Analyzing the complications and remedies of AI vis-à-vis IPR

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Abstract: The rise of digitization has radically altered the landscape of Intellectual Property Rights (IPR), creating both opportunities and difficulties for artists, innovators, and lawmakers globally. While digital advancements have improved the creation and transfer of intellectual property, they have also exposed established IPR frameworks to vulnerabilities. Due to the blurring of geographical borders brought about by digitalization, international partnerships and innovations have increased drastically. The protection of intellectual property has grown more complex since the digital age began with problems like the unlawful replication of intellectual works, trademark dilution in e-commerce, and the unclear ownership of AI-generated products. Furthermore, new aspects of intellectual property governance have been brought about by developing technologies like blockchain, and AI, necessitating flexible and progressive solutions. This paper examines the complex link between digitalization and IPR. also This research looks at how well-suited current laws such as the Copyright (Amendment) Act of 2012 are in tackling digital concerns. It examines India's adherence to international agreements such as the TRIPS Agreement and the WIPO Copyright Treaty and looks at how domestic policy changes might be influenced by best practices from around the world. Citing significant cases and current decisions. The aim of this paper is to offer a thorough hold of how digitalization is changing the reach of intellectual property rights, pointing out shortcomings in the laws and enforcement systems and making useful suggestions. It also sheds light on the increasing challenges caused by the lack of legal provisions governing AI in the field of Intellectual Property Rights. By addressing these urgent issues, this paper adds to the larger conversation about modernizing IPR regulations.

"In the age of AI, innovation races ahead while the law struggles to catch up."

-Richard Susskind

INTRODUCTION

[1]Intellectual Property (IP) is a legal term that refers to products of the human mind which encompass a wide range of creative ideas and outputs created by individuals or organisations. Intellectual Property refers to the disembodied works that are invented or developed, they include literary and artistic works, Symbols, designs, Innovation, etc. With the rise of internet, technology and Artificial intelligence (AI), internet of things (IOT) the field of Intellectual property rights has seen significant growth, protection, generation and consumption. Intellectual Property rights are exclusive legal rights provided to the innovator/originator for safeguarding their work. IPR include Copyright, Patent, Trademarks, Designs. This allows individuals to monetize their creations and maintain a competitive edge in the market. In India, the legal framework recognizes various different types of Intellectual property rights, each law independent from each other made for safeguarding the best interest of the artists, innovators and authors of the original work. The inheritance of legal framework for IPR laws was introduced decades ago in the British regime with introduction of The Patent and Designs act 1911, with the purpose of fostering an environment for patent administration in British India. In the Post independence India introduced its independent laws in the field of IPR which were The Copyright Act 1957 (Amended in 2012) later The Patent Act in 1970, The

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[1] 1 World Intellectual Property Organisation, 'Story of AI on patents' (WIPO) < https://www.wipo.int/tech_trends/en/artificial_intelligence/story.html > accessed 27 December 2024

2 Gurpal Singh, 'INTELLECTUAL PROPERTY RIGHTS IN THE DIGITAL AGE: CHALLENGES AND SOLUTIONS FOR COPYRIGHT AND PATENT PROTECTION' (2016) Vol 5 International Journal of Advanced Research in Management and Social Sciences < https://garph.co.uk/IJARMSS/July2016/15.pdf > accessed 25 December 2024

Trademark Act 1999 and the design Act 2000. With the globalization of Indian economy in 1991 and India being a member nation of World Trade Organisation (WTO), India had to introduce amendments which aligned with the TRIPS agreement (Trade related aspects of Intellectual Property Rights). The main features of the TRIPS agreement are reconciliation of IPR laws globally, when there are conflicts between two nations and dealing with jurisdictional challenges involving internet piracy.

In a recent study of 2020 done by Chauhan &Singh, it was found that there is a significant rise in IPR and most of them were research articles, Manuscripts, Newsletter, reviews, magazines etc. A bibliometric Method was used for researching in field of literature, authorship and various types of papers. A stress on upcoming topics like IPR and inventions and growth in digital era was advised. In recent times with the advancement of technologies there has been a drastic increase in the use of Artificial intelligence (AI) in the field of innovation. Now the question that arises is, who will be the rightful owner of AI- generated creations because the current Legal framework is incompetent to differentiate between AI as a tool and AI as the primary developer of inventions. There are multinational companies out in the market eager to invest in AI based innovation and creations. However, the outdated laws regarding patenting AI inventions would seriously affect investment in AI generated inventions.

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RESEARCH METHODOLOGY

In order to collect information for the paper, doctrinal research is been taken into consideration. Secondary data sources and reference from renowned researchers, data from official government sources, websites of WTO and references from Indian Constitution has been made. In order to examine data from many sources in a flexible and open-ended manner, a qualitative analysis of the available materials has been conducted; nevertheless, a personal interpretation of the data has also been created. Deductive reasoning techniques have been considered in order to develop a hypothesis for the subject and to arrive at an adequate reasoning from the relevant facts.

History of Intellectual Property Rights (IPR) and the transformation brought about by artificial intelligence (AI):

In India, the concept of Intellectual Property Rights has roots in Ancient India, where there was a strong sense of respect for knowledge, art, and invention, even though it was not formally expressed as such.The historical record and sacred manuscripts such as the *Arthashastra,* by Kautilya, highlights the significance of safeguarding the invention from illegitimate use, albeit there was no legal system similar to the current day IPR statutes. Artificial Intelligence made an appearance back in 1950s. The term Artificial Intelligence (AI) was first mentioned in the year 1956 during the Dartmouth summer research project on AI. However, since then the journey of AI has been a roller-coaster ride. There was notable growth in the field of AI from early 1950s – late 1960s after which there were high expectations built amongst people, which it failed to fulfil which led to the fall of AI during the 1970s. From the early 2000s till the present date AI has made exceptional progress. There have been more than 3 lakh, 40 thousand AI related invention which have filed for patent application.

In 2020, the Ministry of electronics & Information technology launched a new division for protection and promotion of Intellectual Property Rights and promoting innovation. There was urgent need for creating E-filing and E-Patenting systems for letting India in the global race of innovations and Intellectual Property. The division facilitated promotion of IPR in the ICT section and had a robust infrastructure for Intellectual property rights.

The ministry of electronics & Information technology introduced a "Centre of Excellence in Intellectual Property (CoE-IP)" with the vision of helping innovators, Startups and Small & Medium industries,

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[2] 1 World Intellectual Property Organisation, 'Story of AI on patents' (WIPO) < https://www.wipo.int/tech_trends/en/artificial_intelligence/story.html > accessed 27 December 2024
2 Gurpal Singh, 'INTELLECTUAL PROPERTY RIGHTS IN THE DIGITAL AGE: CHALLENGES AND

SOLUTIONS FOR COPYRIGHT AND PATENT PROTECTION' (2016) Vol 5 International Journal of Advanced Research in Management and Social Sciences < https://garph.co.uk/IJARMSS/July2016/15.pdf > accessed 25 December 2024

for promoting the importance of Intellectual property rights

LEGAL COMPLICATIONS RELATED TO AI IN IPR LAWS

As we discussed in the above segment, patent filing and blockchain contracts come with their own set of drawbacks. In our preceding segment, we explored AI patent filing and blockchain contracts, which have radically transformed the landscape of IPR. But it also comes with its set of drawbacks. The existing IPR regulatory framework both within India and worldwide lacks specific provisions for artificial intelligence. This gap is evident in India's IP laws, as well as in international agreements like the TRIPS Agreement and the WIPO Copyright Treaty. Below are several key challenges associated with the development and implementation of AI in IPR laws.

1) Who is the rightful owner of the work under the work created by AI and can AI be named as the sole author of the work under the Indian law?

In India the current laws do not recognize AI as the author, because the author must be a human or a legal person. In November 2020, an artwork called "Suryast," the artwork was created by an AI tool RAGHAV and its human creator Ankit Sahni the Co-author of the work registered their work under the Indian Copyright Office. Which got approved This was a progressive move in the field of copyright moment in as it was the first time an AI was recognized as a co-author alongside its human creator. However, this decision was soon withdraw after the notice from the copyright office because it raised question regarding the legal status of RAGHAV stating that an "author" must be a human or a legal entity under the Copyright Act of 1957.

2) Are our current IPR laws in India well-equipped to handle cases involving works created by AI? What are the key challenges within the existing statutes?

In the current statutes, we face two primary options regarding works created by AI: we can either deny copyright protection to these works or hold the user of the AI responsible as the owner of the work. In the Indian Copyright act of 1957, section 2d(vi) clearly states that copyright protection is granted to the author of the work. But despite that, it also clearly clarifies that the person who has caused the work to come into existence using technology, will be the owner of that work. This is again debatable whether it solely refers to use of computers or also the use of Artificial Intelligence. In present day as well, we do not have any clarity on this matter.

Even if AI is granted the right to be an owner of the work it wouldn't have the right to license or have the right to sue or be sued as these are rights given to human authors when their work is registered. Since, AI is just a software it cannot exercise these rights.

Secondly, under The Copyright Act, the owner is given protection for 60 years after their death, so in case AI is granted authorship, we must consider that AI cannot "die" in traditional sense. This will not allow the work to enter the public domain.

Thirdly, if the work doesn't go public it will compromise the doctrine of fair use. The section 52 of The Copyright act allows the use of the work available in public domain. It would disrupt the cycle of created work.

Importantly, AI uses various different public domains for generation of an output. This is also raising an issue of not giving due credit to the owner of the work and various domains referred.

3) Regarding practical applications, what are the issues surrounding copyright applications for AI generated work?

Copyright has been progressively violated upon by numerous creators of original works. The copyright act permits certain revisions and technological transformation to works in the public domain. However, with the advent of ai has greatly simplified to modify the work that is available in the public domain and claim the ownership to that work this issue is undeniably complex the quick evolution of technology has clouded the definition of copyright ownership and infringement complicating the determination of who should be held accountable when AI generated content mirrors pre-existing works.

Not only in India but even in developed nation like the USA also, the legal frameworks are not able to catch up with the current day technology which was clearly observed in the case of *Stephen Thaler vs Shira Perlmutter,* where was AI wasn't granted copyright protection by the copyright office and even the court agreed with the decision of copyright office.

4) Can AI generated content infringe IP?

AI platforms are created in a such a manner that they use all available public domain information for generation of an output for example; If a prompt is inserted in AI software for information, then the software uses various different domains of information and creates its own output without giving due credit to the Author of the work which was referred. There is another type of AI which is narrow AI, a famous example of it is Chat GPT. This AI is programmed in such a manner that it can perform only a single task at a time and cannot function out of its scope unlike General AI.

5) Cases of brand manipulation are increasing in the E-commerce sector with increasing use of AI.

Due to the non-existing repercussions of misuse of technology, people are exploiting the use of AI for their benefits, in a prominent case of *Amazon vs Lush,* amazon was found guilty for violation of Lush's trademark rights. Amazon paid to have its ads appear when people searched for the keyword "Lush" on Google. When a user searched for Lush's product on search engine, amazon's website displayed Lush's products but on redirecting to the website, Amazon suggested similar products in spite of Lush's product.

6) Patentability issues with AI generated Inventions: There are no prescribed rules for determining "autonomously generated" creations by AI. AI systems are gaining prominence in shaping innovation. Now the question that arises is how will the AI-generated inventions seek protection under patent. The current IP laws struggle to distinguish between AI as a tool and AI as the driving force behind creation. Multinational corporations are eager to invest in AI innovations. But the lack of clarity regarding AI might hinder advancement and economic prosperity. If patents are not granted for AI inventions, it could result in reduced investment in AI technology. Some recommended releasing the AI-generated works in public domain allowing free access and shared benefits. In contrast, others argue that patenting AI

inventions would stimulate investment and spur innovation. Some have expressed worry that an overabundance of patents on AI inventions could negatively impact research and development.[3]

PRACTICAL RECOMMENDATION FOR IMPROVEMENT

If AI system can compare images or audio files available on the internet with copyrighted images or audio files to identify any unauthorized use then natural language processing NLP that is the branch of AI that focuses on the interaction between computers and human language so NLP involves teaching computers to understand and interpret natural language inputs such as the text or speech there are several ways in which NLP can be used in the field of IPR for example: NLP techniques can be used to analyse patent documents to identify similar or related patterns or to extract the key information from large sets of patented NLP can also be used to analyse trademarks and identify potential conflicts which existing trademarks so NLP technology can be used to identify trademark infringements by analysing text additionally we can also see that NLP can be used to analyse social media posts or online reviews for potential trademark infringement or copyright violations. Because this procedure of NLP can help the streamlined process of researching and analysing intellectual property and provide valuable insights to the legal professionals. Then there is one more method through which we can take the help of using this AI in the area of IPR that is predictive Analytics, predictive analytics is a branch of data analytics that uses the statistical techniques, machines learning and data mining to analyse the historical data and make predictions about the future events or the trends so this predictive analytics can be applied to various fields that include IPR also and this predictive analytics can be used in IPR to help companies and individuals that can make more informed decisions about their IP

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[3] Sahana Sholapurkar, ' Intellectual Property Rights in the Digital Age: Challenges and Solutions in the 21st Century' (Unfold law, 21 November 2023) < https://unfoldlaw.in/intellectual-property-rights-in-digital-age/ > accessed 2 January 2025

'Protecting intellectual property' (International Trade Administration, 12 January 2024) <

https://www.trade.gov/country-commercial-guides/india-protecting-intellectual-property > accessed 29 December 2024

Colin Sawdy ,'Lush v Amazon' (Mondaq, 1 March 2014) < https://www.mondaq.com/uk/trademark/296274/lush-v-amazon > accessed 26 December 2024

Thaler v Perlmutter[2023] US District Court for the District of Columbia, No. 22-CV-384-1564-BAH.

assets so AI powered Predictive Analytics can be used to detect potential IPR infringements before they apply. For example : if we see that predictive analytics can be used to analyse the patent data and identify trends in patent filing or technology development so this can help the companies may come with more informed decisions about which patent is to be filed what technology is to be invested in and which markets are to be targeted so by analysing the historical data AI can identify the patterns and trends that may inculcate that may also indicate some future infringement but one thing is important' to mention that predictive analytics cannot replace the expertise of legal professionals in the field of idea. So overall AI can be a valuable tool in the fight against IPR infringement however it is important to note that AI should not be relied upon as the sole solution to IPR infringement. Human expertise and judgments are still necessary to ensure the accuracy and fairness in enforcing IPR laws. However, there are challenges as well which are associated with the use of the IPR and the use of the AI but we have to see that there is a risk that AI may unintentionally infringe on the existing IPR especially if the training data used to develop the AI models contains copyrighted works so finally AI is having a significant impact on the IPR and it is creating both opportunities and challenges for IP owners and policy makers as AI technology continue to evolve it is likely that relationship between AI and IPR will continue to evolve as well so as we think, we have to think in line with the rejection of patent application filed by an AI inventor. In 2017 an AI system named DABUS was named as the inventor in patent applications and these applications were filed in the UK, US and Europe. However, the same was rejected in all the three jurisdictions on account of it not being a legal person as required by most of the intellectual property right regime. So, we have to think about how far these AIs are helpful in protecting our IPR. At the same time the human mind, the human being cannot be impersonated by machines.

1) There is a crucial need for countries to take action on a global level:

The international organisations like World Trade Organisation (WTO) and World Intellectual Property Organization (WIPO) are working towards international treaties and establishing framework for minimum protection of Intellectual property (IP). But these treaties do not provide full-fledged protection of IPs.

There is a crucial need for the member countries of these organizations to collaborate and make a well-structured legal framework so as to avoid jurisdictional complexities. Also, the member countries can make mainstream general laws for the protection of Intellectual Property Rights.

2) Use of AI in a constructive method for Intellectual Property protection:

Detection of copyright infringements is the most common example of AI use in IPR enforcement at scale, provided robust training datasets are accessible. If implemented similarly, AI could be also used to identify infringements of designs and trademarks, thereby reducing human workforce. Intellectual property analytics could improve the discovery of relationships, trends, and patterns of IPR infringement for improved enforcement decision making. AI is capable of detecting patterns that are far more superior to that of humans. Therefore, AI is a powerful organizing software that can help professionals to identify unlawful information quickly. Additionally, technology like Blockchain also helps in protection by offering various services like Smart legal contracts, digital signature, etc. One of the available service providers of such services are Lawblocks, which is a platform providing these services. Under WTO & WIPO, member nations can also create a similar platform for convenient documentation processes for registration of Intellectual property and resolving conflicts between citizens of different nations.[4]

[4] Understanding Copyright Laws in India' (S.S Rana and Co. Advocates) < https://ssrana.in/ip-laws/copyright-law-india/ > accessed 1 January 2025
KAnalysis IPR team, ' Notable IPR developments of 2022(January to December 2022)' (Livelaw, 12 April 2023) < https://www.livelaw.in/law-firms/law-firm-articles-/ipr- developments-delhi-high-court-intellectual-property-rights-division-rules-2022-national-intellectual-property-awareness-mission-intellectual-property-wipo-metax-218896 > accessed 25 December 2024
World Trade Organisation ' _Agreement on trade related aspects of intellectual property rights (as amended on 23 January 2017)'

CONCLUSION

As we progress towards the conclusion of the paper, securing the work and best interest of creators of the Intellectual property in the fast-paced evolving technology through addressing the issue of patentability and ownership of AI-generated work is most crucial. Additionally, there is a need to increase public understanding of the e-filing system, which is still underutilized because of obstacles related to digital literacy and a lack of public awareness. The existing Intellectual property rights laws both in India and globally are inadequate to deal with challenges and clearly do not address the issue of work generated and created with AI and the rightful protection of AI in Intellectual Property, this adds to a larger conversation of drafting and implementing AI- inclusive policies at the same time ensuring that human rights aren't violated and contributions are not overlooked. It is important for the countries to collaborate on a global scale to establish a comprehensive and more integrated legal infrastructure for Intellectual Property Right in digital age. By doing so we can encourage innovations, protect the rightful owner of the work and facilitate balanced access to IP. Impactful security demands setting up strict access regulations, utilizing encryption to protect data, providing detailed instructions for employees, and keeping an eye on networks for suspicious activity.