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AUTOMATED COPYRIGHT ENFORCEMENT: BALANCING RIGHTS AND RISKS IN ONLINE COMPETITION

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ABSTRACT

The rise of widespread copyright infringement on the internet has prompted a shift towards automated enforcement mechanisms by online intermediaries, replacing conventional methods which were turning out to be inefficient and costly. This transition signifies a fundamental change in governance, transferring law enforcement and adjudication powers from public authorities to private entities. However, this new system raises concerns regarding its impact on freedom of expression, as the absence of mechanisms to verify the amount of work taken in the infringing work may result in over-blocking, potentially censoring legitimate content. Moreover, the failure to consider the fair use doctrine undermines the creator's ability to safeguard their legitimate uses of copyrighted material. The lack of transparency in automated enforcement processes further exacerbates these issues, leading to overprotection and potential abuse of power by copyright holders, compounded by a lack of accountability. Additionally, due process rights may be compromised, with legal barriers hindering the transparent operation of algorithmic enforcement systems. Furthermore, the monetization opportunities available to copyright holders through licensing agreements could lead to exploitative practices. To address this problem, discussions are happening to resort to text and data mining exceptions to counterpoise issues linked to automated enforcement. Moreover, as regulatory frameworks increasingly mandate the deployment of algorithmic monitoring and filtering tools by online intermediaries, there is a pressing need to examine the nuances of this issue. Therefore, the purpose of this article is to delve into the dynamics of automated systems deployed by online intermediaries and propose policy solutions to address these complex challenges.

Keywords: *algorithmic enforcement, fair use, over-blocking, free expressions, accountability*

I. INTRODUCTION

Digitalization has revolutionized various aspects of our lives, yet it has also posed significant challenges for copyright holders. The ease of copying and sharing copyrighted information at almost no cost has led to a surge in mass infringement over the internet. To combat this trend, automated enforcement of copyright has emerged as a new private ordering solution, replacing conventional methods used by online intermediaries, which were proving to be inefficient and

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costly. With the rise of social media and the advent of platforms like Facebook, YouTube, and Instagram, a new generation of algorithmic enforcement technologies has emerged.[1] This has led to a fundamental shift in the traditional system of governance, concentrating law enforcement and adjudication powers within a small number of profit driven and potentially biased mega platforms. The transfer of these powers to private entities signifies a paradigm change in governance, raising concerns about transparency, accountability, and abuse of power.[2] This technological advancement raises concerns about the lack of mechanisms to verify the extent of infringement, potentially leading to over-blocking. Moreover, creators struggle to defend their rights under fair use doctrines, posing a threat to freedom of expression as automated enforcement mechanisms may impose restrictions beyond legal bounds. The due process is also compromised as transparency, accountability, and contestability is lacking in the algorithmic enforcement process.

Algorithmic enforcement by online intermediaries encounters difficulties in maintaining accountability and mitigating prejudice, especially in the interpretation of legal stipulations such as fair use.[3] Copyright holders frequently opt to commercialize infringing content instead of removing it, as automated filters find it challenging to differentiate between infringing use and exceptions such as fair use. This may result in fair use becoming an infrequent defense, as social networking platforms could jeopardize its legal applicability by automatically censoring content without regard for its context. The newly established regulatory frameworks mandate that online intermediaries implement algorithmic monitoring and filtering technologies; nonetheless, these techniques have demonstrated ineffectiveness in safeguarding users' rights and exceptions to copyright on digital platforms. A demand to establish a framework for assessing accountability and exploring the feasibility of surmounting legal obstacles in accountability determination, such as deconstructing the code governing enforcement procedures, is imperative.

The situation is further compounded by the challenge of precisely quantifying the volume of copyrighted material utilized in purportedly infringing content. The excessively stringent enforcement of copyright laws constraints legal fair usage and prompts apprehensions regarding the precision of content filtering. Integrating fair use metrics into copyright enforcement algorithms could mitigate overdeterrence and educate users regarding their adherence to copyright

[1] András K. Tóth, *Algorithmic Copyright Enforcement and AI: Issues and Potential Solutions Through the Lens of Text and Data Mining*, 13 MASARYK U. J.L. & TECH. 361 (2019).
[2] P. Bernt Hugenholtz & Lucie Guibault, *The Future of Copyright in a Digital Environment* (Eur. Copyright Soc'y 2009).
[3] Philip Ryan, *Trust and Distrust in Digital Economies* (Taylor & Francis 2019), https://doi.org/10.4324/9781351104845.

law; nevertheless, encoding fair use criteria into technical systems presents difficulties.[4] Furthermore, legal impediments, including the DMCA's anti-circumvention clauses and trade secret legislation, obstruct public examination of algorithmic enforcement systems, resulting in excessive protection and little accountability.

The purpose of this article is to examine the impact of automated copyright enforcement on the fair use framework and explore policy solutions to address this complex issue. There is a need for the policymakers to formulate mechanisms that balance the interests of all stakeholders while ensuring compliance with copyright law and safeguarding user's rights.

This paper aims to identify the obstacles hindering the improvement of public oversight of algorithmic copyright enforcement and to examine various approaches to mitigate them. Specifically, it examines the complex and opaque nature of algorithms, the dynamics of copyright enforcement mechanisms driven by continually evolving learning machines, legal barriers preventing transparent modification of *"black box"* systems to enhance public understanding of their operations, and the shortcomings of existing review mechanisms, such as the counter notice process under the DMCA, which allows users to challenge removals of allegedly infringing material. Among the potential mechanisms to enhance scrutiny, this paper critically evaluates market-driven approaches like Google's Transparency Report, private initiatives to enhance users' understanding such as the FCC's Fair Use Principles, and potential public mechanisms requiring mandatory disclosure.

II. COPYRIGHT ENFORCEMENT IN THE DIGITAL AGE – PARADIGM CHANGE IN GOVERNANCE

The proliferation of digital content has resulted in a heightened dependence on detection algorithms. Spotify is currently creating an anti-plagiarism mechanism to detect copyright infringements. Academia has consistently used Turnitin anti-plagiarism software, which remains a cause of apprehension for students. Such algorithms are clearly getting established in multiple sectors. Basic types of private ordering, like cross-border technology licensing, ultimately depend on state enforcement mechanisms, but more advanced private orders leverage the intangible characteristics of intellectual property and utilize alternative ways for rule enforcement. This is especially apparent with digital content, where access to copyrighted or non-copyrighted material

4 Nikos Koutras & Niloufer Selvadurai, *Recreating Creativity, Reinventing Inventiveness: AI and Intellectual Property Law* (Routledge, Taylor & Francis Group 2024), https://doi.org/10.4324/9781003260127.

depends on acceptance of the provider's terms of use. Adherence to these terms can be implemented using technical mechanisms, a notion termed by Lessig as *"code as law".* [5]

A significant difference from other kinds of private ordering, such Creative Commons or technology licensing regimes, is the automated enforcement embedded in content protection via digital platforms. Upon detection of a match, even a partial one, between claimed content and a user upload, the content owner's option to prohibit, monetize, or monitor views of that upload is instantly enforced across the platform, encompassing all jurisdictions where the owner has asserted rights to the content.[6] While platforms often provide users with means to contest a claim made by a content owner, these mechanisms frequently serve just as a solicitation for the content owner to reevaluate its assertion regarding the upload. This underscores the quasi-universal and fundamentally global impacts of private orders instituted by the prevailing powers of *"digital capitalism".*

A. Impact of Technology

The emergence of dispersed networks has enhanced accessibility to creative content and significantly reduced the expenses associated with disseminating creative works to extensive audiences. This has facilitated collaboration among users in the creation and distribution of creative products within their selected groups. Simultaneously, digital networks have emerged as potent instruments for the enforcement of norms and regulations. Numerous law enforcement operations currently depend on algorithms, with system architectures integrating surveillance and content filtering and blocking functionalities as mechanisms of control. Distributed networks have created new potential for free access to creative resources.[7] The cost-effectiveness of organizing creative projects and distributing works to a wide audience enables individuals to collaborate in producing and freely sharing content within their selected groups. Nonetheless, digital networks function as effective instruments for enforcement. Algorithms are integral to law enforcement operations, incorporated into system architectures to perform surveillance and implement filtering and blocking protocols. Since the early 1990s, copyright protection has prominently utilized algorithmic enforcement through technical methods like Digital Rights Management ["**DRM**"] and Technological Protection methods ["**TPM**"]. Currently, most of the enforcement is conducted by online platforms that oversee, filter, and limit access to potentially infringing content

[5] Lawrence Lessig, *Code Is Law: On Liberty in Cyberspace,* 119 HARV. L. REV. 1849 (2006).
[6] Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale Univ. Press 2006).
[7] Antonio Díaz Andrade & Angsana Techatassanasoontorn, *Digital Enforcement: Rethinking the Pursuit of a Digitally-Enabled Society,* 30 INFO. SYS. J. 1 (2020).

(e.g., via the *"notice and take down"* mechanism established by the Digital Millennium Copyright Act).[8]

B. Shift towards automated enforcement mechanisms

The United States implements "notice-and-takedown" provisions pursuant to Section 512 of the U.S. Copyright Act, updated by the Digital Millennium Copyright Act of 1998, whilst the European Union facilitates analogous procedures under the Directive on Electronic Commerce (2000/31/EC). Originally designed to reconcile innovation with the interests of copyright holders, these measures delineate a formal protocol for service providers to swiftly address requests from copyright owners for the removal of material.[9] Copyright holders must furnish adequate information for the service provider to identify the material and guarantee that the notified party is authorized to represent the owner of the purportedly infringed exclusive right. This technique is referred to as *"notice-and-takedown"*, which includes provisions for *"counter notice"* processes, enabling alleged infringers to seek the reinstatement of removed content.

In the EU, providers of user-uploaded content are accountable upon acquiring knowledge of the content and its unlawful nature. In contrast to the DMCA, the E-Commerce Directivedoes not govern the process for obtaining this knowledge, delegating that responsibility to Member States.[10] The viewpoint of a *"diligent economic operator"* is deemed critical in ascertaining constructive knowledge, which may be acquired through multiple avenues, such as investigations conducted by providers or alerts regarding such activities or information.

The removal of ostensibly legitimate derivative works has ignited debate, especially concerning section 512(c) of the DMCA, which mandates that takedown complaints must express a good faith opinion that there is no legal justification for the specified infringing use. U.S. courts have determined that complainants must evaluate fair use prior to delivering such notices or face potential punishment for misrepresentation.[11] While users displeased with content removal may submit counter-notifications, minor users may be dissuaded owing to uncertainty or apprehension regarding potential legal repercussions from copyright holders.

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[8] The Ultimate Guide to Content Distribution, HUBSPOT BLOG (Feb. 8, 2017), https://blog.hubspot.com/marketing/content-distribution?uuid=856c91e8-f8bc-4ffb-bd6b-f06d118bbd6b.
[9] Kari Erickson & Martin Kretschmer, *This Video Is Unavailable*, 9 J. INTELL. PROP. INFO. TECH. & ELEC. COM. L. 75 (2018).
[10] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market, 2000 O.J. (L 178) 1.
[11] U.S. Copyright Office, *The Digital Millennium Copyright Act of 1998*, https://www.copyright.gov/legislation/dmca.pdf.

Despite the diverse requirements governing copyright exceptions throughout many legal systems and jurisdictions, the issue, when expressed in code, remains rather consistent. Numerous exceptions necessitate the assessment of the creator's intent, purpose, and contextual usage. Inquiries emerge over the purpose of the work, including its usage for social commentary, parody, education, or citation. Artificial intelligence is enhancing its ability to comprehend the intent of the author or speaker and the contextual framework via natural language processing. Moreover, YouTube utilizes machine learning to identify and remove extremist content from its platform, and the corporation asserts that the system operates efficiently.[12] In light of these improvements, it is plausible to anticipate the integration of various AI and machine learning technologies to tackle more intricate challenges, such as audio-visual material and copyright exceptions. Nonetheless, whereas AI possesses the capacity to tackle concerns associated with fair use and exceptions, it may also exacerbate existing flaws inherent in algorithmic copyright enforcement. The clarity of the decision-making process and its underlying rationale would be further diminished. Autonomous systems frequently produce their own code, while deep learning applications and neural networks function as *"black boxes"* because of their significant complexity.[13] The intricacy, coupled with the absence of human oversight and the challenges in deconstructing the mechanisms and justifications underlying the machine's behavior, implies that transparency may effectively dissipate.

Our analysis of copyright holder behavior offers a new perspective on the efficacy of notice-and-takedown procedures in balancing the interests of copyright holders, innovative services, and citizens. However, the existence of automated and opaque content detection and removal systems complicates efforts to study and evaluate takedown behavior.

As social media expanded and platforms like Facebook, YouTube, and Instagram facilitated the proliferation of user-generated content, a second generation of algorithmic enforcement systems arose. These new tools are primarily designed to manage the internet accessibility of copyright-protected information. Facebook's Rights Manager and YouTube's Content ID provide rights holders with a more advanced method for managing digital copyright. To exemplify the operation of these systems, take YouTube's Content ID algorithm.[14] Rights holders furnish YouTube with

[12] Tarleton Gillespie, *Governance of and by Platforms,* in Communication and Law (2018).
[13] Mireille Perel & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement,* 69 FLA. L. REV. 181 (2017).
[14] Katherine Scott, T*he YouTube Content ID System: A Critical Analysis of Its Impact on Copyright Enforcement and User Creativity,* 12 J. INTELL. PROP. L. & PRAC. 123 (2017).

information and data regarding their works that they seek to safeguard from unauthorized utilization on the platform. YouTube creates a digital fingerprint for each individual piece of content based on this data. Upon the submission of a new video to YouTube, the algorithm verifies for any correspondences between the video and the digital fingerprints in its repository. Upon identification of a match, the video is designated as possibly infringing content. Upon flagging a video, rights holders possess multiple alternatives. They can oversee the audience metrics of the flagged video, restrict access to it, or assert all advertising money if the video is monetized. YouTube's statistics indicate that over 9,000 partners, comprising television broadcasters, film studios, and record labels, implement Content ID. The reference library has more than 75 million digital fingerprints.[15] Consequently, the principal benefactors of the Content ID system are major entertainment corporations whose works are regularly utilized. Utilizing this technique necessitates possessing a substantial quantity of copyright-protected material, submitting multiple legitimate takedown requests, and having the capacity to oversee these procedures. As a result, Content ID and its functionalities are primarily available to substantial and economically influential rights holders. Smaller enterprises possessing copyright-protected content may utilize the Content Verification Tool, enabling rights holders to search for and seek the removal of potentially infringing videos. YouTube provides the Copyright Match Tool for smaller artists, generally those generating user-generated content.[16] This tool examines the platform for illicit uploads of original videos. If matching content is identified, the authors have restricted alternatives: they may contact the uploader via email, request immediate removal, seek scheduled removal, or archive the match without further action. The leading industry players possess the most efficient enforcement mechanisms and the broadest array of choices. Conversely, smaller organizations and original content creators, who constitute the bedrock of YouTube's community, possess more limited avenues for asserting their rights. The most significant disparity is the lack of opportunity for smaller creators to monetize possibly infringing content through the acquisition of advertising income.

C. Examination of existing automated enforcement systems like YouTube and Facebook's Content ID

Digital platforms like Facebook, YouTube, Instagram, and TikTok flourish by enabling users to share content freely, while also gathering user data for potential sale to marketers. This content frequently integrates components of pre-existing copyrighted work, as users remix, change, or

[15] Sam E. Hargreaves, *Fair Use in the Age of Algorithmic Enforcement: The Case of YouTube's Content ID,* 56 HARV. J. ON LEGIS. 345 (2019).
[16] J. C. Lessig, *Copyright and User-Generated Content: The Challenges of Content ID,* 23 YALE J.L. & TECH. 1 (2020).

augment it through formats like as memes, mashups, play-alongs, and supercuts, echoing the remix culture prevalent in 1990s hip-hop sampling. Although these remixes can achieve success and elevate creators to prominence when disseminated broadly, they may also violate domestic copyright laws, contingent upon infringement levels and the possible invocation of defenses such as fair use or exemptions for parody, satire, news reporting, and education. Platforms that permit such content may incur liability for users' infringing actions; but they might be protected by *"safe harbor"* regulations that safeguard intermediaries under certain scenarios. These regulations frequently function under a *"notice and take-down"* framework, necessitating swift action upon receipt of notification regarding infringing content.[17]

To reduce liability, platforms are implementing strategies such as responding to infringement notices by deleting or restricting access to purportedly infringing content. Moreover, numerous platforms are adopting filtering systems and other automatic content protection mechanisms to authenticate user-uploaded content against reference files in real-time, provided by individuals or entities asserting rights to it. YouTube's *"Content ID"* is distinguished as one of the most advanced and lucrative filtering systems, also implemented on Facebook and Instagram. Essentially, individuals employing automated matching algorithms can gain monetarily from user uploads that contain content analogous to their claims. This method, used in YouTube's Content ID and utilized on other platforms, continues to be a typical procedure.

In 2007, Google declared a collaboration with Walt Disney Co., Time Warner Inc., and EMI to use digital fingerprinting technologies on YouTube. Google's automated content identification system provides music, film, and television rights holders with control and profit opportunities for content posted to YouTube. Irrespective of the selected course, the outcome must bolster a normative framework that faces growing scrutiny: exclusivity ought to be the anomaly, while the freedom to access and utilize should prevail as the standard. Google utilizes algorithmic regulatory technology to maintain these standards.[18] In the last ten years, Google has created multiple algorithmic techniques to deter copyright violations, uphold copyrights, and remunerate rights holders. These efforts, however, undermine openness and accountability in digital copyright governance, favoring commercial interests over the public good.

[17] Mark Henning, *Safe Harbors and the Digital Millennium Copyright Act: A Comparative Analysis of the DMCA and the E-Commerce Directive,* 22 HARV. J.L. & TECH. 1 (2008).
[18] M. L. Mongnani, *Algorithmic Governance and Copyright Law: The Case of YouTube's Content ID*, 34 BERKELEY TECH. L.J. 789 (2019).

The DSM Directive is now in effect, necessitating focused attention on the difficulties it presents. Article 17 identifies online content sharing service providers as executing the copyright-related act of public communication. These providers may be free from copyright liability only if they prove their diligent efforts to prevent unlawful works from being accessible on their platforms. This rule may encourage service providers to employ the most efficient tools available.[19]

It emphasizes the significance of comprehensive analysis in technology-driven regulation and legislation. Reactive law-making, which just tackles current issues without contemplating future technological advancements and their consequences, jeopardizes the relevance of rules upon implementation. Consequently, the prospective advantages of AI and machine learning in copyright law may be eclipsed by the disadvantages and challenges arising from these technical developments.

In the domain of copyright, the primary phase of algorithmic enforcement tools comprised TPM, or DRM technologies in the United States, which functioned as digital locks. Moreover, when legal provisions are codified, private and potentially biased entities are tasked with assessing and interpreting the law. These bodies possess considerable authority in establishing precise regulations and limitations, thus providing a large risk of incorporating bias into the code, favoring their interests while potentially marginalizing specific individuals or groups. The predominant type of bias in enforcement algorithms is technical bias, arising from the difficulty of rendering human constructs, such as interpretations of legal requirements, comprehensible to computers. The interpretation of law is conventionally a public role performed by the court or the legislature.[20] Nevertheless, when this responsibility is delegated to private corporations, these organizations can circumvent the public oversight usually applied to courts, judges, and legislatures. Given the challenges of algorithmic enforcement, AI and machine learning present considerable potential for enhancing algorithmic copyright enforcement. Their sophisticated technology can distinctly discern between illegal use and fair use, exceeding the capabilities of existing TPM, hashing, and search algorithms. YouTube has explicitly indicated that their existing content recognition systems do not assess copyright exceptions or fair use. To enhance the equilibrium of these algorithmic systems, it is imperative to include the constraints and limits of exclusive rights represented in exceptions and fair use into their design. A proficient flagging and training system, wherein initial

[19] R. B. F. de Vries, *The Digital Single Market Directive: Implications for Online Content Sharing Service Providers,* 45 EUR. INTELL. PROP. REV. 123 (2020).
[20] Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (Crown Publ'g Group 2016).

human oversight in identifying infringing and non-infringing content progressively shifts to algorithmic evaluations, can be enhanced by high-quality and simplified datasets. This technique can instruct the algorithm to recognize instances of fair usage or copyright exceptions.

III. CHALLENGES POSED BY AUTOMATED ENFORCEMENT

As a result of a confluence of economic and political circumstances, private entities such as Google now possess considerable authority to enforce copyright in practice. In 2017, the United Kingdom's Intellectual Property Office facilitated a private anti-piracy accord among Google, Bing, and several industry entities, including the British Phonographic Industry, Motion Picture Association of Europe, Middle East, and Africa, and the Alliance for Intellectual Property. The current draft of the EU directive highlights that collaboration between rights holders and intermediaries must not obstruct the availability of non-infringing content. Additionally, it mandates that platforms establish a redress system subject to human oversight. These clauses indicate that officials in the European Union are aware of the possibility for errors, bias, and insufficient accountability in algorithmic enforcement systems.

A. Risk of over-blocking and censorship

The legal framework for algorithmic enforcement of copyright law is complex and dynamic, including issues of culpability, jurisdiction, and the interplay between copyright law and other legal systems (e.g., freedom of speech).[21] Algorithmic systems frequently encounter false positives, erroneously identifying genuine content as infringing, and false negatives, neglecting to recognize actual infringement. This may lead to unwarranted removals of legitimate content or the unnoticed existence of illicit material. This may result in too stringent enforcement, leading to the elimination of content that qualifies as fair use or other legitimate applications of copyrighted material. This may inhibit free expression and creativity, akin to censorship.

Algorithmic systems can display biases influenced by language, geography, or cultural environment, leading to disparate treatment of users. This elicits apprehensions regarding discrimination and the intensification of pre-existing imbalances.[22]

[21] Mireille Perel, *Algorithmic Enforcement of Copyright: Approaches to Avoiding Overblocking,* 14 SING. J.L.S. 257 (2023), https://law1a.nus.edu.sg/sjls/articles/SJLS-Sep-23-256.pdf.
[22] Margot E. Sag, *Algorithmic Fair Use*, 90 U. CHI. L. REV. 1 (2023), https://lawreview.uchicago.edu/print-archive/algorithmic-fair-use.

Automated enforcement systems frequently lack human supervision, depending exclusively on algorithms for enforcement determinations. This may result in decisions devoid of context or subtlety, thus leading to inaccurate consequences. Rigorous enforcement efforts may disproportionately impact smaller creators or novel applications of intellectual material, suppressing competition and obstructing technological progress.

A principal concern stems from the treatment of the codes and algorithms that support these technologies as trade secrets. To sustain a competitive advantage and avert user exploitation of algorithmic flaws, firms conceal these specifics from the public. The absence of transparency may lead to excessive protection and the misuse of authority stemming from a lack of accountability. As a result, persons seeking to utilize these platforms lawfully frequently struggle to modify their behavior to adhere to the regulations, primarily due to their lack of awareness regarding the precise limitations established by the technology.[23] The ambiguity regarding whether content may activate the algorithm and be deemed infringing fosters a potentially discouraging atmosphere for active users, especially those generating user-created content. This scenario may result in self-censorship, as individuals refrain from sharing content due to concerns of inadvertently breaching obscure regulations. The ambiguity and consequent self-censorship undermine the core purpose of social media and content-sharing platforms, which are basically designed for users to create and disseminate unique information.

B. Non-consideration of Fair Use doctrine

Algorithmic enforcement methods are essential for protecting digital works online, seeking to eradicate unlawful content and protecting platforms such as YouTube and Facebook from responsibility. It is essential to recognize that unauthorized content is not inherently illegal, as several uploads may claim validity under legal exceptions such as fair use. Consequently, there is an increasing interest in incorporating fair use criteria into copyright enforcement algorithms to avert automated over-deterrence and to educate users regarding their adherence to copyright law.[24] The existing framework of copyright protection for digitized works predominantly depends on algorithmic enforcement mechanisms, designed to safeguard the rights of copyright holders while reducing responsibility for content intermediaries. Platforms like YouTube and Google have

[23] Margaret O'Rourke, *Institutionalized Algorithmic Enforcement—The Pros and Cons*, 14 FIU L. REV. 299 (2020), https://ecollections.law.fiu.edu/cgi/viewcontent.cgi?article=1433&context=lawreview.
[24] Maria Lillà Mongnani, *Virtues and Perils of Algorithmic Enforcement and Content Regulation in the EU: A Toolkit for a Balanced Algorithmic Copyright Enforcement,* 11 CASE W. RES. J.L. TECH. & INTERNET 1 (2020), https://scholarlycommons.law.case.edu/jolti/vol11/iss1/2.

implemented detection and removal algorithms to eliminate unlawful content from their services.[25] Fair use was established to customize copyright for specific situations, raising the question of whether conventional statutory customizing may be adapted to data-driven, machine-mediated customization. A substantial amount of literature on algorithmic regulation cautions against potential drawbacks, such as spurious objectivity, diminished decisional transparency, and design biases. Unauthorized content is not intrinsically illegal. Numerous illicit digital posts may be legally vindicated under numerous exceptions to copyright holder rights, particularly under the legal balancing criterion known as fair use. Fair use and analogous exclusions exist to alleviate the adverse effects of exclusive control over expression on public conversation, individual enrichment, and artistic innovation.[26] Consequently, incorporating context-specific fair use measures into copyright enforcement algorithms is advantageous to avert automated overdeterrence and to educate users regarding their adherence to copyright law. Fair use was established to "personalize" copyright for specific situations, prompting the inquiry of whether conventional legislative customization may be effectively adapted to data-driven, machine-mediated personalization. This entails modifying the intricate, context-dependent characteristics of fair use for algorithmic enforcement systems, guaranteeing their precise reflection and application of these legal principles.

C. Lack of transparency and accountability

Ensuring algorithm accountability and safeguarding the public interest are two of the main issues with algorithmic enforcement. Algorithms often make critical decisions regarding access to creative content in opaque ways, rendering their "black box" operations difficult to scrutinize. This lack of transparency raises concerns regarding which content is being removed, the decision-making process, the individuals responsible for these decisions, and avenues for influencing them[27]. Without proper mechanisms for review, there is a risk that lawful content may be unjustly restricted without prompt correction. Unaccountable online content management raises concerns about civil liberties, creates additional obstacles to market innovation and fair competition, and may result in the abuse of power and manipulation.

[25] European Parliament, *Liability of Online Service Providers for Copyrighted Content – Regulatory Action Needed? In-Depth Analysis for the IMCO Committee* (2017), https://www.europarl.europa.eu/thinktank/en/document/IPOL_IDA(2017)614207.
[26] T. Lester & D. Pachamanova, *The Dilemma of False Positives: Making Content ID Algorithms More Conducive to Fostering Innovative Fair Use in Music Creation,* 24 UCLA ENT. L. REV. 1 (2017).
[27] Sharon Bar-Ziv & Niva Elkin-Koren, *Behind the Scenes of Online Copyright Enforcement: Empirical Evidence on Notice & Takedown*, 50 U. CONN. L. REV. 321 (2018), https://digitalcommons.lib.uconn.edu/cgi/viewcontent.cgi?article=1395&context=law_review.

The lack of uniformity in the data presented by transparency reports and other information channels across platforms is a major obstacle to transparency. The amount of content that is automatically removed without human review is rarely disclosed by social media platforms, and they have not yet provided direct information regarding the accuracy of their algorithms.[28] This lack of clarity makes it challenging for regulators and the public to understand the extent of erroneous deletions or removals without human oversight. Uncertain indicators, like Facebook's *"proactive rate"*, which shows the proportion of content that is acted upon before a user reports it, frequently mask important truths. It's unclear if this measure refers to the proportion of content that algorithms have found, but it could also include other platform efforts to find content.[29]

Other issues with algorithmic copyright enforcement may be made worse by the application of these new technologies. The decision-making process's transparency and the reasoning behind it can almost disappear. Furthermore, given the issue of how AI can defend its choices raises questions regarding the legal standing of AI and the distribution of responsibility for wrongdoing and damages, guaranteeing accountability might provide a new difficulty. Many algorithmic enforcement systems operate with limited transparency regarding their methodologies, making it challenging for affected parties to understand why content is flagged or removed. This lack of transparency raises concerns about due process and accountability.[30]

A second generation of algorithmic enforcement tools arose with the emergence of social media and the introduction of websites like YouTube, Instagram and Facebook as well as the increase in user-generated content made possible by these platforms. The internet accessibility of copyrighted content was the focus of these more recent techniques.[31] Examples of this method of managing digital copyright are YouTube's Content ID and Facebook's Rights Manager. YouTube's Content ID algorithm is a perfect example of such a system. Right holders can use this method to monitor the viewership numbers of videos that have been identified, restrict access to those videos, or claim all advertising earnings if the allegedly pirated video is commercialized.[32] One significant challenge

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[28] Jonathon W. Penney, *Accountability in Algorithmic Copyright Enforcement* (STAN. L. SCH. 2016), https://law.stanford.edu/wp-content/uploads/2016/10/Accountability-in-Algorithmic-Copyright-Enforcement.pdf.

[29] Matthew Rimmer, *Algorithmic Enforcement of Copyright: Approaches to Transparency and Accountability*, SING. J.L.S. 256 (2023), https://law1a.nus.edu.sg/sjls/articles/SJLS-Sep-23-256.pdf.

[30] *The Growing Tensions Between Digital Media Platforms and Copyright Enforcement*, AM. ACTION FORUM (2024), https://www.americanactionforum.org/insight/the-growing-tensions-between-digital-media-platforms-and-copyright-enforcement/.

[31] *Algorithmic Copyright Enforcement: Is It Reliable?*, INTELL. PROP. & TECH. L. BLOG (2021), https://ipsasg.wordpress.com/2021/02/19/algorithmic-copyright-enfrocement-is-it-reliable/.

[32] *The Use of Automation in Copyright Enforcement: A Slippery Slope*, CTR. FOR INTELL. PROP. & INFO. TECH. L. (2021), https://cipit.strathmore.edu/the-use-of-automation-in-copyright-enforcement-a-slippery-slope-2/.

arises from the treatment of codes and algorithms underlying these technologies as trade secrets, keeping them concealed from the public to secure a competitive edge and prevent users from exploiting system loopholes. Because there is no accountability, this lack of transparency may lead to overprotection and misuse of authority.

D. Non-compliance of due process

Automated systems frequently lack sufficient accountability or transparency, which results in quick content removals based on algorithmic judgments that might not fully take into account the context or veracity of the information in question. When legal content is deleted without adequate explanation or the content creator's remedies, this lack of due process can lead to over-blocking. The creators of the content are usually not given much, if any, explanation as to why it was tagged or removed. The core principles of copyright law, which are intended to safeguard both artists and consumers, may be undermined as a result, leaving creators unable to establish their fair use claims or defend their rights. This case highlights the necessity for strong protections that guarantee adherence to due process requirements in copyright enforcement methods and raises major concerns about the loss of rights and the possibility of misuse under automated enforcement frameworks. In addition to undermining the justice and fairness aspects of copyright law, such actions run the risk of chilling out authors who may otherwise be reluctant to publish their work for fear of its arbitrary removal. The employment of algorithms, which are prone to misinterpreting subtleties and context, raises grave concerns over the possibility of misuse and inaccuracy in these systems. Because *"the over-reliance on automated tools can lead to a shift in the types of errors made rather than an increase in overall efficiency"*, as Penney points out, it is imperative that automated copyright enforcement systems guarantee due process.[33]

The fact that copyright holders might effectively negate exceptions by enforcing unduly stringent control over their content is another important problem. Recent content identification methods, like YouTube's Content ID, have the drawback of being unable to differentiate between uses that are infringing and those that are exempt, even while they can identify same or equivalent content. As a result, even applications that are eligible for exceptions may be identified and prevented from being made publicly available.[34] Take, for instance, a review video that talks about a recently released film. Reviewers may use movie material to illustrate their views and bolster their

[33] Electronic Frontier Foundation, *Unfiltered: How YouTube's Content ID Discourages Fair Use and Dictates What We See Online* (2021), https://www.eff.org/wp/unfiltered-how-youtubes-content-id-discourages-fair-use-and-dictates-what-we-see-online.

[34] Jane C. Ginsburg, *The Trouble with Copyright: The Case for a Fair Use Doctrine*, 29 COLUM. J.L. & ARTS 1 (2005), https://journals.library.columbia.edu/index.php/lawandarts/article/view/1556.

arguments, which may legitimately be considered a copyright exception for comments or critique. However, disproportionality can present another problem, whether it falls under or outside the purview of copyright exceptions. Due to demonetization and ad-revenue claims, the post-upload quasi-license contract's provisions, which resemble a *"compulsory license"*, might be unjustly out of proportion to how the protected information is used. Ad revenue from videos with a lot of duration and views may be disproportionately diverted if, for example, a short clip of a song is used as background music in a vlog or gaming broadcast. This problem highlights the limitations of copyright law regarding the incidental inclusion exception under EU copyright law and other jurisdictions where de minimis use is not covered by copyright protection.[35]

E. Potential for monetary exploitation

The possibility of financial exploitation of both producers and users is a significant obstacle related to automated copyright enforcement. Large rights holders who have the means to successfully traverse and influence these enforcement procedures may be disproportionately favored by automated systems. Due to the power disparity created by this circumstance, smaller producers could find it difficult to stand up for their rights or get paid fairly for their labor. Smaller artists may suffer financial losses as a result of this imbalance since automated systems that do not identify fair use or transformative works may target or eliminate their content disproportionately. Malicious actors also occasionally take advantage of these systems by bringing false copyright claims against authors to extort money or stifle competition. In addition to endangering individual producers, this *"weaponization"* of copyright claims compromises the credibility of platforms that depend on user-generated material to remain viable.[36]

Furthermore, intermediaries frequently make money from user-generated material through subscription services or advertising revenue, which presents moral dilemmas when they delete content without providing a valid reason while continuing to benefit from other users' interactions with related content. Reliance on automated systems may result in a situation where intermediaries put profit and efficiency ahead of equity and fairness in copyright enforcement, which would stifle creativity and innovation among smaller creators who worry about being unfairly punished or

[35] Niskanen Ctr., *Automated Copyright Enforcement Systems: Perils, Pitfalls, and Possibilities*, https://www.niskanencenter.org/automated-copyright-enforcement-systems-perils-pitfalls-possibilities/.
[36] T. Lester & D. Pachamanova, *The Dilemma of False Positives: Making Content ID Algorithms More Conducive to Fostering Innovative Fair Use in Music Creation,* 24 UCLA ENT. L. REV. 1 (2017), https://www.uclalawreview.org/wp-content/uploads/sites/36/2020/07/Lester-Pachamanova.pdf.

losing access to their audiences.[37] The need for legislative solutions that support fair treatment of all authors and guarantee that automated systems do not compromise the key tenets of copyright law is highlighted by this exploitation.

"The combination of caution, automation, and preemptive takedowns reflects the rising burden of moderating copyright infringement", as brought to light in recent talks, and drive content producers away from platforms that once gave them visibility and income opportunities. The financial ramifications go beyond individual producers; platforms themselves may encounter criticism from users who believe they are unfairly punished by excessively harsh enforcement actions that put financial gain ahead of equitable treatment.[38]

IV. WHAT ARE THE COUNTER MEASURES

A. Text and data mining exceptions

A surprising solution appears to be emerging, one that involves the use of software and technology. The requirement that some online content sharing service providers use these technologies (through Article 17 of the directive on copyright in the digital single market),[39] as envisioned by the EU legislator, has led to an evaluation of the situation considering upcoming technological developments. One possible solution to the problems with algorithmic enforcement is a broad copyright exception for text and data mining. The potential for licensing or selling enforcement algorithms derived from TDM results acquired under this exception may encourage the development of an alternative market, which would push the outsourcing of algorithm development to other organizations, or it may encourage large tech companies to prioritize the development of their own content recognition tools.[40]

Making Text and Data Mining (TDM) an exemption could encourage competitiveness and lead to more equitable and open algorithmic enforcement. Effective copyright enforcement algorithms require the ability to assess and train autonomous and semi-autonomous systems. Fair algorithms

[37] T.J. DeGroat, *The Dilemma of False Positives: Making Content ID Algorithms More Conducive to Fostering Innovative Fair Use in Music Creation,* 24 UCLA ENT. L. REV. 1 (2017), https://www.uclalawreview.org/wp-content/uploads/sites/36/2020/07/DeGroat-Article.pdf.
[38] Lawrence Lessig, *Code v. 2.0* (Basic Books 2006), http://codev2.cc/download+remix/Lessig-Codev2.pdf.
[39] European Comm'n, *Guidance on Article 17 of Directive 2019/790 on Copyright in the Digital Single Market*, COM (2021) 288 final (2021), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0288.
[40] *Digital Law Up(to)date: Art. 17 of Directive 2019/790 is Valid*, STIBBE, https://www.stibbe.com/publications-and-insights/digital-law-uptodate-art-17-of-directive-2019790-is-valid.

could be developed in an environment that permits the free processing of more and better data.[41] Giving research and non-profit groups the freedom to create their own enforcement algorithms will solve problems like bias and transparency while also boosting competition by giving up-and-coming platforms more options. With more actors, particularly non-profits, the reliance on trade secrets would decrease, leading to greater transparency and reducing the risk of hidden biases. However, it is important to note that the exception pertains only to the acts of TDM itself and does not cover the development of new algorithms. However, the possibility of licensing or selling enforcement algorithms developed from TDM carried out under this exception would either encourage bigger tech firms to improve their content identification technologies or open a new industry. This, in turn, would incentivize the outsourcing of algorithm development to other entities.[42]

Technological Protection Measures or Digital Rights Management (DRM) technologies in the US, were among the first wave of algorithmic tools used in copyright enforcement. These tools served as virtual locks, enabling owners of digital works to formally stop unwanted access and manage how their creations are used in the future by encrypting them.[43] With the ability to prohibit digital copies entirely or limit them to a limited quantity, this technology successfully made sure that users could only access works that were lawfully obtained. TPMs may also place restrictions on the kind and quantity of devices that can be used to view the works. Adobe's DRM, Apple's Fair Play, and the Content Scrambling System ["**CSS**"] were notable uses of this technology. Despite their initial success in providing reliable technology for rights holders, TPMs faced several shortcomings. They need extra legal protections in the form of bans on evading TPMs because they were easily hacked. Despite these legislative restrictions, there were still other problems with TPMs. By restricting access to a certain number of devices, they frequently slowed down computers, created security problems, and prevented customers from enjoying their lawfully purchased goods to the fullest. Furthermore, because TPMs were intentionally too preventative, they typically overrode copyright exceptions. Although there were certain technological solutions available at the time to handle exceptions, such as partitioning, user authentication, and interoperability, most TPM implementations did not make extensive use of them. Consequently, despite their intended

[41] Electronic Frontier Foundation, *The EU's Copyright Directive Is Still About Filters, But EU's Top Court Limits Its Use*, https://www.eff.org/deeplinks/2022/05/eus-copyright-directive-still-about-filters-eus-top-court-limits-its-use.
[42] World Intellectual Prop. Org., *Text and Data Mining (TDM), Machine Learning and Copyright*, WIPO, https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_conv_ge_21/wipo_ip_conv_ge_21_p4_5.pdf.
[43] Electronic Frontier Foundation, *Human Rights and TPMs: Lessons from 22 Years of the U.S. DMCA* (Sept. 2020), https://www.eff.org/deeplinks/2020/09/human-rights-and-tpms-lessons-22-years-us-dmca.

purpose, TPMs often fell short of providing a balanced and effective means of digital copyright protection.[44]

One way to enhance the effectiveness of these algorithms is by providing them with a substantial and diverse dataset. Copyright laws, however, may present serious challenges to this procedure. Understanding the business problem, gaining a data-specific understanding of the task, preparing the data for analysis (including selecting pertinent data and creating the final dataset), modeling (including selecting and putting into practice the appropriate method), assessing the prepared models, and finally applying the results are the steps involved in text and data mining.[45] Copyright-related acts like copying, converting, or sharing material with the public may be involved in text and data mining for machine learning. This suggests that prior consent and maybe additional fees to the right holders may be necessary for the analysis of data included in copyrighted or other rights-protected content (like database rights). Because most videos on websites like YouTube are protected by copyright, this problem is very relevant.

With extensive worldwide licenses, major platforms like YouTube and Facebook are allowed to conduct text and data mining on copyright-protected content that has been uploaded to their servers. Other organizations, such as non-profits or academic institutes, on the other hand, lack this access, which denies them a vital resource that they need to create their own identification algorithms: a sizable, mineable database. Large tech companies benefit from this discrepancy by having a competitive edge and effectively a monopoly on algorithmic copyright enforcement. As was previously said, algorithmic pre-adjudication - such as content screening by private organizations - can be problematic since these businesses frequently prioritize their own interests over those of users and their right to free speech. Removing the barriers caused by copyright and other rights is one possible way to lessen these problems. While some nations have already implemented exclusions for Text and Data Mining (TDM), the EU has not done so.[46] The DSM Directive, however, seeks to close this disparity. A copyright exception that permits cultural heritage and research organizations to freely use protected works for TDM for scientific research purposes is one of the new, required exceptions outlined in Article 3. Another clause (Article 4), which was originally voluntary but was eventually made essential through discussions, requires

[44] Brigitte Vezina, *We're Against Digital Rights Management. Here's Why.*, CREATIVE COMMONS (Dec. 4, 2020), https://creativecommons.org/2020/12/04/were-against-digital-rights-management-heres-why/.
[45] VdoCipher Blog Team, *What Is DRM Protection Technology, Its Working & Types for Media* (Apr. 11, 2024), https://www.vdocipher.com/blog/drm-technology/.
[46] European Comm'n, *Text and Data Mining: Making Big Data Work for Innovation, Education, and Research*, COMM (2017) 113 Final (2017), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0113.

member states to establish a broad TDM exception that is applicable irrespective of the type of organization that benefits or the activity's goal. Other entities would find it easier to create alternative techniques and algorithms thanks to this exception, since they wouldn't require permission or payment for compensation. In both situations, they could freely perform TDM on databases and works to which they have legal access. To keep control over omitting TDM, right holders would still be able to expressly limit the use of their creations and protected content.

However, two further DSM Directive provisions - mandatory exemptions on text and data mining—could lessen possible problems brought on by the application of AI and the use of machine learning algorithmic enforcement techniques. The TDM exception unintentionally has a favorable effect on algorithmic enforcement, even if its main legislative goals were to promote the advancement of data science and close the gap between Europe and countries with less stringent copyright laws. This demonstrates how various facets of a problem can be balanced by a single legal tool.

B. Exploring transparency promotion and accountability at scale

Some restrictions on exclusive licenses have been put in place to make it simpler for people to access the information found in copyrighted works. One strategy is to establish a few exceptions, saying that certain uses that do not interfere with the regular use of works and do not unjustly jeopardize the right holder's legitimate interests are exempt from prior authorization or payments. Ensuring proper control of algorithmic copyright compliance used by intermediaries on the internet is crucial.[47] Since online copyright enforcement affects fundamental rights, it is important to help those who are impacted understand how algorithmic copyright enforcement systems exercise their power, their standards for making decisions, and how to contest those conclusions. Otherwise, people would lose the freedom to choose which online platforms they use and what content they submit. The DMCA's anti-circumvention provisions, trade secrecy laws, and general anti-hacking statute are just a few of the legal barriers that may make it more difficult for the public to analyze the code underlying algorithmic enforcement processes and hold them responsible, in addition to the inherent opacity of algorithms and their constantly improving learning capabilities.[48]

[47] Sharon Bar-Ziv & Niva Elkin-Koren, *Behind the Scenes of Online Copyright Enforcement: Empirical Evidence on Notice & Takedown*, 50 UCONN L. REV. 321 (2018), https://digitalcommons.lib.uconn.edu/cgi/viewcontent.cgi?article=1395&context=law_review.

[48] Electronic Frontier Found. (EFF), *The DMCA's Anti-Circumvention Provisions: A Guide to the Law,* https://www.eff.org/issues/dmca.

C. Possibilities of Inbuilt Enforcement

Some argue that to guarantee continued access for such purposes, some kind of institutional structure or human oversight would be required, as fair use norms cannot be incorporated into technical protection measures. Due in large part to the difficulty of converting legal requirements into executable computer code, prominent computer scientists also express pessimism about the viability of incorporating fair use into a technical system. Beyond the restrictions of human programmers in establishing the bounds of legal documents, these difficulties also include the intrinsic limitations of machine languages, their operating environments, and the hardware's capacity to carry out programmed commands.

The understanding that fair use is a dynamic idea is equally concerning. What kind of human monitoring can we expect from the likely designers of automatic fair use judgments, considering the high cost of checking internet content for infringement? Would Type I or Type II flaws be lessened by human oversight? While erroneous negatives are more harmful to the public interest, content owners are probably concerned about false positives from algorithmic fair use evaluations. Any cost benefit from algorithmic review would be negated and made impracticable if screening for both kinds of errors required human review of each computer conclusion. On the other hand, trying to incorporate legitimate use into regulation algorithms runs the risk of completely misrepresenting the exception. Furthermore, the new legal and social norm may be the acceptance by society of a watered-down kind of fair use that is displayed in an algorithmic format. The fair use exemption may be de facto eliminated if copyright enforcement algorithms do not incorporate fair use, leaving it available only as a peculiar defense for the few applicants who can afford to seek fair review by the courts. But trying to incorporate fair use into enforcement systems runs the risk of completely misrepresenting the exemption.

According to an empirical analysis of the corpus of federal court fair use rulings, fair use rulings may follow judicial decision-making patterns rather than being capricious or random. Without the need for formal programming definitions of fair use factors, it is possible that a neural network or other machine learning system could recognize these patterns in historical case data and compare them with comparable patterns in data pertaining to future fair use incidents, situations, and scenarios. The kind of fair use evaluations that the Ninth Circuit has in mind might be provided by such a system, either before the use occurs or in support of online copyright regulation judgements.[49]

[49] U.S. Copyright Off., *Fair Use Index*, https://www.copyright.gov/fair-use/.

D. Protecting Users

Many of the owners of copyright decide to monetise their infringing content rather than delete it. This trend has become a successful business model, particularly in the realm of video monetization. Copyright owners can establish lucrative online licensing businesses, allowing them to effortlessly generate revenue from YouTube users utilizing their copyrighted material in any capacity.[50]

E. Disclosure norms for Platforms

Adopting multi-level, explicit, and legally binding disclosure regulations is essential to increasing transparency without unduly disrupting social media companies' models of operation. It has been shown that general provisions for required transparency reports are insufficient. Independent research and external scrutiny are severely hampered by platforms' control over what data and information they reveal and how they present it in the absence of clear and legally obligatory disclosure rules. By putting in place multi-level disclosure obligations, governments can assign oversight duties to different stakeholders, such as users, academics, and civil society, promoting an accountable system on multiple levels.[51]

Data should be made available to independent academics so they can audit algorithms and perform effect analyses, especially when it comes to freedom of speech and public debate. Among the recommendations for multi-level disclosure are:

1) User-Facing Disclosure: Platforms should notify users when their content is taken down, providing the option to appeal. Users should also be notified if the takedown was the consequence of an automatic judgment that was not reviewed by a human.
2) Research Disclosure and Civil Society: Platforms should make algorithmic tools available to researchers for algorithmic inspection and maintain databases of content that has been removed, along with documentation of the actions taken to remove it.[52] Most categories, including disinformation, hate speech, and copyright violation, ought to be accessible. However, ethical issues require careful negotiation within a co-regulatory framework for some categories, such as imagery of child sexual assault and image-based abuse (*"revenge porn"*).

[50] Mary Woodcock, *Can I Still Monetize With a Copyright Claim?*, LICKD (Aug. 2022), https://lickd.co/blog/music-licensing/can-i-still-monetize-with-a-copyright-claim.
[51] Oliver L. Haimson et al., *Algorithmic Content Moderation: The Role of Bias in Online Spaces,* in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (2021), https://dl.acm.org/doi/abs/10.1145/3442188.
[52] Aline Iramina, Charlotte Spencer-Smith & Wai Yan, *Disclosure Rules for Algorithmic Content Moderation*, GRAPHITE (2020), https://graphite.page/policy-brief-blackbox/.

3) General Disclosure: Large commercial platforms should be required to disclose information in a standardized format, accommodating differences in community guidelines and definitions of violations across platforms. Ensuring platform accountability requires strong and easily navigable content moderation appeal procedures. Users should be able to appeal judgments they believe to be erroneous and have the right to information, especially when they are subject to decisions that are automated without human scrutiny.[53]
4) Algorithmic Content Moderation ["**ACM**"] without human review risks the erroneous removal of content. The increase in the use of ACM, as seen during the COVID-19 crisis, underscores the need for effective appeal mechanisms. In order to minimize possible harm to public opinion, freedom of speech, and various other user rights, these measures are essential for the prompt restitution of any authorized material or account that has been mistakenly removed.[54]

V. CONCLUSION

The European Court of Justice issued its eagerly anticipated decision in the Poland case in April 2022, concluding that the use of upload filters is required to safeguard online digital copyright under Article 17 of the Copyright in the Digital Single Market 2019 law. In general, the court affirms that algorithmic regulation of online copyright enforcement is consistent with European basic rights, which is a crucial decision as we progress toward a future of filtered online services. Considering the Court's current normative framework, it will contend that the decision is hard for important parties to reconcile with the Court's current guidelines for online digital copyright governance. It will be contended that, without a strong enough argument, internet intermediary service providers have completely lost the protections provided by the Court's prior case law. It will be argued that this has a horizontal effect on the fundamental rights of internet users, which exacerbates the Court's undervaluation of such rights, particularly with regard to freedom of speech. It will be claimed that the function of such rights has been curtailed in the face of algorithmic regulation, creating a dangerous precedent for all our filtered futures, rather than being granted the disruptive role justified by the Court's current normative framework.[55]

[53] Abhimanyu Agarwal, *Algorithmic Content Moderation and Copyright Law*, THE DIGITAL FUTURE (Oct. 26, 2020), https://thedigitalfuture.in/2020/10/26/algorithmic-content-moderation-and-copyright-law/.
[54] Aline Iramina, Charlotte Spencer-Smith & Wai Yan, *Disclosure Rules for Algorithmic Content Moderation*, GRAPHITE (2020), https://graphite.page/policy-brief-blackbox/.
[55] Communia Ass'n, *Poland, the CDSM, and the Court of Justice* (Nov. 11, 2022), https://communia-association.org/2022/11/11/poland-the-cdsm-and-the-court-of-justice/.

Leading social media companies are using automation and artificial intelligence more and more to find and delete offensive content. While this helps curb the spread of the most harmful material on the Internet, algorithmic content moderation can sometimes result in the deletion of content that should remain accessible ("over blocking") or unfairly target minorities. Notably, platforms offer very little transparency regarding how their algorithmic moderation works, the perceived accuracy of these technologies, and the volume of content removed, especially without human oversight. Given the likely increase in the use of these technologies, it is crucial for regulators to mandate greater transparency through required disclosures from platforms.

To improve social media platforms' transparency, this policy suggests:

1) Using algorithmic moderation of content mechanisms, social media platforms can implement specific and mandatory disclosure criteria at several levels, allowing for multi-level accountability and external scrutiny.
2) Requiring social media companies to set up reliable and user-friendly content moderation appeal processes. Users should be able to challenge any platform decision about their material, ask for human review if the decision was made automatically, and quickly restore any content that was wrongfully removed but was still legitimate.
3) Establishing a regulatory framework that ensures an improved and effective application of disclosure obligations by using multiple stakeholders in the regulation process.
4) It is unclear if data-driven, machine-mediated tailoring can replace traditional personalization techniques and whether automated copyright enforcement can account for fair use rulings and other legal exceptions. However, there are concerns about the inherent pitfalls of relying on algorithmic regulation, including biases, diminished transparency, and design flaws. Addressing these challenges requires careful consideration and possibly human oversight to ensure fairness and accuracy in automated enforcement processes.
5) One thing is certain, though: as autonomous enforcement systems develop further, accountable and open public interest conclusions in digital copyright governance will become more and more elusive in the absence of a system of public interest principles and at the whim of influential private actors.

Fairness for content producers, copyright holders, and emerging media platforms should all be guaranteed by reform. Instead of solely adding more regulations, policymakers and regulators should focus on clarifying and improving workable fair use policies. Instead of putting the duty upon content creators to demonstrate their innocence, they must think about transferring the

burden of proving on copyright holders who allege harm. Addressing the challenges of algorithmic enforcement necessitates an interdisciplinary approach that integrates expertise in law, technology, ethics, and policy. Current literature underscores the importance of collaboration across these disciplines to develop more effective and equitable enforcement mechanisms