

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 7 | Issue 2

2024

© 2024 *International Journal of Law Management & Humanities*

Follow this and additional works at: <https://www.ijlmh.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com/>)

This article is brought to you for “free” and “open access” by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact Gyan@vidhiaagaz.com.

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to submission@ijlmh.com.

An Insight on Digital Age and Copyright Issues

RUCHITA N.¹ AND YOSHA M.²

ABSTRACT

The emergence of the Digital Age has brought about significant changes in the creation, distribution, and consumption of creative works. This research paper delves into the intricate web of copyright issues that have arisen in this technologically driven era. With the widespread use of digital platforms, concerns regarding piracy, fair use, and the protection of intellectual property have become increasingly prominent.

The paper explores the challenges posed by digital piracy to various creative industries and evaluates the effectiveness of current mechanisms for enforcing copyright in the online realm. It also investigates the evolving concept of fair use, analyzing how it adapts to the dynamic landscape of digital content creation and sharing.

Technological advancements such as blockchain, artificial intelligence, and virtual reality present new frontiers for both innovation and copyright challenges. This research scrutinizes the intersection of technology and copyright law, examining how emerging trends impact the protection and utilization of intellectual property.

The role of digital rights management (DRM) in safeguarding digital content is examined, along with its implications for user experience and legal considerations. Additionally, the paper assesses the rise of open-access models and Creative Commons licensing, exploring their impact on traditional copyright paradigms.

The research critically evaluates the responsibilities and liabilities of digital platforms and content aggregators in the context of copyright infringement. It scrutinizes the legal and ethical dimensions, as well as the challenges associated with cross-cultural dynamics in online content distribution.

In conclusion, this paper offers a comprehensive analysis of the complex landscape where the Digital Age and copyright intersect. By unraveling these intricacies, it seeks to contribute to the ongoing discourse on how legal frameworks, technological innovations, and societal norms can come together to address the multifaceted challenges posed by the digital revolution.

¹ Author is a student at IFIM Law School, Karnataka State Law University, India.

² Author is a student at IFIM Law School, Karnataka State Law University, India.

I. INTRODUCTION

Intellectual property means legal rights for intangible assets and includes things people create, like inventions, literacy and artistic works, logos, and brand names. These rights protect the creators and let them control and benefit from their work. The Universal Declaration of Human Rights (UDHR) refers to intellectual property rights in Article 27 which states “*Everyone has the right to the protection of the moral and material interests resulting from any scientific literacy or artistic production of which he is the author.*”

Conversely, Data Privacy is enshrined as a fundamental human right, acting as a fortress against breaches and identity theft, which can have substantial economic consequences. It plays a pivotal role in building consumer trust, considering that consumers increasingly value their data.³

The digitization of content, which makes it possible for information to be seamlessly reproduced, distributed, and consumed over international networks, is what defines the digital age. Because of its unparalleled accessibility, information creation and distribution have become more democratic, enabling people to participate as producers as well as consumers in a networked digital environment. Although this democratization encourages innovation and creativity, it also poses important concerns about the defense of intellectual property rights and the application of copyright in a fast-evolving legal environment. As a legal notion, copyright has historically protected creators by granting them the exclusive right to their original works. The effectiveness of conventional copyright models is called into question by the digital era, as these technologies make it easier to replicate and distribute content, making it more difficult to distinguish between permissible usage and infringement. In this dynamic setting, issues like fair use in the digital sphere, digital piracy, and the effect of developing technologies on copyright enforcement become critical considerations.

A comprehensive comprehension of the legal, technological, and societal aspects involved in copyright issues in the digital age is necessary since they range from the pervasive difficulties caused by digital piracy to the dynamic notion of fair use in a digital milieu. As we go on this road, it becomes clear that updating copyright regimes for the digital era requires striking a careful balance between protecting authors' rights and promoting innovation and fair access to information. Intellectual property paradigms need to be reevaluated in light of technological

³ Anagnostopoulou, Seraina C. and Malikov, Kamran, Online Appendix for: The Real Consequences of Classification Shifting: Evidence from the Efficiency of Corporate Investment (April 3, 2023). European Accounting Review, forthcoming, Available at SSRN: <https://ssrn.com/abstract=4089247> or <http://dx.doi.org/10.2139/ssrn.4089247>

advancement, as the convergence between copyright issues and the digital era becomes a focus point for legal experts, politicians, and stakeholders in this dynamic world.

II. DIGITAL PIRACY

The term piracy has an uncertain definition. However, in today's world, the term "piracy" has grown to encompass a variety of industries, particularly intellectual property. Piracy in intellectual property is defined as copying, stealing, duplicating, transmitting, and selling an individual's intellectual property without their agreement or approval, as well as failing to pay the work's royalty. Piracy is defined as the unauthorized use or reproduction of books, movies, music, and other works protected by copyright laws. The digital market and digital piracy have grown exponentially as technology has advanced. Digital piracy has become a major concern around the world, and it must be addressed as soon as feasible.

A major factor in encouraging software developers to invest in producing a wide range of superior and expensive products is intellectual property rights. Software is referred to as genuine software if it is distributed legally and in accordance with the original software developer's license or authorization. These programs usually include privacy protections and security updates. Users do not need to worry about data theft when they purchase or use legitimate software since they are certain that their personal information is safe and secure. The most common way that pirated software is produced is through unauthorized and unlicensed copies of commercial software. Because these fake programs may contain different kinds of malware and spyware that can damage a user's system, they might not have the same level of security enforcement as genuine programs. Because the security of the user's program has been compromised, these kinds of software are more vulnerable to external attacks. These external attackers aim to obtain unauthorized access to the user's machine by taking advantage of this breach in security and privacy. One of the many hidden characteristics in pirated software is its capacity to track a user's online activity or gather private information without the user's knowledge, both of which might steal the user's personal information and damage their system. The users' system is changed or distributed without their consent as a result of this illegal access to their private data. Another prevalent issue with many pirated software packages is the absence of security updates and safety patches. This is a critical issue that needs to be addressed since, in the absence of regular security updates, the defenses against foreign attacks would become antiquated and the security systems will be unable to prevent them. Businesses that use pirated software may unintentionally break several data protection rules and regulations, which could have serious legal and financial repercussions. Using authorized software facilitates an

organization's compliance with privacy and data protection regulations.

The Copyright (Amendment) Act of 2012 brought about a number of new regulations, notably those pertaining to piracy. The technology protection measures (TPM) that copyright owners employ are shielded from exploitation by the recently included section 65A. TPM is a defense that upholds the rights of the labor. Anybody who knowingly attempts to violate these rights faces legal action, which carries a maximum two-year jail sentence as well as a fine. Furthermore, the Act proposes to make it illegal to remove or alter material protected by digital rights that is not authorized and to distribute such information afterward by inserting section 65B. Sensitive data is shielded from unwanted access using a system called information right management (IRM).

One such example of digital piracy is *International v. Altai, INC*⁴, in this case The plaintiff developed a computer program that included a sub-program, and this case caught the attention of the Court of Appeals. The main program can run on several operating systems thanks to this sub-program. Copies of the source code associated with the plaintiff's sub-program were stolen by one of the plaintiff's staff members who was employed by the defendants. Later on, he created a program for the defendant using this copy. Upon realizing this, the defendant promptly revised the program, leaving out the sections that were duplicated from the plaintiff's sub-program. Regarding both of the defendant's program versions, the plaintiff filed a lawsuit alleging copyright infringement.

The lower court rejected the defendant's second claim, although the first iteration of the defendant's program established copyright violations. The plaintiff said that even though the defendant, Altai, had rewritten the program code, the resulting program's structure was essentially the same as his own. The program's structure includes some nonliteral elements including macros, parameter lists, and more specifically organized inter-modular relationships in addition to general flow charts. In this instance, the course presents an Abstraction Filtration Comparison test. A court would first disassemble the allegedly infringed program into its component structural pieces in order to determine whether there was substantial resemblance. After that, a classification of protectable from non-protectable material would be determined by looking at the concepts and expressions included in the program. The program that is being violated will have its breakdown compared to the program that is violating the law. If there are significant similarities between the protectable material and the infringing program, it will be determined by the comparison's results.

⁴ 982 F.2d 693 (1992)

This analysis guarantees that programmers who create works containing expression are given the proper copyright protection; also, it ensures that the technical expression—that is, the part that cannot be protected—remains in the public domain, allowing programmers to use it as a basis for future works.

III. UNDERSTANDING THE EVOLUTION OF FAIR USE IN RESPONSE TO DIGITAL ADVANCEMENTS

Though justified, the protection of content creator's rights should not be at the cost of public interest. Thus, a balance between private rights and public interest is what is required i.e. creative work must be encouraged and rewarded but private motivation must ultimately serve the course of promoting broad public availability of literature, music, arts, etc.⁵ – the concept of Fair Use in Copyrights.

The notion of fair use has a crucial stand in modern copyright law where it gives a certain freedom to academics, critics, journalists, teachers, filmmakers, and fan-fiction writers to express their creativity by respecting the creator's lawful copyrights⁶.

1. The origin of fair use is commonly considered in the case of *Folsom v. Marsh (1841)*⁷ where the court filled the legal gap of determining the scope of fair use and set the fundamentals of the four factors and ultimately codified in the Copyright Act of 1976 as 17 U.S.C. § 10 which is still used to this day. The defendant's work is nearly identical to the plaintiff's in this historic case, and Judge Joseph Story distinguished between cases involving copyright infringement and those requiring consideration of "*the comparative use made in one of the materials of the other; the nature, extent, and value of the materials thus used.*"⁸. The significance of this case stems from its important contribution to the formation of three interrelated areas of US copyright law:
 1. it marked the start of the evolution of copyright law's conventional legal and intellectual framework.
 2. Secondly, copyright has undergone a significant change from being understood as the exclusive right to print and sell copies of a specific text to prevent monopolization, to being understood as a broad control over the market value of intellectual work since the nineteenth century. This idea highlighted the conflict between the ideology that uses the

⁵ Twentieth Century Music Corp. v. Aiken 422 US 156 (1975)

⁶ Sag M., *The Prehistory of Fair Use*, *Brooklyn Law Review*, Vol. 76, No 4, [June 2011], p. 1

⁷ *Folsom v. Marsh*, 9. F.Cas. 342 (C.C.D. Mass. 1841)

⁸ *Folsom v. Marsh* para.344

"cheap press" to facilitate access to printed texts and growing concerns about commercial exploitation and authorial Rights.

3. The matter in dispute in this case was George Washington's letters which were no ordinary printed textbooks or such, thus, it has elucidated private property rights created by copyright law and the public accessibility to materials deemed to be of peculiar public, cultural prominence.⁹

Judge Story's interpretation clarified that secondary uses of copyrighted material should not be directly regarded as an infringement if they serve the purposes of fair and reasonable criticism, which requires that the criticism primarily come from the original work. The judge also emphasized the frequently cited method of challenging this idea.¹⁰:

*"[W]e must often . . . look to the nature and objects of the selections made, the quantity and value of the materials used, and the degree in which the use may prejudice the sale, or diminish the profits, or supersede the objects, of the original work"*¹¹. This landmark decision established a common law precedent for the fair use approach and laid the groundwork for the Copyright Act's specific statutory description of the fair use criteria (1976)¹². Therefore, the fair use concept persisted as only a judge-made legal doctrine until the Copyright Act was codified. It was also noted in the House and Senate reports that § 107 was intended to be consistent with the previously established judge-made fair use doctrine.¹³ as: "*not to change, narrow, or enlarge [fair use] in any way.*"

IV. FAIR USE PROVISION IN INDIA

In India, Section 52 of the Indian Copyright Act of 1957 establishes the notion of fair dealing. The Bombay High Court concluded that the English Copyright Act, 1842, was applicable in India in *McMillan v Khan Bahadur Shamsul Ulama Zaka*, even though the Act was not expressly declared applicable to India.¹⁴ Because the Act does not define fair dealing, Indian courts have heavily relied on the English precedent of "*Hubbard v Vosper*," which contains the oft-quoted description of fair dealing by Lord Denning: 'It is hard to describe what is 'fair

⁹ Bracha, O., *Commentary on Folsom v. Marsh (1841), Primary Sources on Copyright (1450-1900)*, eds L. Bently & M. Kretschmer, [2008] http://www.copyrighthistory.org/cam/tools/request/showRecord?id=commentary_us_1841#_edn3_last access 29.09.2020

¹⁰ Gorab L. [2018], p. 705

¹¹ *Folsom v. Marsh* para.346

¹² Westbrook S., *Composition and Copyright: Perspectives on Teaching, Text-Making, and Fair Use* Rhetoric Review 29(2):206-209, [March 2010], p. 34

¹³ Gorab L., p. 709

¹⁴ (1895) ILR Bom 557 in Lal, *The Copyright Act*, 3rd edn (Law Publishers India, Allahabad), 1995, p.6.

dealing.' It must be a question of degree. First, assess the quantity and scope of quotations and extracts. Then evaluate the use of...Next, evaluate the proportions. Other factors may spring to mind. However, in the end, it must be a matter of impression.¹⁵

The Delhi High Court recently laid out the theory behind the defense of fair dealing in the case of *Chancellor Masters*. The Court decided that Fair dealing "legitimizes the copyrightable work's reproduction." When combined with a short copyright period, it ensures both a thriving public domain for speech and a public pool of ideas and information that everyone can use and refill. Therefore, it is necessary to read fair use clauses to achieve a balance between the copyright holder's exclusive rights and the frequently conflicting goal of enhancing the public domain. Therefore, it cannot be said that Section 52 discourages invention while yet forbidding obvious plagiarism. It must thus be construed liberally in order to align with the goals of copyright law. Only the two broad headings—whose use would not constitute an infringement—are listed in Section 52 of the Act. Therefore, the guidelines established by the courts must be used..."¹⁶

Despite adopting the "factor analysis method," which was developed in the United States, for evaluating fair dealing, Indian courts have only taken into challenges pertaining to equitable treatment in every instance within a certain setting. Hence, there is limited chance to adopt a comprehensive perspective on the possible interactions between these problems or an analytical perspective on their possible divisions. Since other elements, like bad faith, have not been in question, the courts have not been allowed to investigate them. It doesn't follow that these elements won't come up in other cases, even if they haven't been specifically mentioned as a possible contributing factor.

Indian courts should aim to build on the unique characteristics of their fair dealing regime, such as its policy preoccupations and other factors (in addition to those incorporated in the US code) for determining fair dealing that helps introduce the element of flexibility, rather than incorporating fair use by the introduction of factor analysis method in the Indian Copyright Act. Without a doubt, the fair dealing doctrine is required. Its exact function within the larger framework of copyright law is still unknown. The Indian copyright jurisprudence is currently anticipating a landmark case similar to *Folsom v Marsh*, which will tackle basic questions regarding the intent, interpretation, and practical implications of the fair dealing statute in India. The Calcutta High Court acknowledged the lack of legal precedent regarding copyright issues

¹⁵ (1972) 1 All ER 1023 p. 1027

¹⁶ 2008 (38) PTC 385(Del) Para 33.

when it declared in *Barbara Taylor Bradford v. Sahara Media Entertainment Ltd* that, "at least to this day, our country is singularly devoid of reported decisions in copyright actions."¹⁷ The case of *R. G. Anand* has been presented to us; however, none of the Indian authorities that either party felt worthy of citation before us have seemed to exist since that time. It is therefore best to start by looking at the legislative portions.

However, the Indian courts' method is extremely cautious and disciplined, despite occasionally being overly strict or constrained. The Indian courts have expanded the definition of exceptions to copyright infringement, which was previously primarily predicated on a limited interpretation of its breadth. In fact, in the recent fair dealing cases, the courts have typically examined the cases by using a checklist to go over each of the factors in the context of the stated purposes, weighing each one in favor of the user or the copyright owner, and then calculating the net score.

In a sense, this strategy has worked to keep the doctrine from freezing. The legislation appears to protect the otherwise closed monopoly through the use of both fair dealing and fair use. Ultimately, the policy concerns of the separate courts in India and the US reveal the true distinctions between the two countries. The Indian Act's fair dealing provision is succinct and omits any definition or guidance on the use of the defense. The American Act's fair use clause, on the other hand, is more detailed and the result of significant court consideration. Legislators aimed for the American Act to be adaptable and receptive to future development. Because they wanted to be sure, Indian legislators have opted for a conservative approach, which is reflected in the country's judicial jurisprudence.

V. ARTIFICIAL INTELLIGENCE AND COPYRIGHT ISSUES

Artificial Intelligence (referred to as "AI"), a term coined by John McCarthy in 1956, denotes the capability of machines to perform intricate, logical, and cognitive tasks that typically demand significant human involvement. This technology, recognized for its potential impact across various legal domains such as intellectual property, privacy, liability, and regulatory compliance, exemplifies its prowess through remarkable efficiency. For instance, while an average person might take over 10 minutes to analyze a 5000-word document, AI-powered systems like GPT (Generative Pre-Trained Transformer) can accomplish this task in less than 30 seconds. Ray Kurzweil, in 1990, defined AI as "the science of making computers do things that require intelligence when done by humans."¹⁸

¹⁷ 2004 (28) PTC 474 (Cal) Para 56.

¹⁸ Nina Fitzgerald and Eoin Martyn, "An In-depth Analysis of Copyright and the Challenges presented by Artificial Intelligence", Ashurst's Website, March 11, 2020, available at: <https://www.ashurst.com/en/news->

AI can be understood as a field within computer science and technology focused on developing and deploying computer systems capable of executing tasks that conventionally demand human intelligence. These systems employ algorithms, data analysis, and machine learning techniques to mimic human cognitive functions such as learning, reasoning, problem-solving, perception, and decision-making. They excel at processing and interpreting extensive data sets, identifying patterns, and making predictions or decisions based on their analyses, often improving their performance iteratively over time.

The rapid progress of AI has introduced complexities in various legal areas, particularly copyright law. Traditionally, copyright protection has been reserved for original works produced by human creators. However, AI-driven tools can now generate creative outputs like music, paintings, and literary works, raising fundamental questions:

1. Can AI be recognized as an author?
2. Are works generated by AI entitled to copyright protection?
3. How can existing copyright frameworks adapt to address these novel challenges?

Currently, there is no legal definition of "artificial intelligence."¹⁹ It generally refers to machines' ability to perform cognitive tasks like thinking, perceiving, learning, problem-solving, and decision-making. AI systems can be categorized into expert systems, perception systems, and natural language systems, as identified by *WIPO* (World Intellectual Property Organization).²⁰

AI poses intricate challenges in copyright law, particularly regarding non-human authorship. At the core of AI are "artificial neural networks", which mimic the human brain's learning process. These networks can self-learn, improving their performance as they receive more data.²¹ According to Russ Pearlman, "the central goals of AI include reasoning, knowledge, planning, learning, natural language processing (e.g., understanding and speaking languages), perception, and the ability to move and manipulate objects".²²

andinsights/insights/an-indepth-analysis-of-copyright-and-the-challenges-presented-by-artificial-intelligence/ (last visited on January 23, 2021).

¹⁹ V. K. Ahuja, ARTIFICIAL INTELLIGENCE AND COPYRIGHT: ISSUES AND CHALLENGES, *ILI Law Review Winter Issue 2020* , <https://ili.ac.in/pdf/vka.pdf>

²⁰ WIPO, "WIPO Worldwide Symposium on the Intellectual Property Aspects of Artificial Intelligence", WIPO, March 25, 1991, available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_698.pdf. (last visited on January 23, 2021).

²¹ Jake Frankenfield, "Artificial Neural Network (ANN)", Investopedia, August 28, 2020, available at: [https://www.investopedia.com/terms/a/artificial-neural-networksann.asp#:~:text=An%20artificial%20neural%20network%20\(ANN\)%20is%20the%20piece%20of%20a%20human%20or%20statistical%20standards](https://www.investopedia.com/terms/a/artificial-neural-networksann.asp#:~:text=An%20artificial%20neural%20network%20(ANN)%20is%20the%20piece%20of%20a%20human%20or%20statistical%20standards) (last visited on January 23, 2021).

²² Russ Pearlman, "Recognizing Artificial Intelligence (AI) as Authors and Inventors under U.S. Intellectual

In the Indian legal context, the Copyright Act²³ defines an author to include the person who causes a computer-generated work to be created. However, the Patents Act of 1970 excludes AI systems from patent eligibility, emphasizing human creativity and skill in invention.

Indian courts have yet to explicitly address AI authorship. However, they have tended to favor human authorship in cases of computer-generated works, viewing computers merely as tools under human guidance. Specific provisions, like *Section 2(d)(v) of the Copyright Act*, define authorship in such cases as the person who causes the work to be created.

The emergence of generative AI intensifies intellectual property concerns, as it autonomously generates content without clear authorship attribution. Currently, AI-generated works lack copyright protection, despite their creative outputs, presenting a significant challenge in India's legal framework.

The *RAGHAV*²⁴ case, a landmark in the Indian debate on AI authorship and copyright, involved artist and lawyer Ankit Sahni using the AI tool RAGHAV (“Robust Artificially Intelligent Graphics and Art Visualizer”) to create an artwork titled "Suryast." Initially rejected by the Copyright Office when listed as the sole author, the application was later granted copyright registration when both Sahni and RAGHAV were named as co-authors, underscoring the prevailing emphasis on human authorship in Indian copyright law.

The subsequent registration listing Sahni and RAGHAV as co-authors marked a potentially groundbreaking step, being the first instance in India (and arguably the world) where an AI tool received co-authorship recognition. However, this registration was revoked in December 2023 due to inconsistencies and conflicting statements from Sahni regarding RAGHAV's role.

The RAGHAV case demonstrates the ongoing legal uncertainty surrounding AI authorship and copyright in India. It raises crucial questions about the criteria for authorship in the digital age and challenges traditional copyright frameworks designed for human creators. The case's outcome is yet to be definitively determined, but it has sparked valuable discussions and ignited the need for potential revisions to Indian copyright law to address emerging technologies like AI.²⁵

The Board's opinion extensively references the U.S. District Court's ruling in *Thaler v.*

Property Law”, 24 (2) Richmond Journal of Law & Technology 4 (2018).

²³ Section 2(d), Copyright Act 1957

²⁴ Ankit Sahni v Copyright Office, Dairy no. 13646/2020-CO/A; RoC no. A-135120/2020.

²⁵ King Stubb & Kasiva, The Divergence In Copyright Recognition For AI-Generated Works: An In-Depth Analysis Of Ankit Sahni’s Case In The US And India, <https://ksandk.com/intellectual-property/divergent-copyright-recognition-ai-generated-works-sahnis-case-us-vs-india/> (accessed on 28-02-2024 at 12:49 am)

*Perlmutter*²⁶, affirming the indispensability of human originators for copyright protection. Furthermore, recent guidance from the Copyright Office underscores the pivotal distinction between AI and human creators, predicated on whether the work emanates essentially from human authorship or if conventional elements are generated and executed by a machine. The Board concisely articulated its position, emphasizing that copyright safeguards the expression of an idea, as opposed to the idea per se.

The emergence of AI in creative processes challenges traditional copyright frameworks. With AI generating music, art, and literature autonomously, questions arise regarding authorship and ownership.²⁷ These AI-generated works, while innovative, raise uncertainties in copyright law, especially regarding human involvement and training data sources.²⁸ Addressing these challenges necessitates reevaluating copyright laws to accommodate AI creativity while ensuring fairness to human creators.²⁹

Computer programs have been extensively utilized in generating copyrighted materials since the 1970s. Initially, these computer-generated works didn't raise significant issues regarding copyright ownership. This was because computer programs were perceived merely as tools supporting creative activities, requiring human intervention for production. They were likened to stationery items, necessitating human operation for creating works. However, the landscape has evolved. With the advent of AI, computer programs are no longer just tools but have the capability to autonomously generate works, making independent decisions.

AI possesses the capacity to produce a vast amount of content with minimal investment in a short timeframe. Works created by AI may be eligible for copyright protection in various jurisdictions due to their originality. The criteria of "skill and judgment" in establishing originality may be considered fulfilled based on the programming and parameters guiding AI's compilation and creation process. However, AI-generated works lack a discernible human author. In cases of AI-assisted works, human intervention exists, allowing the person utilizing AI to claim authorship. This contrasts with works entirely created by AI, raising global challenges regarding authorship. There are three broad approaches to address the authorship issue: first, recognizing AI as an author within the copyright system; second, denying authorship in AI-generated works, placing them in the public domain; and third, establishing a sui generis

²⁶ Civil Action No. 22-1564 (BAH)

²⁷ *Artificial intelligence and copyright*, WIPO - WORLD INTELLECTUAL PROPERTY ORGANIZATION, https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html (last visited Feb. 28, 2024).

²⁸ *Who owns the copyright to AI-generated content?*, EURONEWS, <https://www.euronews.com/next/2023/07/10/copyright-challenges-in-the-age-of-ai-who-owns-ai-generated-content> (last visited Feb. 28, 2024).

²⁹ *Ibid.*

legal framework for protecting such works. Granting AI authorship status would equate human and machine creativity, while denying copyright protection would prioritize human creativity. Both scenarios have implications for the future of creativity and innovation. Considering AI as an author presents challenges. AI-generated works may contain flaws, including biased or harmful content, posing legal complexities regarding liability. Additionally, if AI-generated works bear significant resemblance to existing copyrighted works, determining infringement becomes complex. Some argue against granting copyright protection to AI-generated works, suggesting they belong in the public domain. This approach ensures free access to works created without cost, encourages innovation, and prevents AI from monopolizing creative markets. Alternatively, a sui generis legal framework could balance the interests of AI creators and users while protecting against unfair exploitation. The issue of authorship also extends to deep fakes, where AI-generated content raises questions about copyright, privacy, and authenticity. Addressing these challenges requires careful consideration and international cooperation, as efforts to navigate AI's impact on copyright continue to evolve, including discussions at the WIPO. In the case of *Rupendra Kashyap v. Jiwan Publishing House Pvt. Ltd.*³⁰ a traditional approach was observed before the High Court of Delhi, which dealt with the copyright claim of the Central Board of Secondary Education over question papers. The Court determined that the CBSE cannot assert copyright without evidence of individual involvement in creating the question papers, given its status as an artificial entity. Under the Indian copyright act, authorship can only be attributed to a natural person. This position was further supported in the case of *Tech Plus Media Private Ltd. v. Jyoti Janda.*³¹

In the case of *Navigators Logistics Ltd. v. Kashif Qureshi & Ors*³², The case centered on a copyright claim for a computer-generated list, which was dismissed by the Court due to the lack of human intervention. This aligns with the position in the United States, where authorship cannot be solely attributed to AI. The Government of India has recognised the importance of AI in the developmental process . Indian Government has taken steps such as the 'AI for All' policy and the AI Task Force to use AI for social and economic changes. Given the rapid advancement in AI technology, it becomes crucial to re-evaluate the intellectual property framework to ensure that the law keeps pace with these developments. The Indian Copyright Act may be updated to acknowledge AI as authors. However, it is important to clarify that the ownership of the work should still reside with a natural or juristic person. This is necessary to

³⁰ *Rupendra Kashyap v. Jiwan Publishing House Pvt. Ltd.*, 1996 (38)DRJ81

³¹ *Tech Plus Media Private Ltd. v. Jyoti Janda*, 2014 (60) PTC 121 (Del)

³² *Navigators Logistics Ltd. v. Kashif Qureshi & Ors*, AIR ONLINE 2018 DEL 1483

ensure that legal actions can be taken against responsible entities. Additionally, other considerations arise, such as situations where AI is developed by one person but generates output based on inputs from another person. In instances like these, it is necessary to establish copyright ownership among the parties involved. Any legal framework aiming to attribute authorship (either fully or partially) to AI must address these questions and provide comprehensive answers.

VI. CYBERSECURITY AND COPYRIGHT ISSUES

Copyright³³ and cyber law are two distinct fields of legal study, yet they increasingly intersect in our digital age. As the world becomes more interconnected through technology, understanding the relationship between these two areas is essential for creators, consumers, and legislators alike.³⁴

The rapid growth of the internet and associated technologies has made it easier to reproduce and distribute copyrighted works, leading to increased instances of copyright infringement.³⁵ Cybersecurity plays a role in protecting intellectual property (IP) by securing digital assets and preventing unauthorized access, use, disclosure, or manipulation of protected works.³⁶ Over the last decade, cybercrime has continued to increase, impacting governments, corporations, and individuals.³⁷

Cybersecurity is arguably the most significant security concern all over the world. Security research is an essential component of cybersecurity practices and is utilized to detect security vulnerabilities in digital devices that could be targeted and exploited by hackers. Presently, the copyright infringement laws that protect these digital devices conflict with the efforts to conduct security research.³⁸ Cybersecurity research can grant experts and researchers the ability to develop solutions that can prevent hackers from attacking companies, the government, and citizens. While cyber-attacks were formerly centered on email or credit card hacks, cybercrime attacks have evolved with the digital age and allow hackers to cast a wider net over the digital

³³ Manish Jindal, What is Copyright, Bytes Care Blogs, [(February 28, 2024, 1:28 PM)], [<https://bytescare.com/blog/what-is-copyright>].

³⁴ Ibid.

³⁵ PRIVANOVA S.A.S, *Copyright infringement as a form of cybercrime – CYBERSPACE*, CYBERSPACE, [<https://cyberspaceproject.eu/copyright-infringement-as-a-form-of-cybercrime/>] (last visited Feb. 28, 2024).

³⁶ Mili Kanoujiya, *Analysis of copyright issues in cyberspace*, iPleaders, [<https://blog.ipleaders.in/analysis-of-copyright-issues-in-cyberspace/>] (last visited Feb. 28, 2024).

³⁷ Laberis, Bill. "20 Eye-Opening Cybercrime Statistics." Security Intelligence, 14 Nov. 2016, securityintelligence.com/20-eye-opening-cybercrime-statistics/.

³⁸ Maryna Koberidze, *The DMCA Rulemaking Mechanism: Fail or Safe?*, 11 WASH. J.L. TECH. & ARTS 211, 213 (2011).

devices consumers use regularly.³⁹

Recent cybercrimes reported in the news focus on attacks on medical implants and vehicle software. Cybersecurity researchers have found deadly vulnerabilities in a variety of medical devices, including pacemakers and insulin pumps. These vulnerabilities grant hackers the opportunity to access and control these implants by hacking the medical system software.⁴⁰

Vehicle software has also been a recent target of hackers. Researchers who have been able to circumvent vehicle software have found security issues that could have a dangerous impact on consumers who drive cars.⁴¹ Through circumventing vehicle software, researchers have detected a few ways in which hackers have been able to control vehicles,⁴² such as controlling the brakes and the steering in a vehicle by gaining access through the vehicle's Bluetooth or other communication ports.

Security researchers found the security vulnerability when circumventing the vehicle; these researchers were able to show Fiat just how easily they could control the vehicle and brakes through a communication port on the vehicle. As a result, Fiat recalled 1.4 million of their vehicles.⁴³

In 2010, the Indian government's Committee on Piracy (CoP) linked piracy with large revenue and job losses. The CoP presciently observed that the advent of smartphones and 3G would make it "much easier to undertake all kinds of film piracy."⁴⁴

In 2015, the Jabalpur police arrested a piracy syndicate responsible for pirating Baahubali, one of the highest-grossing Indian movies of all time. The accused were granted bail by the trial court. However, the case is still pending and there is no record of a hearing after 2017. Gallingly, the accused were arrested again, in Hyderabad, for pirating Baahubali 2, the film's equally successful sequel.⁴⁵ While, in the recent case of Knit Pro International v State of Delhi (2022),

³⁹ Katherine Weigle, *How the Digital Millennium Copyright Act Affects Cybersecurity*, DIGITAL COMMONS @ AMERICAN UNIVERSITY WASHINGTON COLLEGE OF LAW | AMERICAN UNIVERSITY WASHINGTON COLLEGE OF LAW RESEARCH, <https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1115&context=ipbrief> (last visited Feb. 28, 2024).

⁴⁰ Robert A. McFarlane & Timothy v. Fisher, *Software Patents Under 35 U.S.C. § 271(f): Should Congress Amend § 271 to Harmonize Protection Between Tangible and Intangible Inventions?*, 2 HASTINGS SCI. & TECH. L.J. 183 (2010) (discussing major cases covering pacemakers and circumvention exemptions for this type of software).

⁴¹ Antigone Peyton, *The Connected State of Things: A Lawyer's Survival Guide in an Internet of Things World*, 24 CATH. U. J. L. & TECH. 36 (2016).

⁴² *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 80 Fed. Reg. 65944 (the most recent version of circumvention exemptions for automobiles).

⁴³ Peek into the Future: The Risk of Things, Symantec, <https://www.symantec.com/content/dam/symantec/docs/infographics/istr-iot-en.pdf>.

⁴⁴ Arpan Banerjee, *Copyright piracy and cybercrime: enforcement challenges in India*, WIPO - World Intellectual Property Organization, https://www.wipo.int/wipo_magazine/en/2022/04/article_0008.html (last visited Feb. 28, 2024).

⁴⁵ *Rahul Mehta vs The State Of Madhya Pradesh*, Miscellaneous Criminal Case No.15542/2015.

the Indian Supreme Court declared criminal copyright infringement as a “non-bailable” and “cognizable” offence⁴⁶, however, the ground-level impact of the decision is unclear.

The Maharashtra government established the Maharashtra Intellectual Property Crime Unit (MIPCU) in 2017 to provide rights holders better enforcement. The MIPCU was established as a division of Maharashtra Cyber, the state police’s cybercrime wing, and structured as a public-private partnership.⁴⁷

Yashasvi Yadav, Special Inspector General of Police confirmed linkages between piracy and malware, stating: “Certain malware providers use pirated content as a trap. Their main business is not piracy. Their main intention is to infect computers, steal data or install spyware.”⁴⁸

Despite potential advantages, the MIPCU does have limitations. For a start, the MIPCU cannot directly shut down piracy websites or apps. Such action is the administrative remit of the Indian Ministry of Electronics and Information Technology (MEITY). the unit relies heavily on voluntary compliance. In this regard, Team MIPCU listed many difficulties, ranging from non-compliant hosting services in “rogue geographies” outside India to “members-only” piracy platforms hidden from public view.⁴⁹

On the civil litigation front, the situation in India appears brighter. Many states in India have set up fast-track courts, and the Delhi High Court has recently established an Intellectual Property Division. The Delhi High Court’s approach towards online film piracy (expertly summarized by Justice Pratibha Singh of the Intellectual Property Division in a recent WIPO presentation⁵⁰) has been especially noteworthy.

In the leading case of *UTV Software Communications Ltd. v 1337X.to* (2019)⁵¹, the court recognized “dynamic” injunctions (to preempt pages from shifting across different URLs) and specified criteria to determine when to block “rogue websites” (i.e. websites that “primarily or predominantly share infringing content.” More recently, the Delhi High Court, in *Neetu Singh v Telegram* (2022)⁵², directed Telegram to disclose information about uploaders of pirated

⁴⁶ *M/S Knit Pro International vs The State Of Nct Of Delhi*.

⁴⁷ *Maharashtra’s Big Push to Eliminate Piracy - Creative First*, CREATIVE FIRST, <https://creativefirst.film/maharashtras-big-push-to-eliminate-piracy/> (last visited Feb. 28, 2024).

⁴⁸ *Copyright piracy and cybercrime: enforcement challenges in India*, WIPO - WORLD INTELLECTUAL PROPERTY ORGANIZATION, https://www.wipo.int/wipo_magazine/en/2022/04/article_0008.html (last visited Feb. 28, 2024).

⁴⁹ *Ibid.*

⁵⁰ WIPO - World Intellectual Property Organization, https://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_15/wipo_ace_15_11.pdf (last visited Feb. 28, 2024).

⁵¹ *Utv Software Communication Ltd. And Ors vs 1337X.To And Ors*, AIR ONLINE 2019 DEL 773.

⁵² *Neetu Singh vs Telegram Fz Llc*.

content.

The CoP has observed that piracy is inappropriately viewed as “a low-risk high-reward” crime in India, with law enforcement agencies challenged with tackling “heinous criminal activities.”⁵³ One of the most accessed forms of such data privacy infringement is the illegal use of Databases. Under Section 2(o) of the Indian Copyright Act 1957, “Databases” are protected as “Literary Works.”⁵⁴ For the first time in the Information Technology Act of 2000, the phrase “computer database” was defined. A person who violates the copyright and online regulations can be fined up to one crore rupee under Section 43⁵⁵ of the IT Act of 2000. Section 43 of the Act criminalises a wide range of offences, including computer trespass, digital copying, invasion of privacy, data theft, and so on.

A computer programme is defined as a “collection of instructions represented in words, codes, schemes, or any other form, including a machine-readable medium, capable of enabling a computer to do a certain task or accomplish a particular result,” according to Section 2(ffc)⁵⁶ of the Copyright Act. The Copyright Act defines computer software as a “computer programme.” Computer programmes now qualify for copyright protection, as well as other types of Intellectual Property Rights protection, under the T.R.I.P.S (Trade-Related Aspects of Intellectual Property Rights) accord.⁵⁷

There is no responsibility under Section 79 of the Information Technology Act of 2000⁵⁸ if the subscriber establishes that the breach or crime was committed without the knowledge of a person or that a person had exercised all reasonable diligence to prevent the commission of such breach or offence. To hold an Internet Service Provider (ISP) liable for the infringement or aiding in the infringement of another’s copyright, the ISP must have knowledge of the infringement; otherwise, the ISP is immune from prosecution.

The Delhi High Court held in *Super Cassettes Industries Ltd v. Myspace Inc and Anr.*⁵⁹ that the provisions of section 79 of the Act had no effect on copyright infringements relating to internet wrongs where intermediaries are involved, and that the same provision, Section 81 of the IT Act, had no effect. As a result, even though an intermediary is protected under Section 79 of the

⁵³ *Copyright piracy and cybercrime: enforcement challenges in India*, WIPO - WORLD INTELLECTUAL PROPERTY ORGANIZATION, https://www.wipo.int/wipo_magazine/en/2022/04/article_0008.html (last visited Feb. 28, 2024).

⁵⁴ Indian Copyright Act, 1957 § 2(o).

⁵⁵ Information Technology Act, 2000 §43.

⁵⁶ Copyright Act, 1957, §2 (ffc).

⁵⁷ *Analysis of copyright issues in cyberspace - iPleaders*, iPLEADERS, <https://blog.ipleaders.in/analysis-of-copyright-issues-in-cyberspace/> (last visited Feb. 28, 2024).

⁵⁸ Information Technology Act, 2000 § 79.

⁵⁹ *Super Cassettes Industries Ltd v. Myspace Inc and Anr.*

Information Technology Act, the copyright owner may still sue the intermediary under the Copyright Act of 1957. Even though the Information Technology Act of 2000 doesn't talk about copyright or anything else related to intellectual property rights, it does try to control how intellectual property is shared. In this day and age one needs to therefore pay heed and great caution to everyday activities like, copying content from Social Media, Peer-to-peer (P2P) file sharing, Linking, and Uploading & Downloading, which *prima facie* look harmless and innocent but can feed to the demon of security breach.⁶⁰

VII. CONCLUSION

This paper explores the complexities of copyright in the digital age, highlighting the challenges posed by digital piracy, fair use, and the protection of intellectual property. The paper discusses the implications of denying copyright protection, the issues surrounding AI-generated works, and the evolving concept of fair use in response to digital advancements. It also addresses the importance of balancing private rights with public interest, emphasizing the need for a comprehensive understanding of copyright issues in the digital era. The conclusion emphasizes the necessity of updating copyright regimes to strike a balance between protecting authors' rights and promoting innovation while ensuring fair access to information in this dynamic digital landscape.

⁶⁰ Kavita R. Yadav, *COPYRIGHT IN CYBERSPACE*, SCHOLARLY RESEARCH JOURNAL FOR INTERDISCIPLINARY STUDIES, <https://oaji.net/articles/2017/1174-1489490501.pdf> (last visited Feb. 28, 2024).