EXPLORING THE FUTURE OF INTELLECTUAL PROPERTY RIGHTS IN A DIGITAL FIRST WORLD

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ABSTRACT

The field of intellectual property (IP) rights is changing rapidly in a time of swift technical development and digital innovation. The distinct characteristics of the digital world are posing a growing threat to the conventional frameworks that once successfully regulated ownership and protection. The boundaries between authorship and ownership become less clear as content creation shifts from well-known artists to regular people empowered by social media platforms, posing significant questions about what creativity looks like in a world that is dominated by technology. Since digital reproduction and dissemination are so simple, there is an unprecedented amount of content available, which has led to a rise in piracy and unauthorised usage and the inadequacy of long-standing enforcement measures. Emerging technologies like blockchain, augmented reality, and Artificial Intelligence (AI) simultaneously present new challenges alongside possible answers.

To maintain their relevance, equity, and ability to promote innovation while defending the rights of artists, IP laws and policies must be re-evaluated considering this digital progression. Understanding the future of IP rights is crucial as humanity traverses this complex digital environment, not only for legal professionals but also for creators and consumers who are caught between opportunity and vulnerability in an environment that is always changing.

This article discusses the future of IP rights in a digital-first world. This work analyses the current landscape of IP across different geographical regions and discusses how the landscape has evolved with the introduction of AI. The article goes on to explore some useful strategies that can be adopted going forward.

INTRODUCTION

As intellectual property (IP) law has advanced, protecting digital content has become a pressing issue. Traditional copyright enforcement techniques frequently fall short in safeguarding authors' rights due to the growing ease of copying, sharing, and profiting from digital materials. As a result, the need for innovative solutions that can effectively tackle these issues is growing. Emerging technologies like blockchain and Artificial Intelligence (AI) offer automated, transparent, and secure IP management solutions that have the potential to completely transform the protection of digital information. This study explores the potential of blockchain and AI in safeguarding digital information while determining the critical elements impacting users' and content creators' adoption of these technologies.

METHODOLOGY

This study analyses statistical data from a range of publications including peer-reviewed academic studies, government-funded reports, and published investigations from private companies. Peer-reviewed literature was employed to understand existing theories, practices, and challenges in digital content protection, as well as the current role of blockchain and AI technologies. Statistical data from industry studies, Statista (a reliable data platform that compiles statistics from industry reports and market research) and other sources provided current information on the volume of digital content produced, copyright infringement rates, and the economic impact of new technologies in the IP industry.

DISCUSSION

Navigating the turbulent waters of digital piracy: what's going on?

The emergence of digital platforms has drastically changed the IP rights landscape, making it difficult for established legal frameworks to adjust. In the past, the purpose of IP law was to safeguard material creations like publications, music recordings, and patents. However, the shift from traditional to digital media has fundamentally changed how things are produced, distributed, and consumed. The International Federation of the Phonographic Industry (IFPI), for example, stated in 2020 that digital music channels produced 21.6 billion USD worldwide, highlighting the increasing significance of digital platforms for artistic expression. Notwithstanding these developments, copyright violations have increased in the digital era, and piracy has become a major issue (IFPI, 2020, p.12).

The growing threat of digital piracy in the music industry

The sustainability of the music industry is in danger due to the scope and persistence of digital piracy. Using data from a study conducted by the Institute for Policy Innovation (IPI) (Siwek, 2007), Stassen argued in a 2022 article for *Music Business Worldwide* that while music piracy had significantly declined over the preceding five years, 2021 saw a resurgence. According to international data, piracy increased by 2.18% in 2021 compared to the previous year, with a startling 18.6% surge in the final quarter of 2021 (Stassen, 2022). Although unauthorised digital music access decreased from 20% to 15% in some areas (including the UK) between 2012 and 2022, this development deviated from the global trend (Leu, 2024). Notably, younger users dominate the piracy demographic, with Generation Z (born between 1997 and 2012) comprising 43% of those pirating music (Zandt, 2023).

Economic and employment impacts of music piracy

Recent discussions on the impact of unauthorised use of creative works have expanded to include concerns about AI. A 2024 study by the International Confederation of Societies of Authors and Composers (CISAC) projects that workers in the music sector could lose nearly a quarter of their income to AI within the next four years. The report emphasises the need for policymakers to intervene and protect creators' rights and incomes (CISAC, 2024, p.29). Based on data from a study conducted by the Institute for Policy Innovation, the Recording Industry Association of America (RIAA) estimates that music piracy causes significant financial losses to the U.S. economy, including an annual impact of 12.5 billion USD on the industry, with the U.S. alone losing approximately 2.7 billion USD each year (RIAA, 2024).

Broader trends in digital piracy

Beyond music, there has been a rise in the piracy of other copyrighted media, including films. The overall rate of piracy of copyright-protected content increased by 3.3% in 2022 compared to 2021 and 2020 with film piracy alone increasing by 17% (EUIPO, 2023, p.10). This corresponds to 1.1 access of pirated material per internet user per month in Europe (EUIPO, 2023, p.10). These patterns are reflective of the wider difficulties presented by the digital world, where it is becoming easier and more common to acquire stolen content.

IP includes the legal rights that are given to people or organisations over their works of art, literature, inventions, and trademarks. The complexity of sharing digital content and the rapid pace at which technology is developing require that IP frameworks change. In order to do this, it is necessary to strengthen the rights of creators, modify enforcement strategies, and make sure that fair use guidelines strike a balance between the rights of creators and those of users. Copyright in particular demands renewed focus as digital piracy continues to undermine IP law.

User-generated content, social media, and the evolving concept of fair use

Users can now create and share films, music, and visual content thanks to platforms like YouTube, Instagram, and TikTok, which have completely changed the way that content is created and distributed. This content frequently incorporates previously created works, which has led to the creation of a 'remix culture'. At the core of 'remix culture', user-generated content (UGC) is created by fusing pre-existing media with fresh interpretations, usually with the goal of producing works that are transformative. However, the lines between fair use, authorship, and ownership are blurred in this creative atmosphere, leading to continuous legal disputes and difficulties (Harper, 2010).

By enabling regular people to produce and distribute material that is based on or incorporates the IP of others, UGC platforms have democratised authorship. For instance, many YouTube creators use short clips of well-known songs or videos to

comment on or alter the original content, often inadvertently violating copyright. Original authors are generally granted exclusive rights under copyright but because billions of UGC posts are created every day, platforms make it difficult to enforce these rights (Ginsburg, 2010).

Courts have differing opinions about how to define fair use, which is meant to permit the restricted use of copyrighted content for criticism, parody, commentary, or educational purposes. A work must generally be 'transformative' rather than a mere reproduction of the original to qualify as fair use. However, determining what constitutes transformation is often subjective and varies across cases. In *Campbell v. Acuff-Rose Music, Inc.* (1994), the Supreme Court ruled that 2 Live Crew's parody of 'Oh, Pretty Woman' was transformative, even though it borrowed elements from the original song. Conversely, in 2023**,** The Andy Warhol Foundation sued Lynn Goldsmith, seeking to have his use of her 1981 photograph of Prince deemed fair use (Warhol had created a series of silkscreen portraits including one called 'Orange Prince,' which was based on the photograph). The Court ruled that Warhol's use of Goldsmith's photograph was not transformative enough to qualify as fair use, contrasting with prior rulings that had granted broader leeway to artistic reinterpretations. These cases illustrate the evolving and sometimes unpredictable nature of judicial reasoning regarding transformative use. In the context of UGC, some people may see an Instagram meme or reaction video as transformative, while others may see it as illegal copying.

To identify and report possible copyright infringements, UGC platforms use algorithms and content-matching tools (like YouTube's Content ID). These technologies can inadvertently detect work that would otherwise be considered fair use, as a result of their design to safeguard original artists. Content producers frequently contest these automated judgements, arguing that algorithms stifle creative expression by failing to discern between actual copyright violation and fair use (Perel and Elkin-Koren, 2016). Legal safeguards like the safe harbour provisions of the Digital Millennium Copyright Act (DMCA) in the United States limit platform liability, so long as platforms promptly comply with takedown requests (17 U.S.C. §§ 101-114, 502-503).

The question of whether remix culture should be given more latitude under copyright laws has been raised by this practice of using algorithms to detect content. Remix culture can encourage creativity and engagement, according to proponents of a more flexible approach. It is therefore imperative that regulations change to keep up with these digital behaviours. However, some argue that easing copyright safeguards would jeopardise the financial interests and rights of original creators (Li, 2020).

AI and the redefinition of authorship

Given that AI programs like ChatGPT, DALL-E, and Midjourney can produce writing, artwork, music, and even whole multimedia projects, the emergence of AI has raised serious concerns for the conventional notion of authorship. This phenomenon profoundly challenges accepted ideas of intellectual property and copyright, sparking widespread discussions in the media about what it means to 'create' and 'own' a work. Coverage by media outlets such as Forbes highlights how these public debates extend across law, ethics, and philosophy, reflecting public uncertainty over authorship and ownership in the age of AI-generated content (McKendrick, 2022).

Only human artists are traditionally granted authorship rights under copyright law. As demonstrated by a case involving an AI-generated image where copyright was denied, the Copyright Office in the United States has maintained that works produced exclusively by computers are not copyrightable (*Thaler v. Perlmutter*, 2023).

AI serves as both a tool and a possible collaborator when used to efficiently develop artistic works. There are concerns regarding who the true 'author' is when human producers utilise AI to edit, inspire, or otherwise affect content (for example, when musicians use AI to create beats or writers use it to come up with story ideas). The legal system has difficulty deciding whether a human's contribution is significant enough to justify copyright protection.

Industries are looking at ways to modify their IP frameworks as a result of the usage of AI tools to produce complete works in domains such as publishing, music, and visual arts. For example, AI-generated musical compositions are produced by systems like Jukedeck and Artificial Intelligence Virtual Artist (AIVA) which raises concerns about song ownership. These debates underscore the need for a more nuanced approach to copyright, one that might establish new categories of copyright for AI-generated works with economic and ethical implications or entail co-ownership between AI developers and human users. Concerns regarding the effects on human artists, authors, and designers are raised by AI's capacity to produce large amounts of content. Some contend that granting AI-generated works copyright protections could discourage human originality and result in a market overrun with artificially produced material (Mei, 2024). Others suggest that defining clear ownership rights for AI-generated works can help protect the interests of the companies and individuals investing in these technologies, ensuring that original creators are not unfairly disadvantaged (Aziz, 2023).

Some scholars advocate for a sui generis (unique) category of copyright law specifically for AI works, while others call for stricter guidelines on human involvement in the creative process to claim authorship (Hardman and Housel, 2023). As these debates progress, legal frameworks may evolve to provide more structured guidelines for AI-authored content, striking a balance between innovation and IP rights. This is because AI presents challenges to IP law, and policymakers are considering frameworks that account for human oversight, ethical boundaries, and transparency in AI development.

What is the way ahead?

IP law must change to meet the complex and quickly changing landscape of content generation, distribution, and ownership in a society that is dominated by digital technology. Future IP regimes must be flexible, responsive, and able to safeguard creators' rights while encouraging innovation, given the growing amount of content that exists in digital areas.

By producing time-stamped, unchangeable records of IP ownership, blockchain (which essentially is a type of digital database or ledger that records transactions or information in a secure and transparent way) can guarantee transparency and lower the possibility of infringement. When smart contracts are incorporated into blockchain systems, they can automate the transfer of royalties, giving creators immediate payment and lowering the need for middlemen. This method has already been popular in the digital art and music sectors, where artists profit directly from every transaction involving their creations. The automation of IP infringement monitoring across digital platforms can be facilitated by AI and machine learning. For instance, AI-powered systems can instantly detect illegal copies of content protected by copyright on the internet, greatly accelerating and improving the precision of enforcement measures. Some platforms, such as YouTube, already utilise AI to detect copyright violations, but broader application across other media could offer more comprehensive protection for creators (Bukhari and Hassan, 2024).

An international approach

A unified international framework or treaty like the *Berne Convention for the Protection of Literary and Artistic Works* (1886) could harmonise IP laws across countries, simplifying enforcement and establishing clear standards for digital content protection. This approach would involve collaborative governance among nations and could help mitigate issues like platform-specific or country-specific copyright discrepancies. National IP laws are often insufficient to address cross-border infringement because digital content moves seamlessly across borders (Dihaa et al., 2024).

The needs of digital producers who publish on several platforms are not well reflected by traditional licensing methods, which are frequently inflexible and antiquated. Future licensing schemes might include adaptable, dynamic models that let authors provide licenses for a variety of applications, like non-commercial or educational ones. Furthermore, micropayment schemes that provide modest, direct payments from users to content producers (like a ’pay-per-view’ or ‘pay-per-use’ model) could provide just compensation while enabling users to obtain content at a reasonable cost (Mhlongo et al., 2023).

Techniques for digital watermarking and fingerprinting offer a means of tracking and confirming the ownership of digital works while they are being circulated online. By embedding invisible identifiers in content, these technologies enable creators and rights holders to monitor unauthorised usage and implement the necessary enforcement actions more easily. Businesses in the publishing and photography sectors are already using digital watermarks to protect their IP (Hsieh et al., 2014).

Harnessing blockchain and non-fungible tokens

Given the speed at which digital content is being consumed, shorter durations with renewal possibilities depending on the work's continuous use and relevance could be used as an alternative to the customary long copyright tenure. This strategy would lessen the administrative burden for works that have expired while allowing authors to keep their rights over well-known content. A system like this would encourage creation in the digital realm by making it easier to reuse and reinterpret previous works.

A promising approach to improving ownership transparency and protecting artists' rights in an increasingly digital world is to integrate blockchain technology into IP management. Blockchain's decentralisation, transparency, and immutability offer a solid basis for addressing a variety of IP management problems. Its ability to provide tamper-proof ownership records (where each transaction is time-stamped and encrypted) makes it simpler to establish ownership. For example, the creation of non-fungible tokens (NFTs) (a type of digital asset that represents ownership or proof of authenticity for a unique item) by artists as verifiable proof of ownership is revolutionising the trading of digital art and IP (Tripathi et al., 2023). Furthermore, by using smart contracts to automate payments, blockchain also makes it possible for more effective royalties to be distributed, guaranteeing

that creators receive their money immediately. By avoiding traditional labels and encouraging more equitable profit distribution, platforms such as Audius enable musicians to share their work directly with fans.

Technological obstacles, unclear regulations, and the requirement for broad sector acceptance are still obstacles, nevertheless. It is still up for debate whether NFTs fall within the current copyright legislation or as a new type of IP. Furthermore, sustainability issues are brought up by blockchain networks' high energy usage. Notwithstanding these problems, blockchain offers promising new ways to enhance IP management (Günay, 2022).

With the help of NFTs, artists can maintain control over their creations even after they are sold or distributed digitally. Incorporating royalty clauses into NFTs allows authors to get a cut of future sales, guaranteeing steady income from well-known works. Digital art, music, and other creative industries could undergo a revolution as a result, generating new sources of income and encouraging creativity and dissemination.

These innovative approaches aim to balance protection, flexibility, and accessibility in an IP framework tailored for a digital-first world while safeguarding creations from AI misuse. Implementing these solutions will require collaborative efforts among creators, legal experts, policymakers, and technology developers to ensure that IP laws evolve alongside the digital landscape, supporting both creators and consumers in a rapidly changing environment.

CONCLUSION

To sum up, the digital-first era necessitates a radical rethinking of IP frameworks to protect creators' rights while promoting innovation and accessibility. The transition from physical to digital content has created complex issues, ranging from piracy and unauthorised use to questions about authorship and fair use. New technologies like blockchain, AI, and smart contracts offer promising avenues for improving IP transparency, automating royalties, and managing ownership rights in a secure, decentralised manner. At the same time, international cooperation is necessary to address IP challenges that cut across national boundaries, establishing uniform standards for efficient enforcement. As the production and consumption of digital content increases, flexible licensing, creative legal frameworks, and educational programs will be crucial in fostering a culture that respects IP rights.

By adopting these cutting-edge tactics, it is possible to create an IP environment that benefits both producers and users, keeping pace with the rapid development of digital media. This well-rounded strategy could enhance worldwide access to knowledge and cultural resources while simultaneously defending the rights of producers.

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