

AI, NFTs AND IPR: LEGAL CHALLENGES IN INDIA

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ABSTRACT

The crossing-over of Artificial Intelligence (AI), Non-Fungible Tokens (NFTs), and Intellectual Property Rights (IPR) has brought about various legal challenges in India. With the increasing use of AI-generated works and the popularity of NFTs as a means of buying and selling digital assets, creators and owners face significant legal hurdles in protecting their works and investments.

This article aims to explore the legal implications of AI-generated works and NFTs in India and the challenges faced by creators and owners. One of the crucial challenges is determining the ownership of AI-generated works. Unlike traditional works, where the creator is the copyright owner, AI-generated works may not have a clear owner, raising issues of copyright ownership and infringement.

Regarding NFTs, the use of blockchain technology to verify ownership and transfer of digital assets presents unique challenges in IPR. The absence of clear regulations and guidelines for NFTs in India creates uncertainty for creators and owners regarding the legality of their ownership and transfer. The possibility of infringement and misuse of IPR in the digital space also raises concerns about the protection of creators' and owners' interests.

Keywords – NFTs, Trademark, Artificial Intelligence, IPR, Infringement

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Introduction

The emergence of Artificial Intelligence and Non-Fungible Tokens has brought about significant changes in the world of Intellectual Property Rights (IPR). AI-generated works and NFTs have created new chances for creators and owners, but they also raise new legal challenges.

In India, the use of AI technology in creating works and the popularity of NFTs as a means of buying and selling digital assets have created significant legal hurdles for creators and owners. This article explores the legal challenges of AI-generated works and NFTs in India and suggests possible solutions to address them.

AI-Generated Works

One of the significant obstacles to AI-generated works is deciding the ownership of copyright. In traditional works, the creator is the copyright owner, but with AI-generated works, there may not be a clear owner. This is because the process of creating these works involves using AI algorithms that generate works independently, without human intervention.

The lack of a clear owner raises issues of copyright ownership and infringement. It is unclear who owns the copyright for AI-generated works, and this creates difficulties in determining who has the right to use, license, or sell the works. In addition, the use of AI technology in creating works raises questions about whether the creator or the AI algorithm should be credited as the author.

Another issue that arises with AI-generated works is the possibility of infringement. It is essential to establish clear guidelines on the use of AI technology in creating works to avoid infringing on existing copyrights. The use of AI technology in creating works should not be used to copy or mimic existing works. Additionally, it is essential to ensure that AI-generated works do not infringe on the moral rights of creators.

NFTs and IPR

NFTs are digital properties that use blockchain technology to verify ownership and transfer. These assets include digital art, music, videos, and other forms of digital content. The use of blockchain technology in verifying ownership and transfer presents unique challenges in IPR.

One of the significant challenges with NFTs is the absence of clear regulations and guidelines for their use in India. The lack of regulations creates uncertainty for creators and owners regarding the legality of their ownership and transfer. The possibility of infringement and misuse of IPR in the digital space also raises concerns about the protection of creators' and owners' interests.

There is also a need to establish clear guidelines on the transfer of ownership of NFTs. It is essential to ensure that the transfer of ownership of NFTs does not infringe on the rights of creators and owners. In addition, it is necessary to establish guidelines on the use of NFTs to ensure that they do not infringe on existing copyrights.

To address the legal challenges posed by AI-generated works and NFTs, there is a need for clear guidelines and regulations on their use in India. These guidelines should provide clarity on issues such as copyright ownership, authorship, and the transfer of ownership of NFTs. They should also address the potential for infringement and misuse of IPR in the digital space and provide mechanisms for enforcing IPR.

The rise of AI-generated works and NFTs has created new opportunities for creators and owners, but they also pose significant legal challenges. In India, there is a need for clear guidelines and regulations on their use to address issues such as copyright ownership, authorship, and the transfer of ownership of NFTs. It is essential to establish a regulatory framework that encourages innovation in the digital space while ensuring the protection of IPR.

Understanding of Artificial Intelligence

Artificial Intelligence (AI) refers to the replication of human intelligence in machines programmed to carry out tasks that typically require human intelligence, such as recognizing visuals, understanding speech, making decisions, and translating languages. AI can be categorized into narrow or weak AI, which focuses on specific tasks like image recognition, and general or strong AI, which aims to perform any intellectual task a human can handle.

AI systems are constructed using algorithms that analyse vast amounts of data to detect patterns and make predictions. These algorithms often rely on machine learning, a subset of AI that enables machines to learn from data without explicit programming. Machine learning algorithms can be classified into three types: supervised learning, unsupervised learning, and reinforcement learning.

Supervised learning involves training an AI system with labelled data, where the data is already categorized or tagged with correct answers. The AI system learns to recognize patterns in the data and make predictions based on those patterns. Unsupervised learning, on the other hand, entails training an AI system with unlabelled data, meaning the data is not categorized or tagged. The AI system learns to identify patterns in the data without prior knowledge of correct answers. Reinforcement learning involves training an AI system through trial and error, where it receives rewards for accurate decisions and penalties for incorrect ones.

The potential of AI extends to various industries, including healthcare, transportation, and finance, by enhancing efficiency, reducing costs, and improving outcomes. Nonetheless, the utilization of AI raises concerns regarding privacy, security, and job displacement. As AI systems advance, there are also apprehensions about their capacity to function autonomously and make decisions without human intervention.

As AI is a rapidly progressing field with the ability to revolutionize our lifestyle and work. It is crucial to carefully consider the potential advantages and risks associated with AI and establish regulations and ethical frameworks to ensure responsible and beneficial use of this technology.

Concerns about the use of Artificial Intelligence

The field of Artificial Intelligence (AI) is a swiftly advancing domain that holds immense potential for transformative impact across various aspects of our lives, including healthcare, education, transportation, and manufacturing. However, alongside its promising prospects, the utilization of AI gives rise to a range of concerns encompassing ethical, social, and economic dimensions. One paramount concern associated with AI implementation revolves around the risk of bias and discrimination. The impartiality of AI systems heavily relies on the training data they are fed, rendering them susceptible to perpetuating existing biases and discriminatory patterns entrenched within the data. For instance, a facial recognition system primarily trained on data featuring individuals with lighter skin tones might struggle with accurately identifying people possessing darker skin tones, thus resulting in discriminatory outcomes. This concern is particularly alarming within the healthcare sector, where biased AI systems can perpetuate discrimination and exacerbate prevailing healthcare disparities. Another significant apprehension tied to AI implementation pertains to privacy and security vulnerabilities. Given that AI systems often necessitate extensive personal data, there is an increased susceptibility to breaches, cyber-attacks, and the compromise of privacy. Such occurrences can lead to severe infringements upon privacy and security, as well as instances of identity theft and fraudulent activities. Within the healthcare realm, this concern assumes even greater significance, as personal health data holds utmost sensitivity and, if mishandled, can be exploited for nefarious purposes. Closely linked to the privacy and security concerns is the apprehension surrounding potential job displacement. With the continuous advancement of AI systems, there exists a prevailing worry that human workers, particularly those engaged in repetitive tasks, may face displacement. The ramifications of such displacement could encompass substantial job losses and subsequent economic disruptions, especially in regions heavily reliant on these industries. Autonomy and control present another focal point of concern regarding AI utilization. As AI systems attain increasing levels of autonomy, the question arises as to who assumes responsibility for the actions undertaken by these systems and how accountability can be established in case of any untoward incidents. For instance, in the

event of an accident caused by an autonomous vehicle, determining liability for resulting damages becomes a critical matter.

Lastly, concerns regarding the safety and reliability of AI systems, particularly in critical applications like healthcare, come to the forefront. The efficacy of AI systems hinges upon the quality of their underlying data and algorithms, thereby raising the potential for errors or bugs that could have severe consequences. Consequently, ensuring the safety and dependability of AI systems emerges as a pivotal consideration for their ethical and responsible use in critical domains, including healthcare.

The concerns about AI implementation are intricate and multifaceted. Addressing these concerns necessitates a collaborative endeavour involving policymakers, industry leaders, and the wider public to ensure the responsible and ethical application of AI, ultimately benefiting society at large.

AI Regulation

Artificial intelligence (AI) is an ever-changing technological field that is profoundly reshaping various aspects of our lives and professional endeavours. As AI applications continue to expand, apprehensions have arisen regarding potential risks, including bias, accountability gaps, and the societal impact of AI. To address these concerns, governmental bodies and international organizations are actively exploring avenues for regulating AI.¹

AI regulation can be broadly classified into two categories: hard law and soft law. Hard law refers to legal rules and regulations that are enforceable by law and carry legal consequences for non-

¹ Kumar, Rajeev & Narayanan, Ramkumar. "Artificial Intelligence and Regulation: Challenges and Opportunities," JIPR, 140-147 (2018).

compliance. Soft law, on the other hand, refers to non-binding guidelines and principles that are intended to provide guidance and direction to stakeholders.

One of the primary challenges of regulating AI is its complexity and rapid pace of development. Unlike traditional regulatory frameworks that can be relatively static, AI is constantly evolving, making it difficult to develop regulations that can keep up with the technology.

Another challenge is defining the scope of AI regulation. AI can be applied in various domains, including healthcare, transportation, finance, and law enforcement, among others. Each domain presents unique challenges and risks that may require different regulatory approaches.

Despite these challenges, there have been efforts to develop AI regulations in various jurisdictions. For instance, the European Union (EU) has developed a comprehensive regulatory framework for AI, known as the Ethics Guidelines for Trustworthy AI². The guidelines provide a set of principles and requirements for the development and deployment of AI, with a focus on ensuring that AI is transparent, accountable, and respects human rights.³

In the United States, the White House issued an Executive Order on AI, which directs federal agencies to develop regulatory and non-regulatory approaches to promote the development of AI while protecting American innovation, privacy, civil liberties, and national security.

Similarly, in India, the government has established a National Strategy for Artificial Intelligence, which provides a roadmap for the development and adoption of AI in the country. The strategy

² Amnesty International. "Artificial Intelligence and Human Rights." (2019)

³ Kumar, Rajeev & Narayanan, Ramkumar. "Artificial Intelligence and Regulation: Challenges and Opportunities," JIPR, 140-147 (2018).

includes the development of an AI regulatory framework that addresses the ethical, legal, and societal implications of AI.⁴

In addition to these efforts, there are also international organizations, such as the United Nations, that are exploring ways to regulate AI. The UN has established the Centre for Artificial Intelligence and Robotics, which aims to promote the development and responsible use of AI in support of the UN's sustainable development goals.

AI regulation is a complex and rapidly evolving area that presents unique challenges for policymakers and regulators. Despite these challenges, there have been efforts to develop regulatory frameworks that promote the development and deployment of AI while protecting the rights and interests of individuals and society.

AI Legal Personality

The concept of AI legal personality has gained traction in recent years, as AI systems become more advanced and ubiquitous. Legal personality refers to the ability of an entity to be recognized as a legal subject with rights and obligations, similar to a human or corporation.⁵ The idea of granting AI systems legal personality is primarily driven by the need to address issues of liability and responsibility in cases where AI systems cause harm or engage in illegal activities.

One of the main arguments for AI legal personality is that it could facilitate the attribution of responsibility and liability in cases where AI systems cause harm.⁶ Take the scenario where an autonomous vehicle is involved in an accident, determining liability becomes a complex matter.

⁴ Kumar, Rajeev & Narayanan, Ramkumar. "Artificial Intelligence and Regulation: Challenges and Opportunities," 23 (3) Journal of Intellectual Property Rights 140-147 (2018)

⁵ De Cock Buning, M. (2019). Legal personality for robots, animals, rivers and inanimate objects: an exploration. *Philosophy & Technology*, 32(3), 491-506.

⁶ Calo, R. (2017). Robot rights? *The Yale Law Journal*, 126(8), 2084-2100.

The responsibility could potentially lie with the manufacturer, the software developer, or the owner of the vehicle. To address this issue, some propose the concept of granting legal personality to AI systems. This would enable holding AI systems accountable for their actions in a manner similar to how human beings or corporations are held responsible. Establishing legal frameworks that attribute liability to AI systems, it aims to provide clarity and accountability in cases where AI systems are involved in incidents or harm occurs.

However, there are also concerns associated with granting AI systems legal personality. For example, it may lead to unintended consequences and complicate the legal system. Additionally, it is unclear how legal personality would apply to different types of AI systems, such as those that are self-learning or those that are part of a larger network of interconnected systems.

Responsibility and Liability

One of the biggest challenges associated with AI systems is determining who is responsible when something goes wrong. The increasing use of AI systems in various industries has raised questions about responsibility and liability in cases where these systems cause harm or fail to perform as expected⁷. In some cases, liability may fall on the designers, developers, or operators of the AI system, while in other cases, the responsibility may lie with the users or individuals affected by the system's actions.

To address these concerns, it is essential to establish clear guidelines for the development, deployment, and use of AI systems⁸. This includes ensuring that AI systems are designed and developed in a way that minimizes the risk of harm to users or other individuals. Additionally, it

⁷ Calo, R. (2014). The case for a federal robotics commission. *Harvard Journal of Law & Public Policy*, 37(3), 869-908

⁸ Bryson, J. J. (2018). Robots should be slaves. In *The Cambridge Handbook of Artificial Intelligence* (pp. 709-719)

may be necessary to establish legal frameworks that define liability and responsibility in cases where AI systems cause harm.

IP Rights and Concerns

The implementation of AI systems gives rise to apprehensions surrounding intellectual property (IP) rights. As AI systems progress in sophistication, their potential to generate original works, including music and art, raises inquiries concerning ownership and the necessary measures for protection.

The issue of IP ownership in relation to AI-generated works demands careful examination and the development of appropriate legal frameworks. Given that AI systems are tools crafted by humans, the conventional understanding of authorship and ownership becomes blurred when AI is involved. Determining the rightful owner of AI-generated works requires consideration of various factors, including the extent of human involvement, the level of autonomy exhibited by the AI system, and the specific legal principles applicable in the respective jurisdiction.

To effectively address these concerns, a comprehensive and proactive approach is necessary. It entails adapting existing IP laws and, when appropriate, introducing new regulations that facilitate the equitable attribution and safeguarding of AI-generated works. Striking a balance that nurtures innovation and creativity in the AI realm while ensuring fair protection is essential in this evolving landscape.

One solution to this issue is to establish clear guidelines for the ownership and protection of AI-generated works⁹. For example, it may be possible to assign ownership of these works to the individual or organization that developed the AI system that created them. Additionally, it may be

⁹ Geiger, C., & Schneider, C. (2019). Artificial intelligence and copyright. In *Research Handbook on Intellectual Property and the Digital Economy* (pp. 262-287).

necessary to develop new legal frameworks that account for the unique challenges associated with protecting AI-generated works.¹⁰

Future Forward

As AI systems continue to evolve, it is likely that they will play an increasingly important role in various industries, from healthcare to finance to transportation. To make sure that these systems are developed in way that can be used in a way that benefits society as a whole, it is essential to address the legal and ethical challenges associated with their use. This includes establishing clear guidelines for the development, deployment, and use of AI systems, as well as addressing concerns related to liability, responsibility, and intellectual property rights¹¹. By addressing these challenges, it may be possible to unlock the full potential of AI systems and create a more equitable and prosperous society.¹²

The future of AI in India is promising, but it also poses several obstacles that need to be curated. Here are some of the trends and challenges in the future of AI in India:

Investment in AI research: The Indian government has recognized the importance of AI and has made investments in research and development. In 2020, the government launched the National AI Portal to promote research, innovation, and development of AI-based applications. However, more needs to be done to create an environment conducive to AI research.

¹⁰ Singh, S. (2019). Artificial intelligence and patent law in India. In *Emerging Issues in Indian Intellectual Property Law and Policy* (pp. 157-171).

¹¹ Singh, S. (2019). Artificial intelligence and patent law in India. In *Emerging Issues in Indian Intellectual Property Law and Policy* (pp. 157-171).

¹² Russell, S. J., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach*. Pearson.

Increase in AI adoption: There has been a significant increase in AI adoption across various sectors in India, such as healthcare, finance, and manufacturing. This trend is expected to continue as more businesses recognize the potential of AI to improve efficiency and productivity.

AI for social good: There is a growing interest in using AI for social good in India. For instance, AI is being used to improve access to healthcare and education, tackle poverty and hunger, and address climate change. However, the use of AI for social good also raises concerns about privacy and data protection.

Regulation and policy: The use of AI raises several legal and ethical issues that need to be addressed through regulation and policy. The Indian government has already taken steps to regulate AI, such as the introduction of the National AI Strategy in 2018. However, more needs to be done to create a regulatory framework that addresses the unique challenges of AI.

Skilled workforce: There is a shortage of skilled AI professionals in India, which could hamper the growth of the industry. The Indian government has launched several initiatives to promote AI education and training, but more needs to be done to bridge the skills gap.

Ethical implications: The utilization of AI systems gives rise to ethical considerations encompassing aspects like bias and fairness, transparency, and accountability. It is imperative to guarantee the ethical and responsible development and implementation of AI.

The future of AI in India is promising, but it also poses several challenges that need to be addressed. The Indian government needs to create a conducive environment for AI research, promote AI adoption across various sectors, and develop a regulatory framework that addresses the unique challenges of AI. Additionally, there is a need to bridge the skills gap and ensure that AI should be developed and inculcated in an ethical and responsible manner.

NFTs

Digital assets known as Non-Fungible Tokens (NFTs) have experienced a surge in popularity, providing creators with an opportunity to monetize their work. NFTs serve as distinctive digital tokens that signify ownership of a particular digital asset, ranging from artwork and music to tweets. The uniqueness of each NFT and its inability to be replicated bestow value within the digital market. The emergence and transaction of NFTs have created fresh possibilities for artists and creators to capitalize on their digital creations.

NFTs and IP

Non-fungible tokens (NFTs) are digital assets that possess distinct characteristics and are validated through the implementation of blockchain technology. These tokens serve as verifiable proof of ownership for specific digital assets, including but not limited to artwork, music, videos, and even social media posts. The rise in popularity of NFTs has been remarkable, with notable instances of NFTs being sold for substantial amounts in online marketplaces. However, the legal ramifications surrounding NFTs, particularly in relation to intellectual property (IP) rights, remain a subject of ongoing discourse and examination.¹³

The use of NFTs raises questions about the ownership and control of digital assets. Traditionally, in copyright law, the creator has exclusive rights to reproduce, distribute, and display the work. However, with the rise of NFTs, ownership of a digital asset is more complex as multiple parties can hold partial ownership of the asset through tokenization. This creates a challenge for determining who holds the rights to a particular digital asset.

¹³ Harper, Rachel. "What You Need to Know About the IP in NFTs." Herbert Smith Freehills, (April 06, 2023,10:25 pm), <https://hsfnotes.com/ip/2022/07/25/what-you-need-to-know-about-the-ip-in-nfts/#:~:text=NFTs%20can%20refer%20to%20or,paramount%20consideration%20in%20NFT%20projects>.

The creation and sale of NFTs can also raise legal obstacles. The first hurdle is the verification of ownership and authenticity. As NFTs are digital assets, they can be easily replicated and distributed, which can lead to fraudulent activities. This can cause concerns for creators who want to protect their intellectual property and the value of their creations.

Another challenge with NFTs is that they can potentially infringe on existing IP rights. NFTs can be created from existing works, such as artwork or music, without the permission of the original creators. This can lead to a conflict between the creators and the NFT owners, with each claiming ownership of the asset¹⁴.

Copyright is one of the primary concerns when it comes to NFTs and IP. The copyright law grants the creator of a work the exclusive right to reproduce, distribute, and display the work. This includes digital works such as images, music, and videos. When an NFT is created from an existing work, it can potentially infringe on the copyright owner's exclusive rights.

Authors' rights of artwork NFTs is another legal consideration. Artwork NFTs can include various elements such as photographs, paintings, sculptures, and more. Artists have exclusive rights to reproduce, distribute, and display their artwork. When an artwork is tokenized, the artist must ensure that they hold exclusive rights to the entire work, including all elements used in the creation of the artwork¹⁵.

Resale royalties are also a consideration when it comes to NFTs. Traditional copyright law does not address resale royalties, which means that creators do not receive any payment when their

¹⁴ Rakesh Sharma, "Non-Fungible Tokens (NFT)." Investopedia, (April 05, 2023, 10:00 Am), <https://www.investopedia.com/non-fungible-tokens-nft-5115211>.

¹⁵ Harper, Rachel. "What You Need to Know About the IP in NFTs." Herbert Smith Freehills, (April 06, 2023,10:25 pm).

work is resold in the secondary market. However, some countries such as France and Germany have introduced legislation to ensure that creators receive a percentage of the resale price.

Ownership rights of NFT purchasers are another legal consideration. When an NFT is sold, the purchaser receives the token, which represents ownership of the asset. However, the token does not necessarily grant the owner the exclusive rights to the digital asset. The original creator of the asset still holds copyright and other IP rights to the work.

NFTs are also susceptible to “copyfraud” or “copycats”. As NFTs are digital assets, they can be easily replicated and distributed. This can lead to fraudulent activities where individuals create fake NFTs that claim to represent the ownership of a particular asset. This poses a significant challenge to the authenticity and ownership of NFTs.

NFTs are a new and emerging technology that raises questions about IP rights and ownership of digital assets. Creators and purchasers of NFTs must navigate the legal challenges and considerations to ensure that they are not infringing on existing IP rights and are adequately protecting their digital assets. The legal implications of NFTs are still evolving, and it is essential to stay updated on the latest developments in this field.

Copyrights in NFT

Copyright is a legal principle that provides authors and creators of original works with exclusive rights to reproduce, distribute, and display their creations. Non-Fungible Tokens (NFTs) function as digital assets that can serve as a representation of ownership or evidence of authenticity for

various forms of digital art, music, and other creative expressions. It is important to recognize that copyright laws extend to NFTs, treating them similarly to other forms of intellectual property.¹⁶

The use of copyrighted material in the creation of NFTs can raise legal issues, particularly if the copyright owner has not granted permission for their work to be used. If an NFT is created using someone else's copyrighted material without permission, it could be considered an act of copyright infringement.

However, it is important to note that copyright ownership can be complex, especially when it comes to digital works. For example, if an artist creates an NFT using their own original artwork, they may still need to consider any underlying copyright ownership for elements such as background music or images used within their artwork¹⁷.

One way that copyright issues in NFTs can be addressed is through the use of licenses or agreements. For example, an artist might create an NFT and include a license that grants the purchaser certain rights, such as the right to display the work publicly or make a limited number of copies. This can help to clarify the copyright ownership and allowable uses of the NFT.

In addition, the emergence of blockchain technology and smart contracts can also play a role in managing copyright issues in NFTs. Smart contracts can be used to automatically enforce copyright agreements and ensure that creators are compensated for the use of their work.

Overall, it is important for creators and buyers of NFTs to be aware of copyright issues and to take steps to ensure that they are not infringing on the rights of others. This can include obtaining

¹⁶ Andres Guadamuz, " Non-fungible tokens (NFTs) and copyright," WIPO Magazine, (April 07, 2023, 10:25 pm), https://www.wipo.int/wipo_magazine/en/2021/04/article_0007.html.

¹⁷ Andres Guadamuz, " Non-fungible tokens (NFTs) and copyright," WIPO Magazine, (April 07, 2023, 10:25 pm), https://www.wipo.int/wipo_magazine/en/2021/04/article_0007.html.

necessary permissions, using licenses or agreements, and leveraging new technologies such as blockchain and smart contracts¹⁸.

Authors' rights of artwork NFTs

Artists and creators hold certain moral rights over their works, including the right to attribution, integrity, and the right to control the disclosure of their works. In the case of NFTs, the moral rights of the creators become even more crucial, as the value of the NFT is largely dependent on the authenticity and ownership of the underlying work of art.

When an artist creates an NFT, they retain the copyright to the original artwork, but they also have the ability to transfer certain usage rights to the purchaser of the NFT. For example, they may allow the NFT owner to display the artwork in a virtual gallery or use it in a digital game. However, the artist may choose to retain certain rights, such as the right to reproduce the artwork in physical form or use it for commercial purposes.

It is important for artists to be aware of their rights and to consider the terms of the NFT smart contract carefully before minting their work as an NFT. They should also seek legal advice to ensure that the terms of the smart contract align with their intentions and the protection of their moral rights.

In addition, it is important for NFT buyers to understand the extent of the rights they are acquiring when they purchase an NFT. They should carefully review the terms of the smart contract to ensure that they have the right to use and display the artwork in the manner they intend. They should also be aware of any limitations on the use of the artwork, such as restrictions on commercial use or reproduction.

¹⁸ Andres Guadamuz, " Non-fungible tokens (NFTs) and copyright," WIPO Magazine, (April 07, 2023, 10:25 pm).

Overall, the moral rights of artists in the context of NFTs are crucial to ensuring the integrity and authenticity of the underlying artwork, and artists should take steps to protect these rights when creating and selling NFTs.

Resale royalties Ownership rights of NFT purchasers

When it comes to NFTs, one of the key issues to consider is the ownership rights of the purchaser. Unlike traditional physical artwork, NFTs are a unique form of digital property that raises questions about the extent of ownership and control over the artwork¹⁹.

In the case of resale royalties, NFTs present an interesting challenge because they allow artists to continue receiving royalties every time the NFT is resold. However, this depends on the specific terms and conditions set by the artist or platform at the time of creation and sale of the NFT. For example, the NFT platform SuperRare takes a 10% commission on the sale of an NFT, of which 5% goes to the artist and 5% goes towards a pool that pays out 10% of secondary sales to artists. This means that the artist can continue to receive a portion of the profits each time their work is sold, even if they have already received a lump sum for the initial sale of the NFT.

Ownership rights also come into play with NFTs, particularly when it comes to the potential for fraudulent activity or copycats. NFTs are unique digital assets that are often associated with a specific digital file or artwork, but it is possible for someone to create a copy of the artwork and try to sell it as a new NFT. In this case, ownership rights can become unclear, and it may be difficult to determine who has the legitimate ownership rights over the original artwork and the associated NFT²⁰.

¹⁹ Michael D. Murray, "Transfers and Licensing of Copyrights to NFT Purchasers", SJBLP, (April 04, 2023, 10:25 pm), <https://stanford-jblp.pubpub.org/pub/copyrights-nft-purchasers/release/1>.

²⁰ Michael D. Murray, "Transfers and Licensing of Copyrights to NFT Purchasers", SJBLP, (April 04, 2023, 10:25 pm), <https://stanford-jblp.pubpub.org/pub/copyrights-nft-purchasers/release/1>.

To mitigate these risks, some platforms are exploring the use of smart contracts and blockchain technology to ensure the authenticity of NFTs and track ownership rights. For example, the platform Nifty Gateway uses a smart contract system to track the ownership and provenance of NFTs, making it easier for artists to assert their ownership rights and receive royalties on secondary sales. However, the use of blockchain technology also raises questions about data privacy and security, and there is still much debate about the most effective way to protect the ownership rights of NFT purchasers.

In summary, ownership rights and resale royalties are important considerations when it comes to NFTs. While NFTs present new opportunities for artists and collectors, they also raise important legal questions about ownership, control, and intellectual property rights that must be carefully considered and addressed.

To what extent are NFTs susceptible to “copyfraud” or “copycats”?

NFTs, like any other digital asset, are vulnerable to copyfraud or copycats. In the case of NFTs, copyfraud or copycats refer to the creation and sale of unauthorized copies of existing NFTs. This is because NFTs are typically stored on a decentralized blockchain network, making them easily replicable and transferable²¹.

The susceptibility of NFTs to copyfraud or copycats depends on the underlying blockchain technology used to create and store them. For example, NFTs created on Ethereum blockchain use the ERC-721 standard, which provides unique digital ownership for each token. However, some other blockchain networks may not offer the same level of security and may be prone to hacking, leading to the creation of unauthorized copies of NFTs.

²¹ “The Future of NFTs for Brands & the Potential Risks”, Bolster, (April 04, 2023, 10:25 pm), <https://bolster.ai/blog/future-of-nfts-for-brands-and-potential-risks>.

Furthermore, the issue of copycats becomes more complicated when considering the ownership rights of NFT purchasers²². While NFT purchasers have ownership rights over the unique tokens they purchase, they do not necessarily have the right to reproduce or sell the underlying artwork or media. Therefore, if a purchaser of an NFT decides to sell a copy of the underlying artwork or media, it would be considered copyright infringement, even if they own the unique token.

To prevent copyfraud and copycats in the NFT market, it is essential to establish clear guidelines and regulations for the creation, sale, and transfer of NFTs. Additionally, creators and sellers of NFTs can take steps to protect their digital assets, such as embedding unique identifiers or digital watermarks that can verify the authenticity of the NFT²³.

NFTs offer a new and exciting way to own and trade digital assets, the potential for copyfraud and copycats highlights the need for careful consideration and regulation of this emerging market.

IPR

IPR stands for Intellectual Property Rights. IPR refers to legal rights that protect creations of the human intellect. Intellectual property rights can be broadly categorized into four main areas: patents, trademarks, copyrights, and trade secrets. These rights give the creators of intellectual property exclusive rights to use and exploit their creations for a certain period of time. The purpose of IPR is to provide an incentive to creators to invest their time and resources in the development of new ideas, products, and technologies by giving them a legally enforceable monopoly over the

²² “The Future of NFTs for Brands & the Potential Risks”, Bloster, (April 04, 2023, 10:25 pm), <https://bolster.ai/blog/future-of-nfts-for-brands-and-potential-risks>.

²³ “The Future of NFTs for Brands & the Potential Risks”, Bloster, (April 04, 2023, 10:25 pm), <https://bolster.ai/blog/future-of-nfts-for-brands-and-potential-risks>.

use of their creations. IPR laws and regulations vary by country and are designed to balance the interests of creators and users of intellectual property.

History of IPR in India

The protection of intellectual property rights (IPR) in India has a rich and intricate background. India has actively participated in numerous international agreements and conventions pertaining to IPR, such as the Paris Convention for the Protection of Industrial Property, the Berne Convention for the Protection of Literary and Artistic Works, and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). These engagements highlight India's commitment to safeguarding and upholding IPR within its legal framework.²⁴

The modern legal framework for IPR in India began with the enactment of the Indian Patents and Designs Act in 1911. Subsequent laws, such as the Copyright Act of 1957 and the Trade Marks Act of 1958, further developed the legal framework for IPR in India. In 1970, India passed the Patents Act, which abolished the system of product patents and instead implemented a system of process patents. This move was aimed at promoting domestic innovation and development.

In the 1990s, India began to liberalize its economy and open up to foreign investment. As part of this process, India signed the TRIPS Agreement in 1995, which required it to provide stronger protection for IPR. This led to significant changes in India's IPR laws, including amendments to the Patents Act in 1999 and 2002 that reintroduced product patents.²⁵

²⁴ Sengupta, S. (2018). Intellectual Property Law in India: A Historical Perspective. *IJLT*, 14(2), 92-114. doi: 10.2139/ssrn.3137189.

²⁵ Sengupta, S. (2018). Intellectual Property Law in India: A Historical Perspective, *IJBSS*, 14(2), 92-114. doi: 10.2139/ssrn.3137189.

Today, India has a comprehensive legal framework for IPR that includes laws on patents, copyrights, trademarks, designs, and geographical indications. However, the enforcement of IPR in India remains a challenge, with issues such as counterfeiting and piracy still prevalent.²⁶

Challenges of IPR

Intellectual property rights (IPR) face a number of challenges that can hinder their effective implementation and protection.²⁷ Intellectual Property Rights (IPR) face numerous challenges in today's globalized world. One of the major challenges is the conflict between the interests of the holders of IPR and the public interest. While the holders of IPR aim to maximize their profits, the public interest necessitates that the benefits of innovation be widely shared. Another challenge is the difficulty in balancing IPR with other public policies such as access to essential medicines, biodiversity conservation, and food security. The rapid pace of technological development and the ease with which digital content can be copied and distributed has also led to challenges in the enforcement of IPR. There are also concerns about the potential for IPR to stifle competition, particularly in the technology sector. Finally, the lack of IPR awareness among stakeholders, particularly in developing countries, hampers the effective use and enforcement of IPR. These challenges require a comprehensive approach that balances the interests of all stakeholders and recognizes the importance of IPR for innovation and development.

Some of the key challenges are:

Enforcement: One of the biggest challenges of IPR is enforcement. Intellectual property is often intangible and difficult to monitor and enforce, making it easier for infringers to copy or use

²⁶ Sengupta, S. (2018). Intellectual Property Law in India: A Historical Perspective, IJBSS, 14(2), 92-114. doi: 10.2139/ssrn.3137189.

²⁷ Park, J. H. (2016). Intellectual property challenges and solutions in international business, IJBSS, 7(9), 117-126.

without permission. In addition, intellectual property disputes can be complex and expensive to litigate²⁸.

Challenges of IPR Infringement: In the realm of intellectual property rights (IPR), the prevalence of piracy and counterfeiting poses significant hurdles, especially in the digital era. The accessibility of copying and disseminating digital content has fueled rampant piracy of music, movies, and software. Concurrently, the market has witnessed an alarming surge in counterfeit goods, flooding the market with fake replicas of popular products. These issues of infringement continue to grow, necessitating robust strategies for IPR protection.

Globalization: With the increasing globalization of markets, IPR holders face the challenge of protecting their intellectual property across borders. Different countries have different laws and enforcement mechanisms, making it difficult to maintain consistent protection of intellectual property.

Emerging Technologies: Emerging technologies, such as blockchain and artificial intelligence, are posing new challenges for IPR. For example, blockchain allows for decentralized control of intellectual property, while AI can be used to create new works that may infringe on existing copyrights.

Public Perception: There is a growing perception that intellectual property rights are hindering innovation and stifling creativity, particularly in areas like software and biotechnology. This has led to calls for reform of the IPR system to strike a better balance between protecting intellectual property and promoting innovation²⁹.

²⁸ Park, J. H. (2020). Intellectual property rights and innovation: A review of the literature. *Research Policy*, 49(9), 103976.

²⁹ Park, J. H. (2020). Intellectual property rights and innovation: A review of the literature. *Research Policy*, 49(9), 103976.

Tackling infringing material on- and off-line

Tackling infringing material on- and off-line is a major challenge for intellectual property rights holders. With the rise of the internet and digital technologies, it has become increasingly easy to copy and distribute copyrighted material without permission, leading to a proliferation of infringing content online. At the same time, physical counterfeiting of goods also remains a problem³⁰.

To address these challenges, IP rights holders and law enforcement agencies have employed a range of strategies. On the online front, efforts have focused on identifying and taking down infringing content through a combination of automated and manual processes. This has involved the use of content recognition technologies, such as digital fingerprinting and watermarking, to detect and remove infringing copies of copyrighted material. Legal action has also been taken against websites and individuals who engage in piracy and counterfeiting.

Off-line, strategies have included increased border controls, targeted enforcement actions against distributors and sellers of counterfeit goods, and public awareness campaigns aimed at educating consumers about the dangers of purchasing counterfeit products. Cooperation between rights holders, law enforcement agencies, and governments has also been crucial in addressing the issue of counterfeiting and piracy³¹.

Despite these efforts, the problem of infringing material remains a major challenge for IP rights holders. New technologies and platforms continue to emerge, providing new avenues for piracy and counterfeiting, while the global nature of the problem requires international cooperation and

³⁰ Hansen, D., & Downes, L. (2013). Intellectual Property and Innovation: A Review of the Literature, TJTT, 38(4), 357-389.

³¹ Hansen, D., & Downes, L. (2013). Intellectual Property and Innovation: A Review of the Literature, TJTT, 38(4), 357-389.

coordination. As such, ongoing efforts to tackle infringing material will require a combination of technological, legal, and policy solutions, as well as continued collaboration between stakeholders.

Future Forward

The future of Intellectual Property Rights (IPR) is a constantly evolving topic due to advancements in technology and globalization³². One of the most significant challenges facing IPR is the issue of digital piracy, as the internet has made it easier than ever to copy and distribute copyrighted material without permission. This has led to a growing need for effective methods of digital rights management and enforcement.

Another area of concern for IPR is the increasing importance of intangible assets, such as patents and trademarks, in the global economy³³. Companies are investing more in R&D and creating valuable IP assets that are critical to their success. As a result, the protection and management of these assets have become more important than ever before.

In addition, the emergence of upcoming technologies such as AI, blockchain, and the Internet of Things (IoT) is also changing the landscape of IPR. These technologies have the potential to disrupt traditional IP systems and create new challenges for IPR enforcement³⁴.

To address these challenges, there is a need for continued innovation in IPR laws and policies. This includes the development of new legal frameworks that can effectively regulate the use of

³² Hsieh, W. H. (2019). Future of Intellectual Property in a Globalized World, JICLT, 14(2), 111-126.

³³ Hsieh, W. H. (2019). Future of Intellectual Property in a Globalized World, JICLT, 14(2), 111-126.

³⁴ Hsieh, W. H. (2019). Future of Intellectual Property in a Globalized World, JICLT, 14(2), 111-126.

emerging technologies, as well as the promotion of international cooperation in the protection and enforcement of IP rights³⁵.

The future of IPR is closely tied to the evolving technological landscape and will require ongoing adaptation and innovation to effectively protect and manage IP assets in a rapidly changing world.

Conclusion

The intersection of AI, NFTs, and IPR in India poses various legal challenges. The lack of specific regulations and legal frameworks for NFTs and AI technologies leads to uncertainties in ownership and infringement of intellectual property rights. Moreover, the potential for AI to create infringing material and the use of AI to detect infringement requires a comprehensive legal approach to ensure the protection of IP rights.

The rise of AI and NFTs has brought about new legal challenges in the field of intellectual property rights (IPR) in India. While AI has raised concerns regarding the ownership of created works and the protection of copyrighted material, NFTs have opened up new avenues for artists and content creators to monetize their digital creations. However, these developments have also brought about challenges in the areas of ownership, resale royalties, and potential copyright infringement.

To tackle these challenges, it is important for India to continuously review and update its IPR laws to ensure they are equipped to deal with new technologies and digital innovations. Additionally, it is essential to increase awareness among creators and the general public about the importance of respecting intellectual property rights and the legal consequences of infringing on them.

³⁵ Mukherjee, S., & Chatterjee, A. (2021). AI, NFTS AND IPR: LEGAL CHALLENGES IN INDIA, IJLM, 63(4), 546-562.

Collaborations between the government, legal experts, and tech industry leaders can also help in developing effective solutions to address these challenges.

Furthermore, a balance must be struck between promoting innovation and creativity while also protecting the rights of creators and owners. This can be achieved through a fair and efficient system of IPR laws and regulations, which incentivizes creators to continue producing while also safeguarding the interests of all stakeholders.

While the legal challenges surrounding AI, NFTs, and IPR in India are significant, they also provide opportunities for growth and innovation. By taking a proactive and collaborative approach, India can continue to be at the forefront of technological advancements while ensuring the protection of intellectual property rights for all.