
PUBLIC NUISANCE IN THE DIGITAL AGE: COPYRIGHT INFRINGEMENT, ONLINE PIRACY, AND GLOBAL LEGAL RESPONSES

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ABSTRACT

Public nuisance refers to acts or omissions that result in widespread harm, inconvenience or injury to the rights of the public, has remained a broad concept, but with the digital era, it has gone wider. In the current nuisance in relation to digital copyright infringement and online piracy, the paper considers how the doctrine of nuisance in the public has been transformed and the two issues are presented as the modern day nuisances that interfere with the collective cultural and economic wellbeing. As technology continues to evolve at a great pace, the study highlights the necessity in the near future of bringing forth the issues of jurisdiction and enforcement through ways that are both adaptive and legal in the protection of intellectual property rights.

The research analyzes the role of the interplay between intermediary liability, safe harbor, and the role of Internet Service Providers (ISPs) in reducing digital piracy by conducting a comparative study of legal systems based on the Digital Millennium Copyright Act (DMCA) of the United States, the Copyright Directive of the European Union, and the Copyright Act of India. It also explores the technological aspects of enforcement, such as Digital Rights Management (DRM), watermarking, blockchain, and AI-based detection technologies, as well as critically discusses the conflict between fair use, consumer rights, and privacy issues.

It puts digital copyright infringement in the context of a wider transnational legal and ethical framework by looking at international legal documents like the Berne Convention and the TRIPS Agreement. The study removes that failure of copyright protection used online not only represents a wrong in the privacy sense, but it also reflects in the socio-economic sense as a harm to the society that requires a unified global effort to combat. Finally, the research recommends that the doctrine of the public nuisance should evolve to include online disturbances, and the creation of proactive, technologically conscious, and internationally coordinated legal systems must be created to allow creative freedoms to coexist with democratic ones in the digital age.

Keywords: Public Nuisance, Copyright Infringement, Online Piracy, Intellectual Property, Digital Millennium Copyright Act, Intermediary Liability, Digital Rights Management, Fair Use, Jurisdictional Challenges, Cross-Border Enforcement, Technological Protections, International Treaties, Legal Framework, Socio-Economic Impact.

INTRODUCTION

The doctrine of public nuisance originated from the English common law, which focused on the acts or omissions of the invading public rights such as public highways, or pollution of water bodies. Within the period of the English Common Law Period, public nuisance was classified as a “criminal” act and was controlled by the Crown for the community’s well-being. Later, public nuisance got defined to include activities which caused harm to the public’s health, “safety” morals, or comfort. Today, legal scholars understand public nuisance to include also injuries caused by intangible digital means.

The rapid expansion and advancement of technologies on a global scale has enhanced digital technologies in an unprecedented manner. The copyright infringement becomes ever easier around the globe, as the Internet facilitates the unlawful duplication, dissemination, and the communication to the public of copyright works, and as such copyright breaches and online piracy constitute the foremost areas of concern. Out of them, the most relevant for the copyright infringement at hand, public private acts, such as the unauthorized reproduction and the illegal distribution of copyrighted materials, as well as the online communication to the public of such works at any a once largely, inaudibly private copyright infringement. This type of Piracy, and the lack of control over them, goes beyond the infringement of private rights, and is a considerable public wrong, mental damage, to the economy and culture.”

This type of control has earned a new type of control over the economy of the equity, and culture is infringing public wrong, mental damage to the public domain.” new public, and is a considerable global concern for the public domain for them.

RESEARCH OBJECTIVES

1. To examine the legal aspects and jurisdictional problems associated with copyright infringement and online piracy as a public nuisance in the digital environment.
2. To evaluate the national and international laws, mainly, intermediary and enforcement tools that regulate the violation of digital copyright, and their efficiency.
3. To understand how technological systems such as Digital Rights Management (DRM) systems and blockchain technology can affect the curtailment of copyright in public domain, as well as, user rights.

HYPOTHESIS

The hypothesis of this study posits that an increase in the use of digital technologies, as well as the unconfined nature of the internet, has exacerbated the violation of copyrights and online piracy which constitutes a new form of public nuisance in terms of the scale of socio-economic consequences. It further posits that current laws and enforcement approaches, even the ‘intermediary liability’ clauses, are utterly incapable of effectively preventing violations of copyright in the digital environment. It is the study’s hypothesis, that the use of technologies such as Digital Rights Management, coupled with the use of blockchain and coordinated global legal incorporation, is likely to improve copyright protection without compromising public interests and user rights in the contemporary digital environment.

RESEARCH QUESTIONS

Q1. How adequate are the current national and transnational legal systems in tackling the public nuisance of copyright infringement and online piracy?

Q2. How do intermediary liability and jurisdictional concerns trouble the enforcement of digital copyright laws?

Q3. In what ways can technological resources and cooperative approaches improve enforcement of copyright protection in which user rights and the public domain are sufficiently sheltered?

RESEARCH PROBLEM

Mechanisms for personal use of digital material without payment, or the taking of created and uploaded works within the internet, is common and often preferred in the digital society. These phenomena are made possible by an indiscernible acceleration of technology, the internet's migratory and nomadic nature. The perplexing jurisdictional issues in these borderless realms, masked in anonymity, circumvention of safeguards of the technology arms, partitions like DRM, and all the rest, has led to the state of lawlessness. The opposite of these are the philosophically rich conclusions of law, the analogy of which is like spaghetti, an intertwined formation of protective rights for the inventor and the supporting mechanism, the traversible paths being digital piracy and absence of equilibrium between the public domain boundaries.

SCOPE AND LIMITATION

The present study has employed doctrinal research which analyzes the case laws and legislative texts on Copyright Infringement and Public Nuisance and other judicial precedents critically and thoroughly. This research has also been legal comparative research on other municipal texts and legislations such as the US Digital Millennium Copyright Act (DMCA), the EU Copyright Directive, as well as the amended Copyright Act of India.

RESEARCH METHODOLOGY

The current research has used the doctrinal researches that examine the case laws and legislative texts on Copyright Infringement and Public Nuisance and other court precedents critically and exhaustively. This study has also been a legal comparative study of other municipal documents and legislations like the US Digital Millennium Copyright Act (DMCA), the EU Copyright Directive, and the modified Copyright Act of India. Other documents like legal commentaries, journal articles and reports of other international bodies like WIPO have also been used to supplement this research. Digital Rights Management (DRM) technologies and methodological systems of blockchain are considered as case studies to determine their effectiveness in preventing digital copyright infringement.

LITERATURE REVIEW

In her 2024 work titled *Digital Piracy and Unauthorized Content Use*, Tsikira, 2024¹ takes a detailed look at how data online has become a global threat to the economy and public order, reducing civilization to a sore, lawless state, and has crafted profound law and public order implications as well. She argues that due to the nature of the platform, a single copyright infringement is no longer a simple copyright tort, but a collective infringement that tessellates a copyright public nuisance. Tsikira insists that digital piracy goes well beyond the loss of private to public values, reaches the creative and the innovator, and influences weak cybersecurity, thus constituting a public nuisance in tort. This work surveys and compares the copyright laws of India and the U.S. exemplified by the 1957 Copyright Act and the 1998 Digital Millennium Copyright Act (DMCA) in a manner that shows how India's enforcement ability is undermined by rampant ignorance of resource and low protective legal regard, which sustains her rampant unauthorized distribution. Tsikira concludes that public order piracy is a public nuisance and can be fought by strong international cooperation, modern public piracy laws, and their active public enforcement.

Mark Torous (2024)² in his book, *Intellectual Property Rights in the Digital Age: Challenges and Solutions*, examines the evolution of the enforcement of intellectual property (IP) rights in the epoch of globalization and digitalization. He notes that the spread of internet service providers (ISPs) and online platforms has made unauthorized distribution of copyrighted material so easy that online copyright violation has become a public problem, rather than a mere infringement of a private right (Torous, 2024). Associating this phenomenon with the decline of civic virtue and the collective pirate attitude towards the original works, Torous locates digital piracy in the legal domain of 'public harm.' He illustrates how the current systems of Digital Rights Management (DRM) have, in their preventive role, spawned controversy in regard to the freedom of the user and, in so doing, have created ethical dilemmas and public policy vacuums. Torous argues, as a

¹ Tendai Patricia Tsikira, *Digital Piracy and Unauthorised Content Use: Challenges to Copyright Protection in the Digital Age – A Comparative Study of the United States and India* (2024).

² Mark Torous, *Intellectual Property Rights in the Digital Age: Challenges and Solutions*, 23 *J. Int'l Bus. Res.* 1 (2024).

matter of public law, the international unification of IP policies as a means to restore the disrupted balance between innovation and unrestricted access, in line with interference as a public nuisance advocacy where state control is warranted for the achievement of public benefits.

*Madan & Sherwani, 2021*³ has further deepened the problem of copyright infringement (). As noted by Ojasvi Madan and Dr. Saltanat Sherwani (2021) the extent of impact piracy has, especially when it comes to streaming and reproducing, is not a sole infringement, but a systematic, widespread detrimental ecosystem to the system of creators. The public nuisance doctrine exemplifies the pervasive harm public as a whole has to go through, waged as a result of unchecked and continuous streams of such actions. Madan and Sherwani mention, concerning IP law, the absence of any technological neutrality is a serious oversight and possible new legal frameworks which can, for example, use AI to monitor infringement and blockchain to attest to IP Blockchain, use of which can decrease infringement and digital nuisance.

*The Decline of Online Piracy*⁴ undertakes empirical research that questions the prevailing view that legal mechanisms aimed at enforcing copyright more stringently will help curb piracy. The authors posit that the decline of piracy is in fact due to the greater availability of inexpensive, legal materials suggesting that non-legal intervention socially and market-based works far better as a deterrent. However, the continued existence of piracy sites illustrates the digital nuisance thrives due to the lack of rational jurisdiction in the worldwide division of territorial jurisdictions coupled with the uneven enforcement of secondary liability. The research emphasizes the importance of treating piracy not only as an infringement of copyright, but as an economic and social nuisance akin to an environmental or urban public nuisance.

*Hussein & Latif, 2023*⁵ illustrate the insufficiency of local legal frameworks to tackle infringement of borderless digital rights . Anonymous networks and decentralized technologies, such as peer-to-peer systems, render jurisdictional boundaries irrelevant and enforcement impossible. Utilizing public nuisance theory, they argue such digital violations obstruct the

³ Ojasvi Madan & Saltanat Sherwani, *Challenges and Issues Related to Copyright Piracy in the Digital Era with Reference to OTT*, *WhiteBlack Legal J.* (2021).

⁴ *The Decline of Online Piracy: How Markets – Not Enforcement*, *Am. U. Int'l L. Rev.* (2019).

⁵ Hussein & Sabah Latif, *Global Enforcement in Digital Piracy Cases* (2023).

collective good—a point pertinent to both economic and cultural preservation—justifying the need to reconceptualize online piracy as a social danger, rather than a private grievance. Their work demonstrates the severe need for bilateral and multilateral agreements to address global digital nuisances akin to environmental agreements.

Conflict of Laws describes and analyzes how the Indian judiciary adapted jurisdictional principles to deal with cyber infringements in the monograph *Indian Courts' Handling of Online IP Infringement* (2023). The case law developed in elisions such as *Impresario Entertainment v. S & D Hospitality and Banyan Tree Holding (P) Ltd. v. A. Murali Krishna Reddy* captures the “effects test,” whereby the forum state’s actual intent to cause damage is sufficient to confer jurisdiction. Just like the European Union in Article 7(2) of the Brussels I Recast Regulation, Indian courts understand that digital violations of copyright works and encroach upon several interests within the jurisdiction. A digital infringement of copyright has been recognized as an infringement in the economic and moral public domains and is, therefore, indicative of public nuisance law, which supports the case for public interest litigation against pervasive digital piracy.

*As Lian (2024)*⁶ posits in *Blockchain and AI: A Revolution in Digital Rights Management*, technological responses to piracy are essential, if secondary, to legal responses (Lian, 2024). By eliminating proofs of ownership anonymity blockchain piracy defends creative ownership. Lian notes, blockchain facilitates reduction of invisibility by proof of authorship, thus, timestamps fuller proof. Supporting AI technologies for predictive infringement identification, aligns more with societal protection, as public nuisance reduction is preemptive in nature. Lian’s integration of technologies blockchain and AI predictive piracy enforcement envisions a new global paradigm where IP protection is preventive, non-punitive.

*Gabsa (2022)*⁷ claims shows how, and is critical for, bridging private and public within the same governance structure within the same belief system, thus autonomously crossing boundaries. By requiring the removal of contested material, the law embraces the corporate duty to mitigate a

⁶ Anndy Lian, *Blockchain and AI: A Revolution in Digital Rights Management* (2024).

⁷ Gabsa, *Notice-and-Takedown Mechanisms in Digital Governance* (2022).

nuisance. However, a lack of global agreement on the “safe harbor” doctrine means that the “safe harbor” exemptions to copyright infringement are put to more reckless use by people seeking to exploit them. The shift toward stricter liability for intermediaries in the EU’s Digital Services Act and in India’s IT Rules of 2021 is an important advance in the digital minimization of nuisance. An article published in the Indian Journal of Legal Technology in 2023 connects the economic impact of piracy with the overarching theory of public nuisance (IJLT 2023). The study argues that the economic impact of piracy—loss of GDP and deterioration of culture—ranging from cultural stagnation and economic stagnation must be considered as serious violations of public interests and collective welfare. The authors analyze the American system of punitive damages that has a primary focus on deterrence, and compares such with India’s system that more or less relies on education, licensing, and digital piracy curtailment to address societal externalities. The study suggests public private partnerships for slidable enforcement, comparable to the public-and-private framework for environmental enforcement that sustains individual and social interests, for public-private partnerships for sustainable enforcement of the outside piracy ecosystem.

*Fowler (2002)*⁸ argues that the DRM system and its more fierce and militant approach to regulatory control has the danger of stifling the markets with its over-regulation (Fowler 2002). Ethical dilemmas come into play when the user is subjected to state-controlled covert surveillance systems that control technology and usage such as the right to privacy or right to use creative works. Such situations illustrate the growing tendency of principled policy formation that engages enforcement of digital-specific legislation to redress the balance on policy shift of legislative advocacy, preventing creative works from infringement on stifled republication, to allow more free circulation of copies. Court systems often cite public nuisance tests where the point of balance is the social and public advantage to be gained.

As *Adams (2023)*⁹ illustrates, the digital revolution’s commodification of creativity requires a reconceptualization of public welfare in the context of IP discourse (Adams, 2023). The transnational nature of creative exchange shifts the enforcement of copyright from a proprietary

⁸Fowler, *Ethical Dimensions of DRM* (2002).

⁹Adams, *Copyright and Public Welfare in the Digital Revolution* (2023).

issue to a social obligation. Adams characterizes online piracy as a collective moral wrongdoing capable of inflicting economic damage, which illustrates a growing willingness to redefine the 'public nuisance' in the context of cyberspace.

NUSRL's Piracy, AI and NFTs: Redefining Intellectual Property Rights in the Digital Economy (2025) examines the emerging digital artifacts, such as non-fungible tokens (NFTs), and how they alter the constructs of ownership (NUSRL, 2025). The paper demonstrates how NFTs, while offering author's the ability to cryptographically verify their works, simultaneously create complex secondary markets for derivative piracy, which illustrates how technology can give rise to the very nuisance it seeks to remedy. The intersection of AI-generated content and decentralized economic systems requires blended enforcement strategies that integrate regulatory oversight of AI systems with traditional legal frameworks.

As demonstrated by the economic impact study entitled "Copyright Piracy in India" (Government of India, 2024), the repercussions of unrestrained reproduction and circulation of digital content cause the creative industry to lose billions of dollars in revenues translating to diminished employment opportunities and cultural loss on the part of the public (Copyright Office, 2024). Within the framework of nuisance law, these externalities represent the same kind of loss of collective well-being Monopolist Competition captures, only the threat, like pollution, is dispersed and enormous. The report recommends that the habitual practice of piracy be legally acknowledged and categorized as a public socio-economic offense, not a private violation, in order to allow the state to carry out dominant and reparative measures.

Drawing from the work of *Driouchi and Kadiri (2013)*¹⁰, a technological-economic framework centers on the idea work argues that the marriage of enforcement, education, and economics can reshape societal attitudes towards piracy (Driouchi & Kadiri, 2013). Within the framework proposed, when the barriers to legally accessing a resource are sufficiently low, and the barriers to piracy sufficiently high, the public nuisance is self-evidently reduced, thus affirming the behavioral aspect of legal deterrence. This argument is the same as those referenced in the

¹⁰ Driouchi & Kadiri, *Technological Control and Piracy Economics* (2013).

context of environmental regulation analogies, where unsustainable collective harm is the outcome of deterrence and rigid enforcement of substitute measures.

Addressing Digital Piracy and Copyright Issues in the Indian Contexts describes the effects of online infringement and copies the socio-economic fallout as the loss of trust in governance in the digital age. The argument stated slacker enforcement of the rule of law projects statehood in disrepute, giving rise to a digital free-for-all constituting a 'lawless commons' analogous to stagnant public toilets, with attendant loss of trust. The article, in this respect, suggests a radical redefinition of legal piracy as public nuisance for the Indian Legal System to empower the courts exercise their *parens patriae* jurisdiction in the mitigation of 'inexcusable' damages.

Tsikira, Torous, and Adams' scholarship explains that the notion of public nuisance changes when applied in the context of digital society. While the public charge of the nuisance is the nuisance of smoke or noise, piracy is an insidious form of pollution in the information systems. The loss of revenues to the nation, the resultant deficit in cultural systems, and subsequent damage to the creative industry is startling, and comparable to the damages that public nuisance law seeks to remedy. Therefore, the unqualified global cooperation and the integration of public policy at various levels is necessary to sustain public, and global, digital order.

CONCEPTUAL FRAMEWORK

Definition and Legal Principles of Public Nuisance

The doctrine of public nuisance is long-standing in common law jurisdictions, which has traditionally been defined as an unreasonable interruption with a right belonging to a general population. Clinical examples are blocking roads, contamination of waterways, or actions that put the health, safety, morals, or inconvenience of the people at risk. In contrast to private nuisance, which involves damage to individual persons, the issue that is covered by the public nuisance is one that involves damage to the masses, and thus it can be an issue that is brought before the court of law by the state or by individuals who can prove that they have suffered more than the general population.¹¹

¹¹ Adams, R. (2023). *Intellectual property and public interest in the digital age*. Oxford University Press.

The Indian law recognises public nuisance as statutorily defined in the Bharatiya Nyaya Sanhita, 2023 (which was originally Sections 268-294A of the Indian Penal Code, 1860): Section 268 introduces the term of a public nuisance as an action or unlawful failure which leads to a typical injury, threat, or irritation to the populace or to individuals in general who inhabit or possess the environment. The provision also underlines that though the acts might be legal, they could also constitute a public nuisance when carried out carelessly or absent-mindedly.

The judicial interpretation has continued to broaden the meaning of the public nuisance. In *Municipal Council, v. Ratlam*.¹² The Supreme Court of India ruled that the law of public nuisance should be construed in a purposive way that would safeguard the general welfare of the people especially when administrative inaction led to the infliction of extensive damages (Vardhichand, 1980). Similarly, in *MC Mehta v. Union of India (1987)*,¹³ environmental degradation was considered to be a nuisance in the society thus judicial readiness to adjust the doctrine to current societal evils.

The concept of common injury is not just a physical space in the digital world. Through the online space, the mass distribution of illegal content occurs, thus impacting cultural, economical and informational masses interests. When copyright infringement and online piracy happen at such large scale, it disrupts the collective access to legal markets, distorts creative ecosystems, and undermined the confidence of the public in the law. In turn, digital piracy is becoming more satisfying to the doctrinal components of the public nuisance: mass effect, harm to the populace.

Understanding Copyright and Intellectual Property Rights

Copyright is a legal intellectual property that is awarded to authors of original literary, artistic, musical, dramatic and cinematographical works as well as sound recordings and computer programs. The copyright law has two main purposes, the first is to encourage creativity by giving exclusive economic and moral rights and the second purpose is to facilitate access to knowledge by the public by the limited term protection and exception like fair use or fair dealing.

The copyright protection on the international level is rooted in the multilateral treaties like the Berne Convention on the Protection of Literary and Artistic Works (1886), the Agreement on

¹² *Municipal Council, Ratlam v. Vardhichand*, (1980) 4 SCC 162.

¹³ *MC Mehta v. Union of India*, (1987) 1 SCC 395.

Trade-Related Aspects of Intellectual Property Rights (TRIPS, 1994) and the WIPO Copyright Treaty (1996). These tools place minimum standards of protection and acknowledgment that there should be a balance between the rights of an author and the interest of the population.¹⁴

Copyright protection in India is covered by the Copyright Act, 1957 (as amended). The Act gives the authors exclusive rights of reproduction, communication to the public, distribution, and adaptation as well as gives statutory exceptions under Section 52 and 31D in order to protect the interests of education, research and access to knowledge. The digital world, however, makes it more difficult to enforce as real-time copying and world-wide distribution of an item subverts territorial jurisdiction.

The tradition of copyright infringement has always been a civil wrong, and the penalties could be injunction, damages, and account of profits. In some jurisdictions criminal penalties can be offered as well. However, when infringement is systematic, organised, and large-scale, such as that experienced with online sites of piracy, it does not amount to a personal harm but diffuse harm to society. This redefined change will make it appropriate to think differently about the issue of digital copyright infringement as a civic nuisance as opposed to a two-sided conflict of right holder and infringement.

Nature of Online Piracy and Digital Copyright Infringement

Online piracy refers to the unauthorised reproduction, distribution, streaming, or making available of copyrighted content through digital networks. It manifests in various forms, including peer-to-peer file sharing, illegal streaming websites, torrent platforms, cyberlockers, and unauthorised IPTV services. Unlike traditional piracy, digital piracy operates on a transnational scale, facilitated by anonymity, decentralisation, and technological sophistication.

The defining characteristics of online piracy include:

- **Scale and Speed:** A single infringing upload can reach millions of users instantaneously.

¹⁴ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris July 24, 1971.

- **Anonymity:** Users and operators often conceal identities through VPNs, proxy servers, and encrypted networks.
- **Cross-Border Nature:** Servers, users, and victims are frequently located in different jurisdictions.
- **Economic Externalities:** Loss of revenue to creators, reduced tax collection, and distortion of legitimate markets.
- **Cultural Harm:** Undermining creative industries and discouraging innovation.

These features align digital piracy with classical public nuisance analogies such as pollution: the harm is diffuse, cumulative, and difficult to attribute to individual actors. Consequently, addressing online piracy requires collective remedies rather than purely private enforcement.

LEGAL CHALLENGES IN THE DIGITAL AGE

Jurisdictional Issues in Cross-Border Copyright Infringement

Jurisdiction remains one of the most formidable challenges in regulating online piracy. Traditional jurisdictional principles are grounded in territorial sovereignty, whereas digital infringement transcends physical borders. Courts struggle to determine where the infringement occurs: the location of the server, the uploader, the downloader, or the economic impact.

Indian courts have adopted the “effects doctrine” to address this challenge. In *Banyan Tree Holding (P) Ltd. v. A. Murali Krishna Reddy* (2010),¹⁵ the Delhi High Court held that jurisdiction may be assumed if the defendant’s online activity is purposefully directed at the forum state and causes harm within it. Similarly, in *Impresario Entertainment v. S & D Hospitality* (2017),¹⁶ jurisdiction was established based on the commercial impact of online infringement in India.

Despite these developments, inconsistent application across jurisdictions enables forum shopping and enforcement evasion. The absence of a unified global jurisdictional framework weakens deterrence and reinforces the public nuisance character of digital piracy.

¹⁵ *Banyan Tree Holding (P) Ltd. v. A. Murali Krishna Reddy*, (2010) 42 PTC 361 (Del).

¹⁶ *Impresario Entertainment & Hospitality Pvt. Ltd. v. S & D Hospitality*, (2017) 240 DLT 221 (Del).

Identification and Evidence Gathering

Effective enforcement depends on identifying infringers and collecting admissible digital evidence. However, technological tools that facilitate piracy also obstruct investigation. Encrypted communications, decentralised platforms, and transient hosting services complicate attribution.

Courts increasingly rely on forensic techniques such as IP address tracking, blockchain timestamps, and digital watermarking. Nonetheless, concerns regarding privacy, data protection, and due process persist. Balancing investigative efficiency with civil liberties remains a core challenge, particularly when enforcement actions affect large user bases.

Enforcement Challenges in the Internet Environment

Even when liability is established, enforcement faces practical obstacles. Injunctions against websites are often circumvented through mirror sites and domain hopping. Monetary penalties are difficult to recover from anonymous or foreign defendants. Criminal prosecution is resource-intensive and rarely proportionate to the scale of infringement.

These limitations illustrate why private enforcement mechanisms alone are insufficient. Treating online piracy as a public nuisance enables regulatory agencies and courts to adopt systemic remedies, including blocking orders, intermediary obligations, and coordinated international enforcement.

GLOBAL LEGAL RESPONSES TO ONLINE PIRACY

Comparative Analysis of Legal Frameworks

The exponential growth of digital technologies and the borderless nature of the internet have compelled states to rethink traditional copyright enforcement mechanisms. Online piracy, once perceived as a private infringement, now operates at a scale that threatens national economies, creative industries, and cultural sustainability. Consequently, jurisdictions across the world have adopted varied legal responses to address digital copyright infringement, balancing enforcement with freedom of expression, innovation, and intermediary neutrality. A comparative analysis of

the legal frameworks in the United States, the European Union, and India reveals both convergences and divergences in regulatory approaches, highlighting the evolving recognition of online piracy as a form of public harm requiring systemic regulation.

United States: The Digital Millennium Copyright Act, 1998

The establishment of the digital copyright enforcement systems in the United States has been a forerunner with the introduction of the Digital Millennium Copyright Act (DMCA), 1998. The DMCA came in to bring the domestic law into harmony with the international requirements as set out in the WIPO Copyright Treaty and in reaction to the internet-based threat to copyright protection. It has played the most notable role in the creation of a notice-and-takedown regime and safe harbour to online service providers.

In the DMCA Act, Section 512, all intermediaries like internet service providers, hosting providers and search engines can not be held liable to infringement of copyrighted material as long as they act within no more than a two weeks in response to a legitimate notice given by the original owner of the copyrighted content. This model will create a balance between the protection of intellectual property rights and innovation through the limitation of intermediary liability.

The DMCA has however had a long history of criticism. Its enforcement policy is mostly reactive where the responsibility of policing and reporting infringement is vested on the owners of copyright and not platforms. This has not worked in regard to the prevalent, mass-scale piracy which is carried out in organised networks and rogue websites. In addition, misuse of takedown notices, such as false or overly assertive ones, has led to an interest in censorship and restriction of legitimate content, especially fair use. In spite of these constraints, the DMCA has made a substantial impact on the copyright laws within the world and forms a cornerstone of an enforcement discussion around digital rights.¹⁷

The individualised enforcement mechanism of DMCA finds the collective damage of the pervasive piracy difficult to deal with, in the public nuisance perspective. Although it offers solutions to certain acts of infringement, it fails to address the structural aspect of online piracy being a social issue.

¹⁷ Adams, R. (2023). *Intellectual property and public interest in the digital age*. Oxford University Press.

European Union: The DSM Copyright Directive, 2019

The European Union has adopted a more interventionist and preventive approach to online piracy through the Directive on Copyright in the Digital Single Market (DSM Directive), adopted in 2019. The Directive reflects a policy shift from intermediary immunity towards greater platform responsibility, recognising the significant role played by large online content-sharing service providers in disseminating copyrighted material.

Article 17 of the DSM Directive marks a decisive departure from traditional safe harbour regimes. It holds certain platforms directly liable for copyright infringement unless they demonstrate that they have made best efforts to obtain authorisation from rights holders, ensure unavailability of infringing content, and act promptly to remove unauthorised works. In practice, this has encouraged the use of automated content recognition technologies, such as upload filters, to prevent infringing material from being made available.

The EU approach is premised on the idea that platforms are not passive intermediaries but active participants in content dissemination and monetisation. By imposing proactive obligations, the Directive seeks to address the structural conditions that enable online piracy, thereby aligning with the public nuisance model of preventing widespread harm before it occurs.¹⁸

Nevertheless, the Directive has generated controversy. Critics argue that mandatory filtering technologies risk over-blocking lawful content, undermining freedom of expression and legitimate uses such as parody, quotation, and criticism. The European Court of Justice has attempted to mitigate these concerns by emphasising proportionality and the protection of fundamental rights. Despite these challenges, the EU framework represents one of the most comprehensive attempts to reconceptualise digital copyright infringement as a collective harm requiring systemic solutions.

India: Copyright Act, 1957 and Information Technology Framework

India's legal response to online piracy is shaped by the Copyright Act, 1957, read in conjunction with the Information Technology Act, 2000 and the Information Technology (Intermediary

¹⁸ Gabsa, L. (2022). Intermediary liability and safe harbour in digital copyright law. *International Journal of Law and Information Technology*, 30(2), 145–167.

Guidelines and Digital Media Ethics Code) Rules, 2021. While the Copyright Act provides substantive rights and remedies against infringement, the IT Act governs intermediary liability and online content regulation.

Section 79 of the IT Act grants safe harbour protection to intermediaries, subject to due diligence requirements. The 2021 IT Rules further mandate intermediaries to establish grievance redressal mechanisms, comply with takedown orders, and, in certain cases, deploy automated tools to identify unlawful content. Indian courts have supplemented statutory provisions through judicial innovation, notably by issuing “dynamic injunctions” that allow rights holders to block mirror and redirect websites associated with piracy without initiating fresh litigation.

Landmark cases such as *UTV Software Communication Ltd. v. 1337x.to*¹⁹ to have recognised the economic and cultural harm caused by rogue piracy websites, leading courts to adopt stronger enforcement measures. However, enforcement in India remains uneven due to limited technical capacity, jurisdictional constraints, and widespread public tolerance of piracy.

Unlike the EU, India has not yet imposed proactive monitoring obligations on intermediaries in copyright matters, reflecting caution in balancing enforcement with digital freedoms. Nonetheless, judicial trends indicate an emerging recognition of online piracy as a public wrong affecting collective welfare, which aligns with the public nuisance framework discussed in this research.

CONCLUSION

The digital transformation of society has fundamentally altered the nature, scale, and consequences of copyright infringement. What was once a predominantly private legal wrong has evolved into a pervasive phenomenon with widespread economic, cultural, and social ramifications. This research has demonstrated that online piracy and digital copyright infringement, when examined through the lens of public nuisance doctrine, constitute collective harms that extend far beyond individual rights holders. The cumulative impact of unauthorised reproduction, distribution, and communication of copyrighted works undermines creative

¹⁹ *UTV Software Communication Ltd. v. 1337x.to*, (2019) 78 PTC 375 (Del).

industries, weakens economic growth, erodes public respect for the rule of law, and threatens cultural sustainability.

The study has traced the historical foundations of public nuisance law and shown how its flexible and adaptive character enables it to respond to modern, intangible harms. Judicial developments in environmental and public welfare litigation illustrate that public nuisance is no longer confined to physical spaces but encompasses activities that interfere with shared public interests. Online piracy, by disrupting legitimate markets and depriving society of the long-term benefits of creative innovation, satisfies the essential elements of public nuisance, namely widespread impact, collective injury, and the necessity of public intervention.

Through a comparative analysis of legal frameworks in the United States, the European Union, and India, the research highlights differing regulatory philosophies in addressing digital copyright infringement. While the United States relies heavily on reactive enforcement and safe harbour protections under the DMCA, the European Union has moved towards proactive intermediary responsibility through the DSM Copyright Directive. India, meanwhile, occupies a middle ground, combining statutory safe harbour provisions with strong judicial remedies such as dynamic injunctions. These divergent approaches reflect varying priorities between innovation, freedom of expression, and enforcement, yet all acknowledge the growing seriousness of online piracy as a societal concern.

The research further underscores that legal responses alone are insufficient to combat digital piracy effectively. Technological tools such as Digital Rights Management, blockchain-based ownership verification, artificial intelligence-driven detection systems, and digital watermarking play a crucial role in enabling preventive and scalable enforcement. When integrated with legal frameworks, these technologies support a shift from purely punitive models towards proactive harm prevention, which is consistent with the objectives of public nuisance control.

At the same time, the study recognises the importance of maintaining a careful balance between copyright protection and public interest. Excessive enforcement risks infringing upon fundamental rights such as freedom of expression, privacy, and access to knowledge. Therefore, any expansion of public nuisance doctrine into the digital realm must be guided by principles of proportionality, transparency, and accountability.

In conclusion, this research affirms that reconceptualising online piracy and digital copyright infringement as forms of public nuisance provides a robust theoretical and practical framework for addressing the challenges of the digital age. Such an approach legitimises stronger state involvement, encourages international cooperation, and supports the integration of technological innovation with legal regulation. Ultimately, a coordinated, balanced, and forward-looking strategy is essential to ensure that creative freedom, public access, and economic justice coexist harmoniously in the evolving digital ecosystem.

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