search tools, and providing inventors with early insights into the existence of similar ideas, also introduce some distinctive considerations. Patents are fundamentally about invention and innovation, and AI, which is progressively gaining human-like intelligence, can generate inventions without human input or involvement.[27] In the context of patents and AI, particular focus needs to be placed on specific domains, including weaponry, the pharmaceutical sector, road safety, and emerging technologies.

As the use of AI in IP generation increases, people have started filing patent applications for AI-generated or assisted inventions, naming AI as an inventor. The main issue here is whether the law should permit or require AI applications to be named as inventors. Many countries are attempting to adapt their existing IP laws to the AI world, but there is still uncertainty regarding

[25] AI-generated content will not be subjected to copyright: US court, *available at:* https://indiaai.gov.in/news/ai-generated-content-will-not-be-subjected-to-copyright-us-court (Last visited on October 10, 2023).
[26] Artificial Intelligence, Big Data and Intellectual Property: Protecting Computer- Generated Works in the United Kingdom, *available at:* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3064213 (Last Visited On October 12, 2023).
[27] Artificial Intelligence Collides with Patent Law, 2018-White Paper by World Economic Forum, *available at:* https://www3.weforum.org/docs/WEF_48540_WP_End_of_Innovation_Protecting_Patent_Law.pdf (Last Visited on October 10, 2023).

inventorship. Additionally, there is a question of who should be recorded as the owner of a patent involving an application.[28]

For patent eligibility, specific guidelines need to be followed under patent laws. Should these guidelines be excluded for AI-generated inventions, or do amendments need to be introduced for patent examination guidelines for AI-assisted inventions? Apart from these, many other issues arise concerning AI-assisted or generated patents.[29]

For the ownership, it identified who contributed to the inventive idea. Then ownership of patent ideas flows from these inventors who have contributed. So as of now, there is a long legislative gap concerning this, and it is very challenging to grant ownership for this type of invention.

AI & Traditional Knowledge

Traditional Knowledge encompasses skills, practices, or know-how that communities have acquired and passed down through generations. This knowledge is transferred from one generation to the next within the community.[30] In some cases, AI could potentially encroach upon traditional knowledge by extracting elements from knowledge that already exists within the traditional domain. Given the preceding conversation, it is conceivable that Artificial Intelligence systems or programs might inadvertently infringe upon traditional knowledge, which is an integral part of the cultural heritage of numerous communities.

Other IP inventions

In addition to patents and copyrights, various other types of intellectual property (IP) rights could also be influenced by generative AI. For instance, if an AI system generates a 3D shape or product design that gets sold or used, it might lead to claims of industrial design rights against the AI platform or the user of that 3D shape. Similarly, AI could produce a brand or logo that potentially infringes on a trademark owner's rights if it's used with specific goods or services. In such cases, the person using the brand could face risks unless the use is cleared in

[28]Draft issues paper on intellectual property policy and artificial intelligence, *available at:* https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.wipo.int%2Fedocs%2Fmdocs%2Fmdocs% (Last Visited on October 12, 2023).
[29]A summary of the Conversation *is available at*: https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=459091(Last visited on October 13, 2023).
[30] WIPO, Traditional Knowledge, *available at*: https://www.wipo.int/tk/en/ (Last Visited on October 10, 2023).

advance. The good news is that industrial designs and trademarks don't necessarily require a human author to be eligible for protection.[31]

The idea of artificial intelligence creating content gives rise to a range of complex legal issues. One such issue is whether artificial intelligence possesses enough legal standing to own intellectual property. Can AI be held accountable for copyright infringement? If not, then who should be held responsible for AI's copyright violations? Should it be the entity that creates the technology or the one that benefits from its copyright infringement?

There are lots of issues related to solely generated IP such as liability issues, and legislation issues which are significant while dealing with cases concerning intellectual property. There is the most significant issue related to the legislation. Laws of intellectual property change due to constant innovation by humans. The laws that determine who is entitled to such creations and who is recognized as the owners of intellectual property emerging from the development of artificial intelligence must be passed by the legislature. All nations must acknowledge the same constraints and principles for creating artificial intelligence to solve the regulation of this issue. They must also develop legislation outlining the available solutions and their respective regulatory frameworks. There is no other mechanism to settle disagreements involving the artificial intelligence machine's intellectual property.

Commercialisation of AI-Generated IP: Challenges

In simple terms, commercializing IP means using IP assets to make money. IP assets have economic value, and earning revenue by leveraging your intellectual assets is called IP commercialization.

There are various ways to commercialize IP assets:

- Commercialization by the owner
- Commercialization by assignment (selling to a third party)
- Commercialization by licensing
- Commercialization by franchising
- Commercialization by mergers and acquisitions
- Commercialization through joint ventures

[31] Intellectual property in AI world, practical law Canada, *available at*: https://www.dlapiper.com/-/media/project/dlapiper-tenant/dlapiper/pdf/intellectualpropertyinanaiworld.pdf?rev=4b1520d136824b40aa1488297ab3748d&hash=3EF83CB48A8110EFA667EACD950F2AA2 (Last Visited on October 12, 2023).

- Commercialization through business partnerships

When trying to commercialize AI-generated IP, you may encounter some issues. Here are a few of them:

Ownership and Authorship

"Issues associated with AI-generated IP, such as ownership and authorship, can affect the commercialization process. Determining who owns the AI-generated IP can be challenging, especially if multiple parties are involved in its creation. Deciding on the ownership of that IP may become complex, and there is no established law to guide the ownership determination. "Consequently, when commercializing the IP, this issue becomes a significant challenge.[32] Such disputes can delay commercialization efforts and even lead to legal actions, ultimately impacting the potential for innovation and economic growth. Commercializing AI-generated IP through assignment can be complex due to questions surrounding ownership. These disputes could arise in the future, underscoring the need for clarity regarding the true owner of the IP." Therefore, determining ownership is a crucial step in the commercialization process."

"As of now, AI does not have any legal personality status.[33] In India, there is an ongoing debate about the legal personhood of AI.[34] AI may be granted artificial or juristic person status in the future, but currently, there is no recognition due to various opposing views. In commercializing IP through assignments, a legal instrument transfers IP ownership from one person to another. However, a significant issue arises when defining the term "person" in this context. Currently, there is no legal framework or law recognizing AI as a person. The absence of legal personhood for AI poses a challenge for commercializing AI-generated IP, which can significantly impact the entire process."

Liability for infringement

"The issue of liability in cases of Intellectual Property Rights violation by AI machines is a highly debated topic. It raises questions about who should be held responsible for such violations: the programmer, the machine, or someone else. Currently, there is significant

[32] Parth N., "Issues of Authorship and Ownership in Work created by Artificial Intelligence - Indian Copyright Law Perspective" 11 *NTUT J. of Intell. Prop. L. & Mgmt* (2022).
[33] *available at:* https://www.scirp.org/journal/paperinformation.aspx?paperid=122946 (Last visited on October 12, 2023)
[34] Pranav S., kripi Kathria, "Should India recognise artificial intelligence as an artificial person.", *Money Control*, February 15, 2023, *available at:* https://www.moneycontrol.com/news/opinion"/should-india-recognise-artificial-intelligence-as-an-artificial-person-10085551.html (Last Visited on October 10, 2023).

ambiguity in this regard. If the programmer has prior knowledge that the AI machine may infringe upon Intellectual Property Rights, the responsibility would likely fall on the programmer since they were aware of the potential infringement. However, when the programmer had neither knowledge nor intention of such infringement, and the AI machine or program still infringes, it becomes challenging to determine where the liability should lie. This ambiguity creates a gap that must be addressed to establish clear rules regarding the liability of Artificial Intelligence systems. Furthermore, when the infringement involves criminal liability, determining the AI's criminal responsibility adds another layer of complexity." In summary, the issue of liability is a serious concern that necessitates resolution to prevent potential disputes and confusion.

In the commercialization process, liability and accountability for both customers and owners are also important. Thus, while commercializing AI-generated IP, liability and accountability become significant challenges that can significantly affect the commercialization process. The key issue here is determining who would be liable if AI is involved in the commercialization process, and if any negative repercussions arise, who would be responsible and accountable for the losses incurred. The situation regarding liability is unclear, representing a major legal concern that will be faced when commercializing AI-generated IP.[35] All the commercialisation processes associated with IP which is a contractual based on contractual gains, so here if AI generated IP, then who will be held liable for that breach of contract, it is a significant challenge in this process.

Acceptance and reliability

A common challenge in the commercialization of AI-generated IP is the general issue of trust. Experts often argue that trust in AI is neither inherently good nor bad.[36] Therefore, AI generation still faces reliability issues, and people are not readily accepting AI-generated responses. So, if AI-generated IP comes into market for the commercialisation, then people think that the AI-generated or human creation is best. People will not trust easily. Acceptance and reliability are some of the challenges concerning the commercialisation process.

[35]Intellectual property legal issues impacting artificial intelligence, *available at:* https://www.bakerdonelson.com/intellectual-property-legal-issues-impacting-artificial-intelligence (Last Visited on October 12, 2023).

[36] Is artificial intelligence research trustworthy? *Available at:* https://scienceexchange.caltech.edu/topics/artificial-intelligence-research/trustworthy-ai (Last visited on October 12, 2023).

Regulatory challenge

The commercialization of AI-generated IP involves contractual aspects and the need for liability and legal recognition. Therefore, specific laws are necessary. Currently, the absence of legal recognition is a significant challenge.[37] In this complex scenario, regulations become crucial. The commercialization process typically involves many stakeholders, which may lead to complex legal issues. Without proper regulation, financial gains could be affected, and complex legal problems might result in financial losses. Hence, regulatory challenges are a significant issue in the commercialization of AI-generated IP.

AI Should Own IP Rights

"In the future, artificial intelligence (AI) is expected to be widely integrated into society. Scientists worldwide are working on creating advanced AI systems with autonomy and critical thinking capabilities. As human interaction with these machines grows, it will inevitably lead to the emergence of legal challenges." Currently, there is no legal recognition for AI under any specific law. However, AI is developing and has some capabilities to hold legal personhood. "Artificial intelligence entities must be treated as legal personalities to make them accountable under the law just like corporations." In legal personality for corporations, which was to limit the corporate liability on an individual's shoulder. So, based on this AI also, the concept of legal personhood should be extended to AI entities as accorded to corporate bodies. This will help to existing legal system to resolve the problems and tackle the upcoming challenges related to AI. For the liability concern, if AI is considered a legal entity, it can be held liable for its actions. AI must be vested with legal personhood.

If AI gets recognition in the eyes of the law, then AI-generated IP could be possible to recognise and AI would get the IP rights for its invention under intellectual property. Recently there have so many discussions or conversations about the AI and IP policy, it shows a positive inclination towards the AI-generated IP recognition in the law. Worldwide there are so many examples which show that AI can hold IP rights, The recent DABUS AI system generated two patent applications, named Inventor, so here the question arises of whether AI can be recognised as an inventor and whether AI-generated inventions can get IP protections. With regards to this federal court of Australia gave a positive remark about the AI-generated inventions can get IP

[37]IP and AI what you need to know, *available at:* https://www.maxval.com/blog/ip-and-ai-what-you-need-to-know-now/ (Last visited on October 12, 2023).

protection or court finds that AI systems can be inventoried.[38] The court gave technical explanations regarding holding IP rights but the court has positive remarks concerning that AI can be an inventor. "It is fundamental for the IP environment to encourage new technologies and create a sustainable economic basis for inventions."

If AI were granted Intellectual Property (IP) rights, it would have a profound impact on technical evolution, economic growth, and the IT sector. Such a move would encourage innovation and technical advancement on an unprecedented scale. AI systems, armed with IP rights, could continually enhance their capabilities, driving breakthroughs in domains as diverse as healthcare, finance, and engineering. By efficiently processing vast datasets, AI could revolutionize industries. The increased efficiency and process optimization brought by AI-driven technologies would lead to greater productivity across various sectors. "Granting IP rights to AI could become a driving force behind economic expansion mainly it is talking about the commercialisation of AI-generated IP and how it will contribute to the economy. If AI-generated inventions get IP rights, then it helps a lot in the economy, The economy gets efficient and errorless inventions which help to increase the production or services which ultimately contribute to the economy. As AI technologies become integral to multiple industries, productivity and efficiency will surge. Nations and companies that embrace AI and grant it IP rights would enjoy a competitive edge in the global market. They would lead in technological advancements, attracting investment, talent, and valuable partnerships. The IT sector, in particular, would experience a significant boom. It would become a hub of AI-related development, including software, hardware, and services." In conclusion, granting IP rights to AI systems would propel technical innovation, stimulate economic growth, and trigger substantial growth within the IT sector. It would promote innovation, efficiency, and competitiveness, benefitting a wide array of industries and global economies. So, if AI gets IP rights it is a very impactful thing concerning the economy and growth of the country.

The first and foremost important part is that if AI were to be granted IP rights, it would impact employment. "AI could take over human creations, reducing the importance of human-created IP. Those involved in human-created IP would be affected as AI takes the lead. The existing IP regime may not adequately address AI-generated inventions. This could lead to legal ambiguity, making it challenging to determine ownership and protection of AI-created intellectual property. Without clear legal recognition, disputes may arise over the ownership of

[38] AI and IP rights, *available at*: https://www.wipo.int/wipo_magazine/en/2021/03/article_0006.html (Last visited on October 10, 2023).

AI-generated works. These disputes could involve AI developers, organizations using AI, and other stakeholders, leading to legal battles and uncertainty. Investment in AI research and development may be discouraged by the absence of IP rights for inventions produced by AI. Creators and organizations may be less motivated to invest in AI technology if they can't safeguard and profit from discoveries created by AI. AI-generated inventions could be exploited by individuals or entities without accountability or legal restrictions. This misuse could lead to ethical and legal concerns, especially if AI-generated content is used for harmful purposes. AI is exceptionally efficient and quick at generating content." It can be used by humans without giving credit to the AI, allowing humans to claim ownership over it. Humans might utilize AI-generated innovations for their purposes because the existing IP regime only recognizes human inventions. Therefore, it could become extremely challenging to determine human authorship if we do not grant IP rights to AI.

The question of AI's IP rights has both positive and negative implications. AI can innovate, and granting IP rights to AI can mitigate negative effects while contributing to the economy through commercialization.

Conclusion

AI is undeniably important in the modern world, especially in the context of intellectual property rights. The status of AI-generated IP varies, and it comes with various challenges. Granting IP rights to AI and addressing the issues related to its commercialization can be complicated because there is a lack of regulation governing AI-generated IP. However, if AI were to gain legal personhood and be recognized as a legal entity, it could significantly impact the economy by fostering a technical revolution. Conversely, if AI were not granted IP rights, it would have repercussions on human creations, making it exceedingly difficult for the existing IP regime to address these infringements.