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Prefazione

ROSSELLA BORELLA

Direttrice

Care lettrici e cari lettori,

Sette anni fa, un'idea audace ha preso forma: una rivista giuridica capace di unire profondità accademica e rilevanza pratica, promuovendo una discussione aperta e consapevole su temi cruciali del diritto contemporaneo. Oggi, con orgoglio, presentiamo il secondo numero del Volume 6. Questa edizione rappresenta non solo la maturazione del progetto, ma anche un esempio tangibile di come una comunità accademica viva e partecipativa possa arricchire il dibattito giuridico internazionale. Con trentatré editor interni, affiancati da revisori esterni e una schiera di autori di talento, la nostra rivista continua a crescere grazie all'impegno collettivo di tutti coloro che contribuiscono al processo editoriale.

I tre articoli presenti in questo numero, pur affrontando ambiti giuridici distinti, sono uniti da un filo conduttore comune: la sfida della complessità normativa e tecnologica nel diritto moderno e l'imprescindibile necessità di soluzioni equilibrate e innovative per garantire un sistema legale equo ed efficace.

Il primo contributo, "*Automated Copyright Enforcement Online: How Platforms Stifle Creativity by Reducing Technological Cost*" di Vitantonio Leuzzi, esplora come le tecnologie di enforcement automatico del copyright, come il sistema ContentID di YouTube, abbiano trasformato il panorama della tutela dei diritti d'autore. Questo articolo mette in luce le implicazioni legali e costituzionali di tali

sistemi, evidenziando il delicato bilanciamento tra la protezione dei creatori e la libertà degli utenti. Leuzzi propone soluzioni per un'applicazione del diritto d'autore che garantisca equità e trasparenza nel contesto digitale.

Il secondo articolo, "*CCI v. Sector Regulators: Navigating Jurisdictional Ambiguities for Effective Resolution*" di Hammad Siddiqui e Naman Pratap Singh, affronta le sovrapposizioni giurisdizionali tra la Competition Commission of India (CCI) e le autorità settoriali di regolamentazione. L'analisi approfondita delle ambiguità legislative e delle interpretazioni giurisprudenziali offre spunti per un approccio collaborativo tra gli organi regolatori, al fine di promuovere un quadro normativo coerente ed efficiente che tuteli gli interessi dei consumatori e migliori la competitività del mercato.

Infine, "*Juveniles' Neuronal Development and Criminal Justice: When Neurosciences Meet Criminal Law*" di Nicolò Cappuccitti propone una riflessione innovativa sull'impatto delle neuroscienze nello sviluppo delle politiche penali relative ai minori. Integrando studi scientifici sullo sviluppo neuronale con analisi di sentenze chiave come *Roper v. Simmons* e *Miller v. Alabama*, l'autore suggerisce come il riconoscimento di una responsabilità penale attenuata per i giovani possa influenzare positivamente le pratiche giuridiche italiane.

Questi contributi, apparentemente distanti, condividono un obiettivo comune: illuminare le zone grigie del diritto dove il cambiamento è necessario per affrontare le sfide di un mondo in rapida evoluzione. Ogni articolo esemplifica il ruolo cruciale di un approccio interdisciplinare, capace di combinare analisi giuridica, avanzamenti tecnologici e approfondimenti scientifici per rispondere alle complessità moderne.

Dedicarsi alla pubblicazione di articoli giuridici non è soltanto un esercizio accademico: è un atto di responsabilità verso la società, una

forma di contributo intellettuale che aiuta a costruire ponti tra il diritto e la realtà quotidiana. La nostra missione è continuare a favorire questo dialogo vitale, ispirati dalla passione per il diritto e dalla convinzione che solo un confronto aperto e informato possa guidare il progresso giuridico.

Ringraziamo ogni lettore e collaboratore per la fiducia e il supporto continuo: il vostro impegno è la forza motrice che rende possibile tutto questo.

Augurandovi una buona lettura, vi porgo cordiali saluti,

Rossella Borella
Direttrice

Preface

ROSSELLA BORELLA
Editor-in-Chief

Dear Readers,

Seven years ago, a bold idea took shape: a legal journal capable of combining academic depth with practical relevance, fostering open and informed discussion on crucial contemporary legal issues. Today, we proudly present the second issue of Volume 6. This edition not only marks the maturation of our project but also serves as a tangible example of how a vibrant and participatory academic community can enrich the international legal discourse. With thirty-three internal editors, supported by external reviewers and a talented array of authors, our journal continues to grow thanks to the collective commitment of all those involved in the editorial process.

The three articles featured in this issue, while addressing distinct legal domains, share a common thread: the challenge of regulatory and technological complexity in modern law and the pressing need for balanced and innovative solutions to ensure a fair and effective legal system.

The first contribution, "*Automated Copyright Enforcement Online: How Platforms Stifle Creativity by Reducing Technological Cost*" by Vitantonio Leuzzi, examines how automated copyright enforcement technologies, such as YouTube's ContentID system, have transformed the landscape of copyright protection. This article highlights the legal and constitutional implications of these systems, emphasizing the delicate balance between protecting creators and safeguarding user freedoms. Leuzzi proposes solutions to ensure

fairness and transparency in copyright enforcement within the digital context.

The second article, "CCI v. Sector Regulators: Navigating Jurisdictional Ambiguities for Effective Resolution" by Hammad Siddiqui and Naman Pratap Singh, addresses the jurisdictional overlaps between the Competition Commission of India (CCI) and sector-specific regulatory authorities. By analyzing legislative ambiguities and judicial interpretations, the authors offer insights into fostering collaborative approaches among regulatory bodies to create a coherent and efficient legal framework that protects consumer interests and enhances market competitiveness.

Finally, "*Juveniles' Neuronal Development and Criminal Justice: When Neurosciences Meet Criminal Law*" by Nicolò Cappuccitti offers an innovative reflection on the impact of neuroscience on criminal justice policies for minors. Integrating scientific studies on neuronal development with key judicial rulings, such as *Roper v. Simmons* and *Miller v. Alabama*, the author demonstrates how recognizing diminished culpability in young offenders can positively influence Italian legal practices.

Though these contributions may appear diverse, they share a common aim: to illuminate the gray areas of law where change is essential to confront the challenges of a rapidly evolving world. Each article exemplifies the crucial role of an interdisciplinary approach, combining legal analysis, technological advancements, and scientific insights to respond to modern complexities.

Publishing legal scholarship is not merely an academic exercise; it is a responsibility toward society, an intellectual contribution that builds bridges between law and everyday life. Our mission is to continue fostering this vital dialogue, driven by a passion for law and the conviction that only open and informed discourse can guide legal

progress.

We extend our sincere gratitude to every reader and contributor for their trust and continued support: your dedication is the driving force that makes all of this possible.

Wishing you a pleasant read, sincerely,

Rossella Borella
Editor-in-Chief

Automated Copyright Enforcement Online

How Platforms stifle Creativity by reducing Technological Cost

VITANTONIO LEUZZI*

Abstract: This article explores the relationship between copyright law and automated enforcement technologies on digital platforms. The constitutional foundation of copyright, the doctrine of fair use, secondary liability, and the DMCA safe harbor provisions incentivize platforms to develop and utilize such technologies. YouTube's ContentID system is thereby used as an emblematic example of this interaction. The first part of the paper outlines these foundational aspects, providing a legal framework for understanding how copyright law has evolved to address digital challenges. It discusses the constitutional basis for copyright protection - which creates the legal basis to grant creators exclusive rights - and examines the fair use doctrine that balances copyright holders' rights with users' interests. The article also considers the legal implications of secondary liability for infringing content and the DMCA's safe harbor provisions, which offer protections for platforms hosting user-generated content. In the second part the paper builds on this legal framework by analyzing contemporary issues in online copyright enforcement. The rapid rise of automated systems, like YouTube's ContentID, has transformed how digital platforms monitor and enforce copyright, but it has also raised concerns regarding fairness, accuracy, and overreach, which negatively impact on user's rights. This section highlights these challenges and proposes potential solutions to enhance the effectiveness and equity of copyright enforcement in the digital age, ensuring both creators' rights and users' freedoms are fairly protected.

Keywords: Copyright; Fair Use; DMCA; Enforcement Technologies; AI.

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1. Introduction

Copyright is a set of rights awarded to authors to protect their works from unauthorized copies and other activities that would impair their ability to profit. The Internet has changed the way copyright is enforced¹. There is a profound difference between the offline world – where items exist in a tangible form – and the online world, where everything takes the form of intangible data. In the offline world, where we all walk, breathe and touch, technological barriers² define what can be easily done and what cannot be easily done.

These barriers are in turn taken into consideration – whether

* In 2024 Vitantonio Leuzzi graduated *cum laude* in Law from the University of Trento. It also obtained an LL.M. in American Legal System from the University of Cincinnati. Throughout his studies he developed a strong interest in Intellectual Property, and how it interacts with new technologies. He is currently a Trainee at Studio Legally in Trento, where he is practicing in Business Law, Contracts, International Law and Digital Law.

¹ Lawrence Lessig, *Code: And Other Laws of Cyberspace, Version 2.0* at 169-199 (Basic Books 2006).

² Harry Surden, *Technological Cost as Law in Intellectual Property*, 27(1) Harvard Journal of Law & Technology 135, at 184-201 (2013) (scholar H. Surden refers to these technological barriers as “technological costs” in *Technological Cost as Law in Intellectual Property*).

knowingly or not - by lawmakers when they draft new laws, defining the scope of copyright law³. Understanding copyright's enforcement on online platforms is therefore relevant, as the rules that are applied regulate a big portion of user-generated content and influence our everyday experience⁴. In other words, they contribute to shaping the breadth of our freedoms.

Consider the following scenario in an internet-less world. If someone unlawfully made a copy⁵ of *The Lord of the Rings*, J. R. R. Tolkien's estate would have to know about the infringement, find the infringing copy and sue the infringer, or at least send him a cease-and-desist letter, hoping that it will be enough to stop the unauthorized behavior. Not only does the infringer have a good chance of being unnoticed, as it might be difficult to have knowledge of the existence of an unlawful copy. But even if the infringement was discovered, the process of enforcing copyright would be very resource-consuming, since the costs of litigation, in terms of money and time, are very high⁶. In the online world, however, this is not the case anymore. By lowering the costs of copyright enforcement and scouting through huge amounts of data, technology does the job for you⁷. Today, platforms like YouTube and Twitch function as

³ See *Ibid.*

⁴ See Luciano Floridi, *The Fourth Revolution: How the Infosphere is reshaping Human Reality*. (As L. Floridi puts it, our experience is "onlife": what happens in the online world has effects also in the offline world. They are entangled. This means that a limitation of rights on the internet cannot be disregarded as a mere limitation over a minor and negligible part of human experience).

⁵ 17 U.S.C. §106(1) (This provision gives the author the exclusive right to "reproduce the copyrighted work in copies". Hence, copying said work without authorization constitutes infringement. This is referred to as the author's "reproductive right").

⁶ How much does it cost? Anywhere from \$100,000 to \$1,000,000.

⁷ Niva Elkin-Koren, *Fair Use by Design*, 64 UCLA Law Review 1082, at 7-8 (2017).

“gatekeepers” for content creation⁸: they provide services to billions of users worldwide, which are then used to express artistic, educational and entertaining ideas and make them available to a large public. By controlling the flow of information, gatekeepers influence economic, social, political and cultural dimensions of our lives⁹. Understanding copyright’s enforcement on these platforms is therefore relevant, as the rules that are applied regulate a big portion of user-generated content and influence our everyday experience¹⁰. In other words, they contribute to shaping the breadth of our digital freedoms.

To illustrate this, consider the following example. PewDiePie is a famous Youtuber, with more than 111 million subscribers to his channel¹¹. In 2021, the entire library from 2016 and backwards was struck down by copyright infringement claims¹². YouTube gives him the opportunity to counterclaim videos that were removed for copyright infringement. However, when a large number of videos get hit, it is often not feasible to file a counterclaim for each of them, as the process requires too much time to be worth the effort: each

⁸ Orla Lynskey, *Regulating “Platform Power”*, LSE Legal Studies Working Paper No. 1 (2017), at 10, cite Karine Barzilai-Nahon, “*Toward a theory of network gatekeeping: A framework for exploring information control*”, 59(9) *Journal of the American Society for Information Science and Technology* 1493 (2008) (“[G]atekeepers are non-state actors that have the capacity to alter the behavior of others in circumstances where the state has limited capacity to do the same”).

⁹ See *Id.*, at 2. See also, Emily Laidlaw, *A Framework for Identifying Internet Information Gatekeepers*, 24(3) *International Review of Law, Computers, and Technology* (2010).

¹⁰ See Floridi, *The Fourth Revolution: How the Infosphere is reshaping Human Reality* (cited in note 4).

¹¹ PewDiePie’s YouTube channel, available at <https://www.youtube.com/user/pewdiepie/videos?app=desktop> (Last visited November 20, 2024).

¹² 17 U.S.C. §512(c)-(d) (creates the so-called “notice-and-takedown” system that allows copy-rights holders to request the removal of allegedly infringing content.) See *infra* Section 2.

counterclaim must be accompanied by a statement¹³ that explains why the use of the protected work was fair. It could take years of filling forms to get the videos available to the public if the claim is not withdrawn by the rightsholder. While it is true that rights holders must provide a statement that explains the reason they're requesting the take-down, they can file multiple take-down notices at once, provide blank statements that are easy to copy-and-paste¹⁴ and still be complying with the minimum requirements of the DMCA¹⁵. Content creators, on the other hand, are required to explain in detail why the law entitles them to use the protected work the way they did. This situation of reduced compliance costs for rights holders creates a disparity that puts users in a situation of disadvantage. This case was not isolated, as many other content creators have addressed similar controversies¹⁶.

On one hand technology has reduced the cost of producing new

¹³ 17 U.S.C.(g)(3)(C) (A statement under penalty of perjury that the subscriber has a good faith belief that the material was removed or disabled as a result of mistake or misidentification of the material to be removed or disabled).

¹⁴ For an example see the *Lenz case infra*, Section 5 (cited in note 175).

¹⁵ 17 U.S.C. §512(c)(3)(v)-(d)(3). See *infra*, Section 2 (more generally, the Digital Millennium Copyright Act, also known as "DMCA", is a statute that was enacted to address the new challenges that copyright law was facing in the face of the popularization of the commercial internet. Digital technologies were becoming more and more popular, and copying copyrighted works was becoming increasingly cheaper. Authors lobbied for new rules that would support their revenues, while platforms lobbied for rules that would allow them to develop the technological infrastructure that runs the Internet).

¹⁶ See also Katherine Trendacosta, *Unfiltered: How YouTube's Content ID Discourages Fair Use and Dictates What We See Online*, (Electronic Frontier Foundation, December 10, 2020), available at <https://www.eff.org/wp/unfiltered-how-youtubes-content-id-discourages-fair-use-and-dictates-what-we-see-online> (Last visited November 20, 2024)

copies of a work, thus the cost of infringing authors' copyright¹⁷. On the other hand, however, technology has also reduced the cost of enforcing authors' copyright¹⁸. Digital Rights Management technologies¹⁹, trusted systems²⁰, algorithms and artificial intelligence²¹ are powerful tools to sift through the internet for infringing material, remove it and sometimes even prohibit its publication in the first place²². It is easy to see the internet as primarily a place where copyright is massively infringed, and rightfully so. But another truth should not be disregarded: copyright protection technologies also exist²³, and their deployment should be taken into account when assessing the current state of copyright law.

¹⁷ See generally, Jeff Jarvis, *The Gutenberg Parenthesis*, Bloomsburg Publishing Plc, (2023). See also, Mark Lemley, *IP in a World Without Scarcity*, 90 New York University Law Review 460, at 10-12 (2014) (Before Gutenberg, to create a copy of a book one had to transcribe every single word by hand. Then, the press was invented, and the process became much cheaper, since many copies of a single page could be made simply by changing the tiles on a metal platform, which would then print the words on a paper sheet. Today, a whole book can be copied by selecting a file on a computer, copy it, and then paste it).

¹⁸ Lessig, *Code*, at 171-180 (cited in note 1). (Lessig examines the complex interaction between copyright law and technology, until he analyzes "trusted systems". A specific technology that embeds copyright protection into code, hence reducing the cost of enforcement as it is now part of the technological infrastructure itself, and does not require external action).

¹⁹ See generally, Roberto Caso, *Digital Rights Management: il commercio delle informazioni digitali tra contratto e diritto d'autore tra Contratto e Diritto d'Autore* (CEDAM 2004).

²⁰ Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12,1 *Berkeley Technology Law Journal* 137, at 138-140 (1997).

²¹ Niva Elkin-Koren, *Copyright in a Digital Ecosystem: A User Rights Approach*, in Ruth Okediji, *Copyright in an Age of Limitations and Exceptions* (Cambridge University Press, 2017).

²² You Tube ContentID, see *infra*, Section 3.

²³ Lessig, *Code*, at 171-180 (Basic Books 2006) (cited in note 1).

This change in technology has radically modified the old balance²⁴ between authors' rights and the public interest. Before the Internet became commercial, high technological costs prevented the public from massively infringing authors' rights; but they also prevented authors from stopping and suing against every little infringement that had occurred. As further discussed in Part II of this Article, said balance destabilization happens in part because of the mechanisms set forth by the law²⁵.

This paper argues that online service providers ("Platforms" or "OSPs"), such as YouTube, are incentivized to deploy automated copyright enforcement technology by the combination of DMCA "safe harbor" provisions²⁶ to avoid "secondary liability"²⁷. The use of such a technology creates three sets of issues that distinguish copyright enforcement in the offline world from enforcement in the online world:

1. Users' ability to rely on fair use is highly diminished because of its inherent need to be interpreted by humans that makes it impermeable to a proper automated implementation. Creativity is stifled as a consequence of this loss of flexibility.
2. Prevention of content upload changes the standard setting for copyright enforcement. In an offline environment, infringing content was allowed to exist until it was found and prosecuted. Now, the opposite is true.
3. The scale of enforcement is unprecedented. Content that is

²⁴ Surden, *Technological Cost as Law in Intellectual Property*, at 163-165 (cited in note 2).

²⁵ 17 U.S. Code §512, better known as DMCA "safe harbor" provisions. See *infra*, at 18.

²⁶ See *Ibid.*

²⁷ See *infra*, at 17.

infringing but likely would not suffer a block in an analogical setting, due to the high costs, could now be blocked almost for free. The scope of copyright changes, as it restricts a form of creativity that was tolerated in an offline setting.

Hence, “the Progress of Science”²⁸ is sacrificed.

Section 2 will introduce the concepts of the the utilitarian view of copyright, fair use, secondary liability, safe harbors and the “notice and takedown” system; section 3 will describe what platforms are doing, given the incentives they are exposed to; section 4 will explain why the measures adopted by the platforms create concerns for the users’ creativity ; section 5 will discuss possible solutions; finally, concluding remarks.

2. The Pieces of the Puzzle

The Copyright system creates incentives for platforms to make available to the author technologies that block content that they consider infringing, without any judicial assessment. The authors’ power is not balanced with a corresponding mechanism for users to fight against enforcement, even when their legitimate interests are trampled. This Section will start with the philosophical doctrine underlying the American Constitution’s legitimation of Intellectual Property; it follows with an overview of fair use to briefly explain how the law protects the users’ interests and how important this is to the public discourse; and finally it analyzes secondary liability, and the necessity to shield online platforms from it. The heart of the issue will then be presented: the notice and takedown system that the law created, in exchange for the safe harbor provisions. This system ultimately protects the Internet’s infrastructure and the author’s

²⁸ The “Intellectual Property Clause” of the U.S. constitution, Art. 1, Section 8, Clause 8 recites: “The Congress shall have Power [...] [T]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”.

rights, but it underestimates its negative effects on users' digital freedoms.

2.1. *The Utilitarian View under the Constitution*

The U.S. constitution grants Congress the power to create a copyright system in order to promote the "Progress of Science"²⁹: this principle fully embraces the utilitarian view of copyright law. This theory posits that the public interest in the circulation of new ideas is *best served by* establishing a copyright system that allows authors to profit from their creation. Copyright law, therefore, is legitimate, insofar as it is *useful* to the production and distribution of intellectual works. Article 1, Section 8, Clause 8, which embodies the utilitarian view of copyright, is therefore both a grant of power *and* a limitation³⁰. Congress is empowered to establish intellectual property – the right to authors to prevent others from copying their work - if and only if this is paramount to the creation and dissemination of new works. As a matter of fact, copyright should be a system of incentives where the benefits – more works created and disseminated - outweigh the costs – the prohibition to the public to fully access and use intellectual works. Creativity then, is understood as the focal point of copyright law³¹. To make said incentives machine function properly, the main feature of the current system is the authors' right to sue anyone who

²⁹ See *Ibid.*

³⁰ See Lessig, *Code* (cited in note 1), cites M. G. Frey, *Unfairly Applying the Fair Use Doctrine: Princeton University Press v Michigan Document Services*, 99 F3d 1381 (6th Cir 1996), 66 University of Cincinnati Law Review 959, at 1001 ("Limitation" here, is used in the sense that copyright law is constitutional as long as it serves the purpose of fostering the production and dissemination of cultural works. "[Copyright law does give authors a considerable benefit in terms of the monopolistic right to control their creations, but that right exists only to ensure the creation of new works]").

³¹ See Julie Cohen, et al., *Copyright in a Global Information Economy*, at 7 (Wolters Kluwer Law & Business 2015) (Copyright law is inspired by a utilitarian principle. "By solving the public goods problem, copyright law furnishes incentives to creators and publishers to invest in creative activities").

allegedly infringes their rights³² (under 17 U.S.C. §501). Should the authors prove infringement, they would have access to a set of powerful remedies: damages, injunctive relief (to prevent or restrain ongoing or future infringement), and the Impoundment and Destruction of the unlawful copies³³. Essentially copyright law gives authors a legal entitlement to limit the public's enjoyment of certain benefits that come with the copyrighted work³⁴. This mechanism creates a form of intellectual monopoly³⁵. Going back to the *Lord of the Rings* example, J.R. R. Tolkien's estate can enjoin writers to stop using the *Fellowship of the Ring's* characters in their own story, if they had not previously obtained authorization. The estate can also recover damages. However, this is only one side of the story.

2.2. Fair Use

As shown above, the utilitarian view of copyright legitimizes a monopoly over intellectual works, only if this ultimately benefits the public interest in those works. Still, the law recognizes that certain

³² Copyright holders' rights are listed in 17 U.S.C. § 106.

³³ 17 USC §§ 502, 503, 504.

³⁴ Cohen, et al., *Copyright in a Global Information Economy*, at 7 (cited in note 31) (the authors argue that limiting other people's use of the protected work is paramount to solve the "public goods problem" of non-excludability. Copyrighted expressions, therefore, look more like traditional property under this theory. However, it is not without controversy that the two *should* be treated similarly, since intellectual works are non rivalrous). See also Perry Barlow, *The Economy of Ideas: Everything You Know about Intellectual Property is Wrong*, in A. Moore, *Intellectual Property: Moral, Legal, and International Dilemmas*, at 359 (Rowman and Littlefield, 1997). See generally S. Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84(2) Harvard Law Review 281.

³⁵ See generally, Michele Boldrin, David Levine, *Against Intellectual Monopoly* (Cambridge University Press, 2008) (the authors argue that Intellectual Property Law grants authors an artificial monopoly that allows them to control the use of their ideas even after they have been disclosed. A limitation to the monopolistic power of the rights holders is the fair use doctrine). See *infra*, Section 2.

public interests trample the authors'³⁶. For this reason, after the implementation of the first copyright statute in 1790³⁷, courts quickly allowed the public a certain "fair" use of copyrighted works. The doctrine of "fair use" was born³⁸. A classic fair use example of fair use is parody. The law recognizes that parody is so important to society that authors should tolerate the imitation of their work by others - which would normally constitute infringement - to comment on the work itself. Authors, in fact, would not be incentivized to grant licenses to third parties, so that parodies could be made. Therefore, the law declares that those uses are not infringing, and remedies cannot be granted. The relevance of fair use makes it one of the important features of the modern copyright legal framework³⁹: it is a "safety valve"⁴⁰ that allows for certain creative uses of copyrighted work to be considered lawful⁴¹, and thus protected from authors' infringement claims. If authors had full control over what others could do with their work, even after it was sold⁴², they would

³⁶ See *Eldred v. Ashcroft*, 537 U.S. 186 (2003), Steven J. Breyer, dissenting (copyright law must always take into consideration First Amendment related concerns. A copyright system that restricts the public's interest in free speech is unfair. "A particular statute that exceeds proper Copyright Clause bounds may set Clause and First Amendment at cross-purposes, thereby depriving the public of the speech-related benefits that the Founders, through both, have promised").

³⁷ See Copyright Act of 1790, available at <https://copyright.gov/about/1790-copyright-act.html> (Last visited November 20, 2024)

³⁸ See 17 U.S.C. §107 (fair use stemmed from the English court's doctrine of "fair abridgement", which recognized the right of the alleged infringer to fairly utilize part of the copyrighted work. In *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841), for the first time an American court considered the fair abridgement doctrine. The term "fair use" however, was deployed for the first time in *Lawrence v. Dana*, 15 F. Cas. 26, 60 (C.C.D. Mass. 1869). Fair use was later codified by Congress in 1976).

³⁹ Elkin-Koren, *Fair Use by Design* (cited note 7).

⁴⁰ See *Ibid.*

⁴¹ The fair use clause is not limited to parody, as demonstrated by this section.

⁴² 17 U.S.C. §109 (gives the owner of an authorized copy to "sell or otherwise dispose of the possession of that copy". This is the so-called "first sale" doctrine).

essentially have a monopoly that stifles progress and creativity, instead of fostering them, in stark contradiction with the wording of the Constitution's Intellectual Property Clause⁴³. The flexibility of fair use comes from the wording of 17 U.S.C. §107, which "includes, but is not limited to" six predetermined lawful activities: "criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research"⁴⁴. Judges are at the center of this policy because they are required to exercise their good judgment in cases brought by authors, and decide which uses are fair and which ones are not. They have to balance the interests of the public at large, with those of the parties, on a case-by-case basis. Decision after decision, many uses have been deemed fair besides the six explicitly mentioned in §107.

By statute, judges must consider four factors when asked to decide upon the fairness of a use: 1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; 2. the nature of the copyrighted work; 3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and 4. the effect of the use upon the potential market for or value of the copyrighted work⁴⁵. As mentioned above, this system is extremely flexible, and it has been argued that flexibility is precisely what makes it strong⁴⁶. Its ability to

⁴³ See Article 1, Section 8, Clause 8.

⁴⁴ The activities are listed at 17 U.S.C. §107 ("[C]riticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research").

⁴⁵ 17 U.S.C. §107.

⁴⁶ Pierre Leval, *Towards a Fair Use Standard*, 103 *Harvard Law Review* 1105, at 1135 (1990); Bernt Hugenholtz and Martin Senftleben, *Fair Use in Europe. In Search for Flexibilities*, available at <https://www.ivir.nl/publicaties/download/Fair%20Use%20Report%20PUB.pdf> (last visited November 18, 2024). For a review of US fair use case law, see generally B. Bebe, *An Empirical Study of U.S. Copyright Fair Use Opinions Updated, 1978-2019*, 10(1) *Journal of Intellectual Property and Entertainment Law* 1 (2020) (which tries to compute fair use's four factors' analysis to show underlying patterns, in an effort to

flexibly take into account different fact patterns and the competing interests involved in the real world decision, makes fair use analysis a strong tool to pursue copyright law constitutional mandate. New uses can be considered fair by the judiciary, without the need for a legislative action that is too often lengthy and detached from real world facts.

2.3. Secondary Liability

The delicate, and often conflicting, balance between authors' rights and public interest found another important milestone in the doctrine of "secondary liability". In short, secondary liability holds a party, different from the directly infringing one, liable for having somehow contributed to the infringement itself. The basic idea is simple: it is more effective to sue the party that is in a better position to prevent the infringement⁴⁷. There are two types of secondary liability: vicarious liability and contributory infringement. Under the vicarious liability doctrine one party is liable because it had a duty to supervise the infringer, but failed to do so⁴⁸. Similarly, the contributory infringement doctrine posits that one party is liable because it materially contributed to the infringement that somebody else has

systematize courts' decisions). See also P. Samuelson, *Unbundling Fair Uses*, 77 *Fordham Law Review* 2537 (2009).

⁴⁷ Douglas Lichtmann, William Landes, *Indirect Liability For Copyright Infringement: An Economic Perspective*, 16 *Harvard Journal of Law and Technology* 395, at 396-399 (2003) (also, the Supreme Court held that in an ongoing relationship the secondary infringer is "in a position to control the use of the copyrighted works by others" (*i.e. the primary infringer*)). See also *Sony Corp of Am. V. Universal City Studios, Inc.*, 464 U.S. 417 (1984), at 437 (without this ability to control, secondary liability would be unjustified, as the indirect infringer would be punished for an unlawful use that it would not be able to stop).

⁴⁸ See *Shapiro, Bernstein & Co. v. H.I. Green Co.*, 316 F.2d 304 (2d Cir. 1963) (to hold a party accountable under the vicarious liability doctrine, the following elements need to be met: 1. The right or ability of the party to supervise; 2. Direct financial interest in the exploitation of copyrighted materials).

materially carried out⁴⁹. According to these doctrines, a party that is not infringing the author's rights directly should nonetheless be liable either because the direct infringer may not have enough resources to compensate the copyright holder, or because it is economically inefficient for the copyright holder to sue the direct infringer⁵⁰. In other words, in absence of these two doctrines, filing a lawsuit for a small violation may not be worth the resources invested, and many instances of infringement would not be stopped. To prevent what seems a shortcoming of the enforcement system, copyright law allows authors to sue the non-directly infringing party, under the consideration that it too profits from the direct infringer's unlawful activity. Moreover, from the law enforcement perspective, it is more efficient to sue the party that it is best suited to stop the infringement⁵¹.

In *Napster*⁵², a peer-to-peer online service that allowed registered users to exchange files freely was found liable under both secondary liability theories of secondary liability. In the eyes of the Court, Napster was facilitating users to exchange protected material, without the rights holders' authorization. As a result of the damages awarded to big companies in the movies and music industries that filed suit on behalf of the authors, Napster was driven out of business. It was enjoined to ensure that no "copying, downloading, uploading, transmitting, or distributing" of the rights holders' works occurs through its services. Of course this was impossible to implement given Napster's technological infrastructure, which was built exactly

⁴⁹See *Gershwin Publishing Corp. v. Columbia Artists Management Inc.*, 443 F.2d 1159 (2d Cir. 1971) (The contributory infringement doctrine requires: 1. the knowledge of the infringing activity; 2 the inducement, causation, or material contribution to the infringing conduct of another).

⁵⁰ Lichtmann, Landes, *Indirect Liability for Copyright Infringement*, at 396-399 (cited in note 47).

⁵¹ See *Ibid.*

⁵² *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (2001).

to that⁵³. After the *Napster* case, the power of secondary liability became clear to everyone. Especially on the Internet, secondary liability acts as an impending sword over technological agents, shaping how the market for creative works functions.

2.4. Safe Harbors

As exemplified by *Napster*⁵⁴, with the advent of the internet, the scope of secondary liability broadened considerably. In the online world of the early 2000s, where users could send files from one side of the world to another, where discussions happened on blogs where almost no content moderation was enforced⁵⁵, and where items were

⁵³ See Law Sam, “*Metallica vs. Napster: The Lawsuit That Redefined How We Listen to Music.*” (*Kerrang!* April 13, 2021) available at <https://www.kerrang.com/metallica-vs-napster-the-lawsuit-that-redefined-how-we-listen-to-music> (Last visited November 20, 2024) (Napster declared bankruptcy after a landfall of lawsuits had been brought against it, following the 9th Circuit decision).

⁵⁴ See *A&M Records, Inc. v. Napster, Inc.* (cited in note 52) (If 17 U.S.C. §512 was enacted when *Napster* was decided, and yet Napster was still found liable, does it mean that the safe harbor provisions were violated? The 9th Circuit does not fully answer the question of whether in the specific case the safe harbor provisions were sufficient to shield Napster, but held that §512 may still protect from secondary infringement. However, plaintiffs raised “serious questions regarding Napster's ability to obtain shelter under § 512, and plaintiffs also demonstrate that the balance of hardships tips in their favor [...] including: (1) whether Napster is an Internet service provider as defined by 17 U.S.C. § 512(d); (2) whether copyright owners must give a service provider “official” notice of infringing activity in order for it to have knowledge or awareness of infringing activity on its system; and (3) whether Napster complies with § 512(i), which requires a service provider to timely establish a detailed copyright compliance policy.”).

⁵⁵ See generally, X, *Global Transparency Report* (2024), available at <https://transparency.x.com/content/dam/transparency-twitter/2024/x-global-transparency-report-h1.pdf> (last visited November 18, 2024) (A good example is today's version of X, formerly known as Twitter. Since its acquisition by Elon Musk, the platform's rules for regulating speech have made it substantially less restrictive than most alternatives).

sold on marketplaces of previously unheard-of dimensions⁵⁶, secondary liability could force on the same platforms enabling these new and promising opportunities a level of control over their users activities that was simply unfeasible. In 1998, after a long process of negotiation between platforms and copyright holders', Congress enacted the Digital Millennium Copyright Act ("DMCA"), fearing that the copyright system would impair the early development of the commercial Internet. One of the most important innovations of the DMCA is the set of "safe harbor provisions", codified in 17 U.S.C. §512. These provisions protect online service providers ("OSPs") from liability for damages when certain conditions are met. There are four different safe harbors and each of them has its own elements⁵⁷. The most important safe harbors⁵⁸ for the purpose of this article are the ones set in §512(c) and (d). To qualify for the exemption in

⁵⁶ See Clark Dave, *Economic Impact for Small Businesses, Powered by Partnership with Amazon* (Amazon, 2021), available at <https://www.aboutamazon.com/news/small-business/economic-impact-for-small-businesses-powered-by-partnership-with-amazon> (Last visited November 20, 2024) (according to the 2021 *Amazon Small Business Empowerment Report* Amazon hosts more than 1.9 million small-to-medium businesses in the U.S. alone).

⁵⁷ The First safe harbor applies to transitory digital network communications and applies to services that transmit or transiently store infringing material. For secondary liability exemption, §512 (a) requires that 1. the transmission be initiated by someone other than the OSP; 2. the transmission be carried out by an automated process without selection of the material by the OSP; 3. the OSP must not select the recipient, except for an automated process initiated from a request of another person; 4. the OSP must not maintain a copy accessible to anyone other than the recipient for a period longer than necessary; 5. The material is transmitted without modification of its content. §512 (b) applies to system caching. The requirements are 1. The material is made available by someone other than the OSP 2. and is transmitted from them to a recipient, at the recipient's direction; 3. Storage happens through an automatic technical process. Furthermore, the OSP must comply with rules concerning the refreshing, reloading, or other updating of the material when specified by the person making the material available on the caching system and must disable access to the infringing material when requested by a court.

⁵⁸ Cohen, et al., *Copyright in a Global Information Economy*, at 619 (cited in note 31).

§512(c)⁵⁹ it is necessary that the OSP: 1. does not have actual knowledge that the material or an activity using the material is infringing, or, in absence of *actual knowledge*⁶⁰, it is not aware of facts from which such a knowledge is apparent; and if it acquires such a knowledge, removes, or disables access to the content. 2. Does not receive financial advantage directly from the infringement. And 3. upon notification, it responds expeditiously to remove or disable access to the infringing content.

§513(d)⁶¹ applies to information location tools and requires the same

⁵⁹ 17 U.S.C. § 512 (c) (“[A] service provider shall not be liable for monetary relief, or, except as provided in subsection (j), for injunctive or other equitable relief, for infringement of copyright by reason of the storage at the direction of a user of material that resides on a system or network controlled or operated by or for the service provider, if the service provider (A) (i) does not have actual knowledge that the material or an activity using the material on the system or network is infringing; (ii) in the absence of such actual knowledge, is not aware of facts or circumstances from which infringing activity is apparent; or (iii) upon obtaining such knowledge or awareness, acts expeditiously to remove, or disable access to, the material; (B) does not receive a financial benefit directly attributable to the infringing activity, in a case in which the service provider has the right and ability to control such activity; and (C) upon notification of claimed infringement as described in paragraph (3), responds expeditiously to remove, or disable access to, the material that is claimed to be infringing or to be the subject of infringing activity”).

⁶⁰ It has been argued that receiving a notice is enough to trigger the exception to liability protection. This may be one reason why platforms choose to deploy automated copyright enforcement technologies that are not explicitly required by the DMCA. See *infra* at 27-28.

⁶¹ 17 U.S.C. §512(d) (“[A] service provider shall not be liable for monetary relief, or, except as provided in subsection (j), for injunctive or other equitable relief, for infringement of copyright by reason of the provider referring or linking users to an online location containing infringing material or infringing activity, by using information location tools, including a directory, index, reference, pointer, or hypertext link, if the service provider: (A) does not have actual knowledge that the material or activity is infringing; (B) in the absence of such actual knowledge, is not aware of facts or circumstances from which infringing activity is apparent; or (C) upon obtaining such knowledge or awareness, acts expeditiously to remove, or

elements of §513(c). The importance of these lies in their application to services such as blogs, audiovisual content hosting platforms and social media; all services that constitute the Internet's infrastructure as we know it – and enjoy – today.

§512(c)-(d) also create the crucial “notice and takedown” system, when they require a that “upon notification of claimed infringement [...], the subject responds expeditiously to remove, or disable access to, the material that is claimed to be infringing or to be the subject of infringing activity”⁶². As it will be discussed in Section 3, the “notice and takedown” system is the center of this article's discussion. This is the heart of the mechanism that unduly burdens users' ability to rely on fair use online by giving authors too much leeway to enforce copyright law, without properly addressing users' interests and legally protected use of the copyrighted works⁶³.

3. What are Platforms Doing?

3.1. The Incentives for the Adoption of Automated Copyright Enforcement Technologies

The DMCA shields OSPs from secondary liability if they qualify for at least one of the four safe harbors. For OSPs, it is therefore essential to keep the shield up, because otherwise they would be sued and

disable access to, the material; (2) does not receive a financial benefit directly attributable to the infringing activity, in a case in which the service provider has the right and ability to control such activity; and (3) upon notification of claimed infringement as described in subsection (c)(3), responds expeditiously to remove, or disable access to, the material that is claimed to be infringing or to be the subject of infringing activity, except that, for purposes of this paragraph, the information described in subsection (c)(3)(A)(iii) shall be identification of the reference or link, to material or activity claimed to be infringing, that is to be removed or access to which is to be disabled, and information reasonably sufficient to permit the service provider to locate that reference or link”).

⁶² 17 U.S.C. §512(c)(3) and §512(d)(3).

⁶³ See *infra* at 15.

driven out of business, as it happened to Napster. The concern for the Internet's development and the users' interest was discussed during the DMCA deliberation process, as the safe harbor provisions raised First Amendment concerns, especially for libraries and other educational institutions. If authors could block what they considered infringing by just sending a notice, wouldn't this also block content that was made public by entities that had every right to do so? And what would those entities do in the face of OSPs decisions⁶⁴? In fact, 17 U.S.C. §512(c)(1)(iii) requires OSPs that have acquired "knowledge of awareness of the infringing material, act expeditiously to remove, or disable access to, the material" if they want to enjoy its protection⁶⁵. Additionally, the notice and takedown provisions ask OSPs to remove content immediately once they have been notified of the existence of infringing material on their channels. At first glance this makes sense: as stated above the technological cost for creating a new copy has decreased considerably on the Internet. However, the law only requires the notifying party to have *good faith belief* that such material is indeed infringing, thus lowering the bar for enforcement so much that it excessively tilts the balance in the author's favor, sacrificing the user's interests to take part in the public discourse⁶⁶.

By including the "notice and take-down system", the legislature chose that the *immediate* removal of *potentially* infringing content was the correct way to pursue the utilitarian goals of copyright law. It gave an advantage to copyright holders over the public, by allowing authors to request content take down even before infringement was found by an impartial third party, and before the notice could even be disputed⁶⁷. Not even the requirements for copyright

⁶⁴ Jennifer Urban, Laura Quilter, *Efficient Process or "Chilling Effects"*, 22(4) Santa Clara High Technology Law Journal 621, at 633 (2006).

⁶⁵ 17 U.S.C. §512(c)(1)(iii).

⁶⁶ 17 U.S.C. §512(c)(A)(3)(v).

⁶⁷ See *infra* at 15.

impoundment, which require the exercise of judicial powers, need to be met⁶⁸. The author's self proclaimed good faith shall suffice. It is clear how the legal framework gives enormous powers to copyright holders, as their good faith belief is enough to remove a content from a platform, without any consideration of the application of the fair use doctrine to the case. Authors can basically remove access to the allegedly infringing work at their own will.

The incentives created by the DMCA encourage copyright holders to file a notice whenever they think that their rights are violated. To theoretically limit the potential for abuse and balance public interests to fair use, copyright law provides users the chance of filing a "counter notice" to dispute a take-down notice⁶⁹. The mechanism functions as follows: if a user has uploaded content that has been taken down for alleged copyright infringement, a counter-claim can be filed, explaining why the content makes "fair use" of the copyrighted work, or is otherwise allowed on the platform⁷⁰. However, a disparity between authors and alleged infringers is strikingly evident: the counter notice does not force OSPs to immediately restore access to the material. Instead, the law requires content to be restored within 10-14 business days, when it may be too late for the users to gain substantial benefits from it⁷¹. Most of the users' access to the content are made in the days right after the content's publication. Moreover, since users do not enjoy a legal action against OSPs, platforms have the incentive to disregard the users' counter notices, since they do not risk liability of any kind. In other words, removal must be immediate; access restoration can wait.

The incentives to file a counterclaim are indeed thin. Small users -

⁶⁸ 17 U.S.C. §503.

⁶⁹ 17 U.S.C. §512(g)(2)-(3).

⁷⁰ Fair use is not the only defense, as the underlying work might be in the public domain, an uncopyrightable subject matter or previously authorized by the rightsholder herself.

⁷¹ 17 U.S.C. §512(g)(2)(C).

most users - do not have the resources to risk a lawsuit, so they would rather not file a counterclaim and accept the removal, even though their use of copyrighted material was fair⁷². More radically, they would not engage with discourse that would technically be fair under the law, but would trigger the take-down system. Additionally, it cannot be expected that every user knows the intricacies of fair use well enough to explain why their use is fair, which decision supports their argument, and why the author is ultimately wrong. Receiving a notice is often enough to stop users from disputing the author's actions. On top of the injury, an insult is also added: in fact, it is also the case that users are notified when their content has been removed, but they do not necessarily know *why* the copyright holder deemed their use unlawful⁷³. The DMCA does not require platforms, nor rightsholders, to provide an argument to support their request⁷⁴. This creates uncertainty for users and makes it more difficult to properly dispute the claim, and it undermines the possibility for users to defend their interest. One cannot fight what cannot be seen. One last thing shall also be noted. Certain types of content are valuable only if they are timely. For example, a commentary on a movie that just came out or an opinion on a recent political controversy only have value if they can be immediately linked to the content they refer to. As soon as the waters of the public's interest on those topics calms down, the content loses its value and attraction. In these cases it is easier to avoid the use of copyrighted material even if it is fair. The intellectual

⁷² Sharon Bar-Ziv & Niva Eikin-Koren, *Behind the Scenes of Copyright Enforcement: Empirical Evidence on Notice & Takedown*, 50 *Connecticut Law Review*, at 372 (2018).

⁷³ YouTube sends a message containing generic language, such as "Due to a copyright takedown notice we had to take down your video from YouTube" or "A copyright owner using ContentID has claimed some material in your video". These messages do not explain in what way the use was infringing.

⁷⁴ The DMCA only requires OSPs to notify the users of the action taken against their published content.

“progress” that the Constitution wants to uphold⁷⁵ is being chilled as a result of a form of self-inflicted “silence”. Users’ creativity is either stopped, prevented or kept from being disclosed in the first place, and the authors’ power to shut people off is privileged. One ought to wonder if the Constitution ever preferred certain people’s opinion over others, and why on the Internet the balance shall be so different then in the offline world. This Article’s stance is that the answer to both questions is no.

The “notice and takedown” mechanism is not the only tool that online platforms deploy to enforce copyright law online. The DMCA explicitly protects OSPs from liability if they remove content that *they* deem infringing, as long as they act in good faith, and the “infringing activity is apparent”⁷⁶. Because of it, many OSPs have developed their own algorithm-powered technologies (i.e. automated copyright enforcement technology) to scout their platforms in search of infringing material and automatically file a notice, under §§512(c)-(d)⁷⁷. In some other and more worrying cases⁷⁸, they directly take the content down or stop it from being uploaded in the first place⁷⁹. The DMCA does not require them to, but creates strong incentives that encourage platforms to act this way⁸⁰. There are several reasons why platforms adopt such technologies. One is to avoid political controversies with organized copyright holders and be perceived as

⁷⁵ Article 1, Section 8, Clause 8, Constitution of the United States.

⁷⁶ 17 U.S.C. §512(g)(1).

⁷⁷ See Joe Karaganis, Jennifer Urban, *The Rise of Robo Notice*, 58(9) Communication of The ACM 28, at 28-30 (2015) (This is the case of the so-called “robonotices”).

⁷⁸ And prevalent on gatekeepers’ platforms. ContentID is one of them and it will be discussed in Section 3.

⁷⁹ Karaganis, Urban, *The Rise of the Robo Notice* (cited in note 77) (YouTube’s ContentID is paradigmatic, and it will be discussed in Section 3. Scholars Karaganis and Urban define robo-notices as “automated notice-sending systems”. They are automated systems that trigger the DMCA notice and take-down mechanism).

⁸⁰ Karaganis, Urban, *The Rise of the Robo Notice*, at 28-30 (cited in note 77).

doing all they can to protect their interests⁸¹. Copy-right holders are often organized in groups with substantial lobbying power and being perceived as acting in accordance to their interests might prevent ruinous disputes or reputational harm⁸²; the second is the fear of losing the qualification for safe harbors under the “knowledge” requirement of the DMCA safe harbors, as examined above⁸³. If it can be proved that OSPs knew, or should have reasonably known about the infringement⁸⁴, and yet did not act, they would be held liable for damages, as the “safe harbor” protection would not apply. Removing content broadly, therefore, ensures that such a situation does not occur. The third reason to adopt enforcement technologies is that, although OSPs do not have a general duty to monitor their libraries for infringement, doing so might also be a way to anticipate future regulation, given the progressive strengthening of authors’ rights⁸⁵. Finally, other legal systems may impose different rules that favor copy-rights in the face of users’ or the public’s interests, and later become standard setters, requiring the regulated party to change its

⁸¹ See *Id.*, at 29.

⁸² The Sonny Bono Act, for example, was strongly supported by the film making and the song production industry, including big players such as Walt Disney, who argued for an extension of copyright duration.

⁸³ §512(c)(1)(iii).

⁸⁴ See generally, X, *Global Transparency Report* (2024)(cited in note 56).

⁸⁵ Henning Grosse Ruse-Khan, *Automated Copyright Enforcement Online: from Blocking to monetization of user generated content*, 8 University of Cambridge Faculty of Law, at 5 (2020) (also, the Office of the U.S. Intellectual Property Enforcement Coordinator stated that as administration the U.S. Copyright Office has adopted the approach of encouraging private players to enforce “[C]ooperative voluntary initiatives to reduce infringement that are practical and effective”). See also, US Intellectual Property Enforcement Coordinator, *Joint Strategy Plan on Intellectual Property Enforcement* (2023) at 35, available at <https://www.whitehouse.gov/wp-content/uploads/2022/09/2020-2023-Joint-Strategic-Plan.pdf> (last visited November 20, 2024) (although this declaration is not binding law, it is a form of soft power that nonetheless may anticipate future developments of the law).

behavior worldwide⁸⁶.

Automated copyright enforcement technologies are the real concern for the change of scope in copyright law. They allow for enforcement on a scale that was never available before. The number of possible copyright violations that can be detected is much higher than it would be in the real world, due to the abysmally low cost that enforcement entails. It is then necessary to ask if copyright was ever intended to be enforced in an almost perfect fashion, or if the technological costs inherent to the offline world that prevented the possibility of near-perfect enforcement were themselves part of the desired balance. A perfect system might still want some violations to be tolerated⁸⁷, either because they still advance progress in a way that is socially desirable⁸⁸, or because they do not really harm the economic interests of the author⁸⁹. In the offline world it is expensive to both detect

⁸⁶ In recent years, the EU has passed the Directive (EU) 2019/790, art. 17.1, which creates exceptions to the European equivalent of the safe harbor provisions. Platforms may choose to apply the same standard worldwide, instead of applying different settings to different geographical areas. The overreaching regulatory effect of European regulation is known as the “Brussels Effect”. See *infra* Section 4.

⁸⁷ Tim Wu, *Tolerated Use*, 31(4) Columbia Journal of Law and the Arts 617, at 619 (2008) (tolerated use is defined as “[I]nfringing usage of copyrighted work of which the copyright owner may be aware, yet does nothing about”).

⁸⁸ See *Gottlieb Development LLC v. Paramount Pictures Corp. LLC v. Paramount Pictures Corp.*, 590 F. Supp. 2d 625 (S.D.N.Y. 2008) (Fair use, scenes-à-faire, merger are all doctrines that enlarge the set of what can be used of a copyrighted work. De minimis infringement is a doctrine that protects alleged infringers if the violation is so small that the used part of the protected work would not appear “substantially similar” to the original one to an “average layman”).

⁸⁹ See *Ibid.* (this concept is different from de minimis infringement. De minimis infringement occurs when the allegedly infringing work is not substantially similar to the original one. An example is a copyright-protected pinball machine that appeared in a scene of the movie “What Women Want” for a matter of mere seconds, so that the “average layman” would not find the original work to be “substantially similar” to the fragments that appear in the movie. What the current analysis takes into consideration, however, is material that it is indeed infringing, and could give

infringement and to sue people, the inherent cost-benefit analysis that each copyright author must make acts as a barrier for “over-enforcement” (i.e. suing infringers on a frivolous claim)⁹⁰. In this world, a case for infringement would be filed only if the damage caused to the author is higher than the cost to enforce the author’s rights. Technological cost acts as law⁹¹. It protects an underlying value in a subtle and unexpressed way that is always not obvious to the lawmakers themselves, as it is embedded in the “nature of things”⁹². But if technology can now detect every potentially infringing content in the platform’s library and lower the cost for taking it down, the old equilibrium not only changes in quantity, but also in *quality*. All that is needed today to take down content and compress users’ interests is a couple of clicks. Right holders do not have to accept the risk of the content being subject to defenses in Court anymore, so their enforcement costs are drastically reduced. Online, the paradigm shifted from works being available unless proven to be infringing, to works being unavailable unless proven not to be infringing⁹³. What was believed to be a fair system, capable of properly evaluating both private and public concerns is not as balanced anymore⁹⁴.

3.2. Youtube: ContentID and Other Minor Technologies

birth to a cause of action, however is tolerated because it is economically not worth it to stop it).

⁹⁰ “Overenforcement” is the enforcement of copyright towards every possible form of infringement, regardless of the amount of harm that it causes to the author, or the consideration of defenses when it is not sure if they occur or not.

⁹¹ Surden, *Technological Cost as Law in Intellectual Property*, at 184 (cited in note 2). (“[J]ust as law modulates the prevalence of activities by imposing legal costs, technological limitations regulate implicitly because certain activities will be technologically constrained given the state of technological development of an era.”)

⁹² See *Id.* at 151.

⁹³ Elkin-Koren, *Fair Use by Design* (cited in note 7).

⁹⁴ See *infra*.

YouTube⁹⁵ is the most popular video-sharing platform in the market. It is present in more than 100 countries and is available in over 95 languages⁹⁶. It counts over 2 billion active users⁹⁷. For its dimensions, it is one of the most important websites for expressing creativity. It also is one of the platforms that have chosen to utilize an automated copyright enforcement technology, called ContentID⁹⁸. ContentID is an algorithm-based technology that allows users with the need to file a large number of notices daily (such as movie studios, record labels and collecting societies⁹⁹), to scan YouTube's entire library¹⁰⁰ for potentially infringing material and choose between one of three possibilities if such content is found: 1. track the allegedly infringing video¹⁰¹; 2. remove access; 3. profit from its revenues¹⁰². This is the technology that ContentID asks eligible users to upload on the system an excerpt of their video, along with metadata, video title and ownership. YouTube then creates a "fingerprint" and the search for

⁹⁵ www.youtube.com. has been chosen as an example as it is the most popular video-sharing platform online, and deploys one of the most advanced automated copyright enforcement technologies in the market.

⁹⁶ YouTube, *YouTube Copyright Transparency Report H1 2021*, available at https://storage.googleapis.com/transparencyreport/report-downloads/pdf-report-22_2021-1-1_2021-6-30_en_v1.pdf (last visited March 6, 2022).

⁹⁷ See *Id* at 1.

⁹⁸ See Joanne Gray, Nicholas P. Suzor, *Playing with Machines: using machine learning to understand automated copyright enforcement at scale*, 7 *Big Data & Society*, at 2 (2020) (YouTube claims that ContentID is the most advanced technology of its kind. For this reason, and for its broad application, it was chosen for this study).

⁹⁹ YouTube, *YouTube Copyright Transparency Report*, at 3 (cited in note 96).

¹⁰⁰ See Maryam Mohsin, *10 YouTube Stats Every Marketer Should Know in 2023* (*OBERLO July 20, 2023*), available at <https://www.oberlo.com/blog/youtube-statistics> More than 500 minutes of new content are uploaded on YouTube every second (last visited March 6, 2024) (More than 500 minutes of new content are uploaded on YouTube every second).

¹⁰¹ To "track the video" means to collect data about views, such as average watching time, likes and dislikes, number of times the video was shared.

¹⁰² *YouTube Help: How ContentID Works*, available at <https://support.google.com/youtube/answer/2797370?hl=en> (last visited March 6, 2024).

matching content begins. The process of fingerprinting makes it also possible to detect the violations that have altered the original work¹⁰³, in an analysis that resembles the “substantial similarity test” pertaining to nonliteral violations in traditional copyright infringement cases. However, the factors that influence the automated analysis are obscure. Another peculiar feature of ContentID is that it is capable of preventing the upload of a new video if it detects that it is utilizing content matching with an existing fingerprint.

The user that is notified of the alleged infringement is left with a choice: 1. do nothing and accept the removal of access to the video; 2. edit the video to remove the allegedly infringing parts; 3. share profits with the rightsholder¹⁰⁴; 4. dispute the claim¹⁰⁵. Disputing the claim, however, exposes the user to the DMCA mandated notice and take-down procedure, in case the rightsholder chooses to uphold the claim. The risk of being potentially found liable explains in part the low number of disputed ContentID claims¹⁰⁶. Consider once again the example of Pewdiepie described in Section 1. It is in fact too costly for a Youtuber to dispute every single claim that their videos receive, so most of them just decide to do nothing.

In recent years YouTube has also implemented a new tool, that places itself in between the notice and take down system (which the platform calls “Webform”) and ContentID, in terms of broadness of

¹⁰³ Irene Terenghi, *Sistemi Decisionali Automatizzati e Tutela dei Diritti: Tra Carenza di Trasparenza ed Esigenze di Bilanciamento*, 62 Università degli Studi di Trento. Facoltà di Giurisprudenza, at 68 (2021).

¹⁰⁴ This option is only available to users adhering to the YouTube Partner program, a program accessible only to the biggest YouTubers, who are awarded more powerful tools than everybody else due to their influence on the community.

¹⁰⁵ See YouTube, *Learn about ContentID Claim*, available at <https://support.google.com/youtube/answer/6013276> (last visited March 6, 2022).

¹⁰⁶ Trendacosta, *Unfiltered* (cited in note 16).

application and accuracy: Copyright Match Tool. Copyright Match Tool is available for YouTube Partners and users that have submitted a notice and takedown request and are accepted to the program¹⁰⁷. In its essence, Copyright Match Tool works like ContentID, but it cannot prevent the upload of a matching content. It only works after content has been uploaded. The only exception is that it can prevent a second upload of a video that has already been removed. These technologies together enforce copyright at an unprecedented scale: a little more than 1.6 million actions were taken by Copyright Match Tool, compared to a little over 2 million by Webform and a staggering 722 million by ContentID, only in the first half of 2021¹⁰⁸.

According to YouTube's own data, the Webform is the least reliable tool: it removes 83% of the claimed content, with a 15% of claims that are either categorized as "abuse" or "invalid claims"¹⁰⁹. This is because it is copyright holders themselves that request a take down, based on their own findings and understanding of copyright law. If they are in good faith and think that a content is infringing, or if they are in bad faith and know that a content is not infringing, they can request a notice and take down, stop access and eventually dispute the counter-claim later. While it is true that acting in bad faith exposes authors to liability, the percentage of cases that are litigated under §512(f) is exceptionally small, which shows that the burden of proof (*i.e.* proving that author considered the other party's claim to fair use) to avoid liability is so small that users would rather not file lawsuit,

¹⁰⁷ It is not clear what conditions need to be met to be accepted into the program.

¹⁰⁸ YouTube, *YouTube Copyright Transparency Report*, at 5 (cited in note 96).

¹⁰⁹ See *Id.* at 8 (abusive claims are defined as claims that were sent knowingly or maliciously in an attempt to remove content from the platform through a likely false assertion of copyright ownership; invalid claims are claims that show little understanding of copyright law. Both of them reduce the area of liberty that the law grants to the public).

and bear damages¹¹⁰.

Copyright Match Tool places itself in the middle in terms of reliability. 4.2% of the requests are invalid, whereas 0.14% are abusive. ContentID is the most automated tool that YouTube offers. 99.6% of the requests are automatic when ContentID is involved. Disputed claims amount to 0.5% when the claims are automatic and 1.7% when they are manual¹¹¹. This data seems to suggest that automation is capable of enforcing copyright mostly when it is safe to assume that the matching content is indeed infringing. However, “disputed claims” are not necessarily a good way to infer how accurate ContentID is. If users are disincentivized to dispute¹¹², many could simply accept that their fair content has been removed. Assessing the accuracy of ContentID is a difficult task especially because YouTube publishes generalized data, but not granular ones¹¹³. Inferential reasoning therefore needs to be extensively employed, reducing the accuracy of the findings. However, general observations can be made on the extensive use of algorithms and

¹¹⁰ *Bungie, Inc. v. Minor*, 2024 WL 965010 (W.D. Wash. March 6, 2024) (One of those rare cases is this, where a YouTube user pretended to be the author of a videogame, and filed many takedown claims to remove content on the platform, in retaliation for the developer’s original take down of a video. Because of the specific facts of the case, it was exceptionally easy to prove the “material misrepresentation” requested by 17 U.S.C. § 512(f)). See also Eric Goldman, *Plaintiffs Make Some Progress in 512(f) Cases* (Technology and Marketing Law Blog, March 6, 2024), available at <https://blog.ericgoldman.org/archives/2024/05/plaintiffs-make-some-progress-in-512f-cases.htm> (last visited November 20, 2024).

¹¹¹ YouTube, *YouTube Copyright Transparency Report*, at 13 (cited in note 96).

¹¹² See Jennifer Urban et al., *Notice and Takedown in Everyday Practice*, UC Berkeley Public Law Research Paper at 44 (2017) (And indeed, they are, as suggested by Urban, et al.). See also *supra* Section 3.

¹¹³ Gray, Suzor, *Playing with Machines*, at 1 (cited in note 98).

artificial intelligence tools in copyright enforcement¹¹⁴.

4. *Why the Pieces Do Not Fit*

4.1. *Why do Platforms Deploy Automated Copyright Enforcement Technologies?*

The DMCA notice and takedown provisions, the protection from liability for taking down content in good faith and the push from copy-rightsholders' organizations, incentivize OSPs to adopt automated systems that over enforce copyright. This means, on one hand, that fair use is not properly taken into account, and creativity is consequently stifled. On the other hand, the low costs for suing a copyright infringer allow for an extensive removal of allegedly infringing content, regardless of the actual harm produced by it. This proves that the scope of copyright law has changed, together with a change in technology¹¹⁵.

The notice and take down provisions¹¹⁶ push OSPs to act in favor of the rights holders¹¹⁷. If a content is considered by them to be infringing and a notice is filed, OSPs must act expeditiously to remove it¹¹⁸. If they do not, they expose themselves to losing the safe harbor protections and secondary liability if the infringement of

¹¹⁴ See *infra*; see also Helen Nissenbaum, *From Preemption to Circumvention, If Technology Regulates, Why Do We Need Regulation (And Vice Versa)?*, 26,3 Berkeley Technology Law Journal (2011). See also Ian Kerr, *Digital Locks and The Automation of Virtue*, in Michael Geist, *From "Radical Extremism" to "Balanced Copyright": Canadian Copyright and the Digital Agenda* (2010).

¹¹⁵ Surden, *Technological Cost as Law in Intellectual Property*, at 146-148 (cited in note 2).

¹¹⁶ 17 U.S.C. §§512(c)-(d).

¹¹⁷ Gray, Suzor, *Playing with Machines* (cited in note 98) cite Annemarie Bridy, *Copyright's digital deputies: DMCA-plus enforcement by internet intermediaries*, (2016) and Uta Kohl, *Google: the rise and rise of online intermediaries in the governance of the Internet and beyond (Part 2)*, 21 International Journal of Law and Information Technology 187, (2013).

¹¹⁸ 17 U.S.C. §512(c)(1)(C).

copyright is proven, as they would know about the infringing content, but decide not to act. Since the DMCA protects OSPs that in good faith remove content¹¹⁹, the copyright holders will more often than not have the upper hand, as removing content will not hold either the OSPs nor the rightsholder liable, unless the requesting party acted under knowingly and under a material misrepresentation of the alleged facts¹²⁰, which is a notoriously difficult standard to prove. This is true even when it looks like the use of the copyrighted work would be fair under the fair use doctrine¹²¹. In other words, OSPs are simply encouraged to remove content, regardless of what the users' interests are, even when they serve the public good¹²².

If this is the case, OSPs also have an incentive to design automatic copyright enforcement tools that favor copyright holders, as the scope of this practice mirrors that of the notice and takedown mechanism. The line of reasoning is indeed analogous: if OSPs can remove allegedly infringing content as long as they act in good faith, they will do so. Embedding this type of technology in their systems allows them to automatically remove infringing content, and eventually deal with the complaints of the users later, if they arise. In addition, the fact that users have the chance to dispute the algorithm decisions further encourages OSPs to “err on the side of caution”¹²³ – i.e. in favor of the right holders¹²⁴. But as data show, a small percentage of claims are actually disputed¹²⁵. In this way platforms

¹¹⁹ 17 U.S.C. §512(g)(1).

¹²⁰ 17 U.S.C. §512(f).

¹²¹ 17 U.S.C. §17.

¹²² Elkin-Koren, *Fair Use by Design*, at 1088 (cited in note 7).

¹²³ Grosse Ruse-Khan, *Automated Copyright Enforcement Online*, at 6 (cited in note 85).

¹²⁴ Elizabeth Gotham, *Lessons from ContentID: Searching for a Balance between Editorial Discretion and Free Expression on Application Platforms*, at 13, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2258861 (last visited November 20, 2024).

¹²⁵ See *supra*, Section 3.

favor big, organized copyright holders with a lot of bargaining power, at the expense of users, who often have little knowledge of copyright law and relatively more limited resources. Because of this asymmetry, their interests are less represented¹²⁶.

One of the main concerns of ContentID and other automated copyright enforcement technologies alike is that they operate “with narrow objectives that can introduce systematic bias”¹²⁷. They also lack the ability to account for the full context of the analysis, impacting negatively on human decision making¹²⁸. On the contrary, copyright enforcement requires to consider the specificity of the case, as constructed by the courts¹²⁹. The analysis of context cannot be disregarded if a just verdict is to be reached. Even an advanced technology, such as ContentID, carries a degree of error and unfairness¹³⁰. At a large scale, even a small percentage of errors can

¹²⁶ See Perry Barlow, *A Declaration of the Independence of Cyberspace* (1996), available at <https://www.eff.org/cyberspace-independence> (many users of the early internet had a naive view of the internet’s “democratizing” power. This view can be exemplified by Barlow’s utopia, which is in fact false. It is true that people have access to tools with which they can express themselves in an unprecedented manner. However, it is not correct to say that the internet is a place where no regulators are involved, nor is this scenario desirable. Regulation is ever present, and it does not only come from governments. Rather it comes from an intricate system of private regulation and public regulation. Public regulation nudges platforms to act in a certain way. Technological development creates new needs and new tools and pushes platforms to act in another - sometimes conflicting - way. The result is a complex system of rules resulting from both vertical pushes and horizontal pushes, which often does not correspond to the values embedded in its offline counterpart).

¹²⁷ Gray, Suzor, *Playing with Machines* at 3 (cited in note 98), cites Reuben Binns, et al., *Like Trainer, Like Bot? Inheritance of Bias in Algorithmic Content Moderation* (2017) available at https://link.springer.com/chapter/10.1007/978-3-319-67256-4_3 (last visited November 21, 2024) (the scholars use the terms “automated decision-making technologies” of which enforcement technologies are a subcategory, as they deploy decision making to enforce rights).

¹²⁸ See *Ibid.*

¹²⁹ See the cases cited *infra* in Section 2.2.

¹³⁰ See Grosse Ruse-Khan *Automated Copyright Enforcement Online*, at 14 (cited in note 85); see also Gray, Suzor, *Playing with Machines* (cited in note 98) (YouTube claims

result in a high number of unfair results,¹³¹ which ultimately disfavor the users – as platforms would rather favor authors instead¹³².

These technologies are also problematic because they are able to enforce copyright even when the works are not copyrightable, for example because they fall under public domain, or because the subject matter is not copyrightable at all¹³³. This creates an outcome that differs substantially from the intended balance of copyright law, as it restricts the users' freedom to fairly use these works, while unduly reinforcing rights holders interests.

4.2. Technological Cost and Harmless Creativity

As mentioned in section 3, automated copyright enforcement technologies are also problematic because they change the way the law operates¹³⁴. In the offline world infringement must be detected first, and the process to enforce it is costly. Once again, if Tolkien's

that ContentID errs in 0.5% of cases. However, the methodology used to calculate this percentage is unknown. Independent studies show that this number is likely to be too low).

¹³¹ See Urban et al., *Notice and Takedown in Everyday Practice* (cited in note 112). (If 0.5% is the correct percentage of errors, then in the first half of 2021 the number of wrongfully decided take down requests amounted to approximately 3,610,000. This number, however, does not take into account the fact that each request may refer to more than one content. This means that this approximation is likely to be too small. YouTube, however, claims that 2.2 million videos that were taken down were later overturned, available at <https://www.theverge.com/2021/12/6/22820318/youtube-copyright-claims-transparency-report> (last visited March 6th, 2022).

¹³² See *supra*, Section 3.

¹³³ See *supra*, Section 1. See also, *Bungie, Inc. v. Minor*, 2024 WL 965010 (W.D. Wash. March 6, 2024)(cited in note 110) (there is no preemptive control over the initial author's claim. While YouTube requires the claim to be initiated by the rightsholder or her agent, there is no guarantee that this tool is always used properly. As the aforementioned anecdote of PewDiePie shows, one of his videos intended to be broadly used on the platform, was claimed by an unknown person, who acted as if the video was theirs).

¹³⁴ *Supra*, Sections 2 and 3.

estate wanted to file suit against every infringer, it would have to hire lawyers to both detect the infringement, send them cease-and-desist letters, and sue them individually. This is why many infringements happen every day, but pass under the rights holders radar, as they are simply tolerated. However, this is not the case in the online world, as technology changes the paradigm.

In Lawrence Lessig's regulatory framework, discussed in *Code: Version 2.0*¹³⁵, there are four regulators of users' behavior online: the market, social norms, the law, and code¹³⁶ (often compared to architecture in an offline setting)¹³⁷. When it comes to copyright enforcement in the offline world, even if social norms (I want to protect my work because copying another person's art is wrong), the law (authors' have the right to ask for remedies for the infringement of their work) and the system's architecture (courts exist and allow copyright holders to obtain what they ask for and enforce a judicial decision) allow authors to sue an alleged infringer, the market often holds them back. The legal costs involved and the risk of losing the claim and having to bear them, ultimately deter copyright enforcement when the benefits are not big enough, or simply if the holder does not have many resources to invest.

As a positive externality of "missed enforcement", a form of "little-to-no-harm" infringement is tolerated, and some forms of creativity are protected, even though copyright holders are a little worse off. This is a socially accepted form of authors' rights violation. An offline example of this is graffiti street art. Oftentimes graffiti depict famous characters from comic books, tv shows and literature. The value that they add to the décor of the city is perceived as "good" and the art is

¹³⁵ Lessig, *Code* at 120-137 (cited in note 1).

¹³⁶ See *Ibid.*

¹³⁷ See generally Roger Brownsword, *Law 3.0*, (Routledge, 1st ed. 2020).

tolerated, even if technically the author rights are violated¹³⁸. The partial compression of these rights is actually useful to the advance of the public good, in line with the utilitarian view's prescriptions.

Another way to further clarify the concept comes from thinking about technology – and the absence thereof – is in terms of costs. There is in fact a technological cost in the offline world that prevents holders from suing every single alleged infringer¹³⁹. The lack of an efficient technology to enforce copyright requires the author to perform a series of activities that are costly, therefore disincentivizing enforcement. Only infringement that causes a certain amount of harm is sought after. Such a cost, therefore, protects an implicit value¹⁴⁰ – creativity that causes little-to-no-harm to the authors, even if it uses their works unfairly (“harmless creativity”).

Technological cost is defined as “the implicit constraint of an activity by processes of the past”¹⁴¹. An example is the very existence of copyright law, in the first place. Before Gutenberg revolutionized the printing process with the invention of the printing press and the first printed Bible of history, in 1455, the process of reproducing books was very costly. Everything needed to be done by hand and not many people knew how to write; paper was expensive; time was a serious constraint. However, after the mass production of books, copying became much less expensive. The need for protecting authors' expression of ideas arose, and copyright was created¹⁴². This example clearly shows how a change in technology, and the consequent

¹³⁸ If the murals are removed it is not because of copyright infringement, but often because of property rights on the “canvas” wall. Also, while it is true that most graffiti artists use pseudonyms, it is not difficult to find them, as many people know who they are. Not everyone knows how to protect his or her identity as Banksy does.

¹³⁹ See Surden, *Technological Cost as Law in Intellectual Property* (cited in note 2).

¹⁴⁰ See *Id.* at 146-148.

¹⁴¹ See *Id.* at 138.

¹⁴² The first copyright statute ever enacted was the Statute of Anne, in 1710's England.

reduction in copying costs, exposed a value that no law protected before, simply because there was no need to: the authors' right to be protected against unauthorized copies of her work.

The same reasoning can be applied to the online world: harmless creativity is protected by technological cost because it is not worth stopping the infringement by enforcing authors' copyright against it. The way enforcement works in the offline world makes it useless to translate the protection of harmless creativity into written law, simply because the inherent existing technological cost in the enforcement mechanism is enough to protect it¹⁴³. However, when technological cost is reduced, the underlying hidden value is damaged, and it needs to be exposed to be protected by new policy. As stated extensively in this work, in the online world infringement can be easily detected by automatic copyright enforcement tools. These tools lower considerably the price for enforcement and damage hidden creativity: legal services to draft cease-and-desist letters, the cost of sending them, the time to bargain with an attorney, and the eventual legal dispute that arises are scraped away, whereas the new process of fingerprinting material on ContentID and similar technologies only requires a few clicks.

As time goes by, automated copyright enforcement technology will likely miss less and less cases of alleged infringement and the erosion of harmless creativity will inevitably grow¹⁴⁴. In the first six months of 2021, YouTube's ContentID alone enforced around 722 million requests¹⁴⁵. It should be noted that a single request can refer to more than one content. The quantity of material removed is astonishing. The difference between high cost and very low cost is enormous when these numbers are involved. In the offline world, even a low cost, multiplied for each request can be enough of a deterrent to file

¹⁴³ See *Ibid.*

¹⁴⁴ Should de minimis doctrine be broadened? See *infra*.

¹⁴⁵ YouTube, *YouTube Copyright Transparency Report*, at 10 (cited in note 96).

only those that are most likely to be won. The judicial system as a whole would also be hit by a multitude of lawsuits, which would interfere with the regularity of its activities, making it undesirably flooded with frivolous lawsuits. In an online setting, however, these types of deterrence do not exist. The relevant change for copyright law comes from the fact that enforcement at this scale and level of granularity is unprecedented. The result is that the balance of authors and public interest is disproportionate. Authors, and especially big, organized rights holders that have access to this type of technology¹⁴⁶, have the power to enforce the equivalent of a privately issued injunction order¹⁴⁷, that has immediate effect¹⁴⁸, and very little chance of getting disputed¹⁴⁹, while also bypassing the basic need to preliminarily convince any impartial third party of the worthiness of their allegation. Moreover, as discussed above, OSPs have strong incentives to act in rights holders' favor to keep the protection from liability¹⁵⁰.

4.3. Preemptive Blocks

Another feature of traditional copyright enforcement is that offline infringement needs to be discovered before the law can be enforced against the perpetrator. This means that infringement is allowed to exist at least until it is detected. Automatic enforcement tools such as ContentID, however, scan content before it is even uploaded on the platform and made public. If the system detects content matching a copyright holder's fingerprint, it tells the user that several violations

¹⁴⁶ See *Id.*, at 4 (Which is in fact still limited to a small number of rights holders, who have the need to file a large number of copyright infringement claims).

¹⁴⁷ Rule 65, *US Federal Rules of Civil Procedure Procedure*.

¹⁴⁸ 17 U.S.C. §512(c)(1)(C) (“[U]pon notification of claimed infringement as described in paragraph (3), a service provider responds expeditiously to remove”).

¹⁴⁹ YouTube, *YouTube Copyright Transparency Report*, at 12 (cited in note 96) (According to YouTube, 0.5% of all claims get disputed).

¹⁵⁰ *Supra* at Section 3.

have occurred and gives the alleged infringer the opportunity to modify the video and try to upload it again. As it should be expected from such a technology, the system does not work perfectly and sometimes it detects more violations after the users have deleted whole parts of the video, even if it should detect less¹⁵¹. Nonetheless, the user is left with three possibilities: 1. modify the video again, hoping to reach a version of the video that the system does not consider infringing¹⁵²; 2. remove the copyrighted work entirely from the video, even if there is good reason to believe that its use is fair¹⁵³; 3. refrain from uploading the video altogether. Users have no chance of publishing the content and accepting the risk of a notice, because the technology simply does not allow it. This is a typical example of a “digital lock”¹⁵⁴. Code prevents the users to behave in a certain way, therefore conveying a certain value. A distinction is due: in the offline world¹⁵⁵, users may choose to accept the risk of receiving a cease-and-desist letter, or even a lawsuit, if the content is so important to them that it needs to be released to the public, regardless of the legal consequences. The setting for dispute would then be the Courts, with all of their procedures and guarantees. Some activities, in fact, need to be executed quickly to be influential and worth the effort. However, preemptive enforcement impairs users’ freedom to determine which behavior to adopt, based on a cost-benefit analysis¹⁵⁶. This makes the negotiation of what uses are fair

¹⁵¹Trendacosta, *Unfiltered* (cited in note 16).

¹⁵² Again, nobody really knows what parameters ContentID uses to deem a use infringing or not.

¹⁵³ For example, remove the part of the song that is being analyzed from a music review channel.

¹⁵⁴ See generally Kerr, *Digital Locks and The Automation of Virtue* (cited in note 114).

¹⁵⁵ Or, when ContentID-type technology is not involved.

¹⁵⁶ Kerr, *Digital Locks and The Automation of Virtue* (cited in note 114) (Ian Kerr, uses Aristotelian’s ethics of virtue to express this concept. He believes that users must be left with the ability to choose how to behave, to exercise morality. In the example provided, the cost would be the damage to be paid if a violation is found, multiplied by the chance of the occurrence of such an event. The benefit would be whatever

impossible. Copyright holders gain a broader protection for their works, while users see their creativity and their moral agency restrained¹⁵⁷.

4.4. From Removal to Monetization

As mentioned above¹⁵⁸, one of the possibilities offered to ContentID users is to monetize the video of the allegedly infringing party, instead of removing it¹⁵⁹. This feature of ContentID aligns the platform's interests with those of the rightsholders. In fact, YouTube holds an economic interest to keep the video online and profit from the advertising revenues¹⁶⁰. At a first look it may seem like the balance between users' interest to maintain the availability of the video on the platform, and authors' economic interest to profit from their works reaches a balance. However, this is not the case. ContentID is not a perfect tool and it may flag as infringing, content that is not actually infringing, as well as content that causes irrelevant damage¹⁶¹.

First, by profiting from the users' works, they enforce a license-type agreement, in which the users lose bargaining power as they cannot negotiate the percentage of revenues to be transferred. The users, in fact, are not a negotiating part; nonetheless they are bound by the agreement.

Second, even if the work used is infringed, the infringement may be only a small part of the entire video (even so small that it should be considered *de minimis* infringement). In this case, the

good result from the publication, and it may involve an improvement in reputation, monetary gain, or the influence on a certain topic of discussion. Here, the cost acts as an *ex post* sanction. If, however, such an analysis cannot be made, then even the good that may result from the violation of a rule is prevented.)

¹⁵⁷ See *Id.* at 275-303.

¹⁵⁸ See *supra* Section 2.

¹⁵⁹ YouTube, *YouTube Copyright Transparency Report*, at 6 (cited in note 96).

¹⁶⁰ Grosse Ruse-Khan *Automated Copyright Enforcement Online*, at 14 (cited in note 85).

¹⁶¹ YouTube, *YouTube Transparency Report*, at 7 (cited in note 96).

rightsholder is still allowed to profit from the entirety of the video, excluding entirely the users from enjoying the revenues¹⁶². The user is therefore deprived of economic gains that he should legitimately be able to earn under copyright constitutional justification¹⁶³. An example brought by H. Grosse Ruse-Khan involves the use of a 1-minute-long excerpt from a song in a 15-minute long video. The rightsholder would be able to profit from all of the video, while the user would be excluded from any monetary gain¹⁶⁴. But this conclusion seems to be in contrast with the utilitarian prescriptions of the constitution. If copyright law constitutional basis and moral justification is to create a form of intellectual monopoly¹⁶⁵ only insofar as it creates an economic incentive to produce more creative works, than this policy runs against it. The rights holders, contrarily, profit more than they should because it is awarded monetization from somebody else's work, which itself is a useful expression of creativity. The same idea is expressed by Grosse Ruse-Khan, who claims that this form of authors' profit constitutes an improper gain, devoid of any legal basis¹⁶⁶.

Third, the rightsholder still maintains the ability to stop monetization and block the user's content, at any point by simply deploying ContentID. Authors are encouraged to keep the video up for as long as it makes revenues. Then, when the monetary gains stop, rights holders can just start the notice and takedown process, which is, again, tilted in its favor¹⁶⁷. Users find themselves in a position where they have little to say to defend themselves in the face of the rights holders' decisions and suffer from the fear that their work might be removed anytime. The redirection of profits from the user

¹⁶² Grosse Ruse-Khan *Automated Copyright Enforcement Online*, at 14 at 14 (cited in note 85).

¹⁶³ See Article 1, Section 8, Clause 8 of the U.S. Constitution.

¹⁶⁴ YouTube, *YouTube Transparency Report*, at 6 (cited in note 96).

¹⁶⁵ See generally Boldrin, Levine, *Against Intellectual Monopoly* (cited in note 35).

¹⁶⁶ Grosse Ruse-Khan, *Automated Copyright Enforcement Online*, at 5 (cited in note 85).

¹⁶⁷ See *supra* at Section 3.

to the author is yet another obstacle for those who want to utilize a copyrighted work. They are incentivized not to use any content that could be claimed by an author, even when its use is fair, to avoid running into monetization issues. This is another form of self-restraint from a use that the law deems legal.

5. Possible Solutions

5.1. Striking down the Safe Harbor Provisions

The safe harbor provisions of the DMCA have been passed into law in a moment where the development of the internet was in a moment of great rise¹⁶⁸. New sharing technologies made it possible to infringe authors rights in a matter of clicks¹⁶⁹. Rights Holders organizations, worried that these new technologies would have destroyed their businesses by allowing users to download protected content instead of buying it from analog stores, lobbied for more protection¹⁷⁰. Conversely, platforms managed to argue for a compromise to shield themselves from secondary liability. They claimed that if they had to pay for their users' misconduct, the internet would not develop rapidly, depriving society of a greater good¹⁷¹. This way of thinking is still valid today.

One difference with the internet of more than 25 years ago when the DMC was enacted, is that in 1998 copyright enforcement was done by humans. Automated enforcement technologies were not available yet. Proponents of the deletion of the safe harbor provisions

¹⁶⁸ Senate Committee Report, *Congress.gov.*, S. Rept. 105-190 - The Digital Millennium Copyright Act of 1998, at 2-8 (1998), available at <https://www.congress.gov/congressional-report/105th-congress/senate-report/190/1> (last visited November 20, 2024).

¹⁶⁹ See *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (2001).

¹⁷⁰ See *Ibid.*

¹⁷¹ See *Ibid.*

see the exposure of platforms to secondary liability as both necessary and sufficient to reassess the correct balance between authors' rights and users' interests. However, they miss the opportunity to further improve the old balance.

Striking down the safe harbor provisions, in fact, would rewind the internet to a world of uncertainty. Courts would once again have the power to hold platforms liable under the secondary liability doctrines, and drive them out of business. Smaller platforms with less financial resources to invest on content moderation would have to face substantial entrance barriers, stifling digital innovation¹⁷². While it might be true that this measure would create an incentive for OSPs to create more sensitive automated copyright enforcement technologies, it would also encourage them to stand even more on the rights holders' side. To avoid liability, platforms would impose an even stricter enforcement policy with less regard for users' interests. And the network effect that characterizes platforms on the Internet would prevent users from moving to newer, user-friendly platforms. Taking these concerns into serious account, makes it more desirable to leave the safe harbor provisions intact¹⁷³.

One solution is to require courts to apply a standard of "misrepresentation" that is more favorable to the users than it is to the rights holders. As a matter of fact, 17 U.S.C. §512(f), titled "misrepresentation", gives users a cause of action to sue the author when the notice and take down request was filed under "materially knowingly misrepresentation". This cause of action serves the

¹⁷² Terenghi, *Sistemi Decisionali Automatizzati e Tutela dei Diritti*, at 70 (cited in note 103).

¹⁷³ See Directive (EU) 2019/790, art 17.1. (The EU has passed a new copyright regulation, which creates an exemption to their version of the safe harbor provisions. "[M]ember States shall provide that an online content-sharing service provider performs an act of communication to the public or an act of making available to the public for the purposes of this Directive when it gives the public access to copyright-protected works or other protected subject matter uploaded by its users.". The EU's newly modified legal framework provides an interesting case study for legal assessment that deserves to be the subject matter of future research).

purpose of exposing the author to liability when it is enforcing his copyright claim, knowing that the allegedly infringing party is indeed entitled to use the protected work¹⁷⁴. In *Lenz*¹⁷⁵, plaintiff uploaded a video of her daughter on YouTube while dancing to the notes of “Let’s go Crazy” by Prince. Universal, who was entitled to the rights of the song, filed a notice to take down the video, stating that they had a good-faith belief that “the [...] activity *was* not authorized by the copyright owner, its agent, or the law”¹⁷⁶. Access to the video was removed. Lenz filed a counter-notification, protesting that her video should be re-uploaded, pursuant to §512(g)(3). Universal contested the counter-notification, reiterating that the use of the song had not been authorized and never even mentioned fair use. After a second counter-notification, access to the video was finally reinstated, and Lenz sued Universal for damages. Defendant urged the court to interpret *Rossi*’s holding to construe the “misrepresentation” requirement as a “demonstration of some actual knowledge of misrepresentation” to mean that the rightsholder acted knowing that its assertion is false. The 9th Circuit, however, held that failing to consider the user’s fair use claim equated to a misrepresented belief of the goodness of the infringement claim. *Lenz* is one of the few cases where a §512(f) claim made it to the court and awarded damages to the user. The decision goes in the right direction, even though it is controlled only in the 9th Circuit, which means that the rest of the Federal Circuits in the U.S. are not bound by it. The *Lenz* decision should be codified to extend its validity to every federal court of the country¹⁷⁷. Moreover, the DMCA should be amended to require the

¹⁷⁴ *Rossi v. Motion Picture Ass’n of Am. Inc.*, 391 F.3d 1000 (9th Cir 2004).

¹⁷⁵ *Lenz v. Universal Music Corp.*, 815 F.3d 1145 (9th Cir.), cert. denied, 139 S. Ct. 419 (2018).

¹⁷⁶ See *Id.* at 1154.

¹⁷⁷ Even though YouTube’s policy specifically binds the two parties to the 9th Circuit forum, Google is not the only player in the market. The decision should also be

author's notice to be accompanied by a statement¹⁷⁸. The cost for engaging in the "notice-and-takedown" mechanism would be slightly higher, to the benefit of the users. More specifically, the provision should be construed so that a notice filed by the rightsholder would have to contain a statement explaining why the user's use was not fair. Noncompliance with this requirement would then immediately grant the user a cause of action for damages and injunctive relief (*i.e.* the reinstatement of the content). By introducing a risk for authors to file a bogus notice, the system would incentivize rights holders to truly consider the users' interests, and would make it more difficult to elude the DMCA's good faith belief requirement discussed in Section 2¹⁷⁹. Under the amended system, every takedown request notice would have to be sufficiently tailored to the specificity of the alleged infringement, so that blank statements such as the one provided in *Lenz*¹⁸⁰ would not be enough to be protected from liability. Platforms may even require that a certain number of characters are entered in the proper box, and AI could be deployed to preliminary check if a claim is sufficiently argued for, before making it possible for authors to submit their request¹⁸¹. The involvement of AI in this step of the process would also standardize the effect on the users. The number of takedown requests should drop and more infringements should be tolerated as a result, rebalancing authors' rights and users' interests serving the public good¹⁸².

5.2. Fair Use by Design

applied when other platforms are involved, which may choose different forums to decide disputes.

¹⁷⁸ 17 U.S.C. §513(g)(3)(c).

¹⁷⁹ §512(c)(A)(3)(v).

¹⁸⁰ *Lenz v. Universal Music Corp* (cited in note 175).

¹⁸¹ Proposals that act directly on the code follow Lessig's suggestion in *Code* (cited in note 1).

¹⁸² *Supra* at 14-15.

It has been said by influential scholars that the fair use doctrine should be implemented online¹⁸³, following Lessig's suggestion that code could be designed to incorporate legal provisions and embed specific values¹⁸⁴. To be fair, ContentID seems to aim at the same goal. Its defenders see it as a way to give rights holders a tool that protects them against copyright infringement, while also taking into account the users' interests by providing a counter-notice system to argue in favor of fair use. The problem to be solved, however, with automated implementation is not just technological. Fair use is a doctrine that relies heavily on human judgment, and it was designed specifically for that. Nonetheless, when it is a machine that substitutes humans in decision-making process under fair uses's four prongs¹⁸⁵, this precious flexibility is lost. Code, in fact, is not tailored to properly analyze context¹⁸⁶, which, on the contrary, is essential for fair use analysis. Moreover, complex semantic analysis is still a problematic task for artificial intelligence¹⁸⁷.

This is not to say that enforcement technologies fully compliant

¹⁸³ Elkin-Koren, *Fair Use by Design*, at 1093-1100 (cited in note 7).

¹⁸⁴ See generally L. Lessig, *Code* (cited in note 1).

¹⁸⁵ 17 U.S.C. §107.

¹⁸⁶ Gray, Suzor, *Playing with Machines*, at 143 and 273, (cited in note 98) cite Julia Black, *Decentering Regulation: Understanding The Role Of Regulation And Self-Regulation In A 'Post-Regulatory' World*, (2001) available at https://www.researchgate.net/profile/Julia-Black-9/publication/30527050_Decentering_Regulation_Understanding_the_Role_of_Regulation_and_Self-Regulation_in_a_'Post-Regulatory'_World/links/00b4952eb889c858c6000000/Decentering-Regulation-Understanding-the-Role-of-Regulation-and-Self-Regulation-in-a-Post-Regulatory-World.pdf?_sg%5B0%5D=started_experiment_milestone&origin=journalDetail, and Zimmerman, *Copyright and Social Media: A Tale of Legislative Abdication*, (2014), available at <https://heinonline.org/HOL/LandingPage?handle=hein.journals/pace35&div=13&id=&page=> (Last visited November 20, 2024).

¹⁸⁷ Mark A. Lemley, *Rationalising Internet Safe Harbors*, 6 *Journal of Telecommunication and High Technology Law* 101, at 110-111 (2007).

with code cannot be implemented. The point is that such a system will never be perfect because the fair use doctrine, by its own virtue, is difficult - if not impossible - to rationalize and reconduct to unifying, coherent, general principles that can then be made into code¹⁸⁸. Fair use analysis is so fact-specific that a *fil-rouge* that connects all the judge made decisions is unlikely to ever be found. Once again, flexibility is key in infringement analysis, and it cannot be lost when enforcing copyright law.

N.Elkin-Koren's proposal is fascinating and worth mentioning. AI and machine learning technologies could be used to identify patterns of fair use by studying previous decisions and apply them to the cases in front of them¹⁸⁹. But as noted by the scholar herself, oftentimes the reasoning behind machine-implemented decisions are not understood, even by its programmers. Because of it, public discourse on those decisions is significantly stifled. Moreover, even if these patterns were to be discovered, their binding power would be at least doubtful. If the common denominator of judge-made decisions is so obscure that the very judges that decided in accordance with it did not willingly do so, such a principle would look more like bias than anything else. Future decisions would just perpetuate this bias, instead of critically upholding the value of the argument's justice.

Yet, technologically implementing fair use on platforms might still be desirable to an extent as one of many tools deployed to uphold users' interests. It is better to have a system that is able to incorporate some elements of fair use, rather than no elements at all. It is not realistic to expect automated copyright enforcement technologies to disappear, as they are still a necessary tool for OSPs to monitor their libraries. If they stopped using them, they would expose themselves to a potential change of rules - whether by Congress or by the judiciary - in a direction that is so favorable to rights holders that it

¹⁸⁸ Leval, *Towards a Fair Use Standard*, at 1135 (cited in note 46).

¹⁸⁹ Elkin-Koren, *Fair Use by Design*, at 1097 (cited in note 7).

actually reduces the broadness of their protection against liability¹⁹⁰.

But if such a technology can be implemented, it must be done so with some caveats. N. Elkin-Koren suggests that AI and Machine Learning could give a score on the probability of fair use¹⁹¹, making the technology itself reviewable from outside scrutiny when compared to a judge-made decision. Also, the decision made by this type of system would be more easily challenged in court, as the absence of arguments to support the decision - that is a characterizing feature of AI - would be substituted with at least a form of information: a number¹⁹². While not perfect, this technology would still be better than the current one, where the mere similarity between the allegedly infringed work (or parts of it) and user uploaded content is enough to trigger removal or monetization, with little to no regard to fair use. Moreover, the criteria informing the technology could be tweaked in a way that the final score resembles more what is acceptable for the legal community¹⁹³.

Elvin-Koren also proposes AI and machine learning to be trained under the supervision of a judge. Judges would be required to articulate principles to instruct the proposed technology to an adequate fair use analysis¹⁹⁴. The problem with this suggestion, however, lies in the fact that these principles are hard to assemble

¹⁹⁰ For example, liability could be imposed if the safe harbor provisions of §512(c)(1)(B)-(d)(1)(B), which require that the OSP “does not receive a financial benefit directly attributable to the infringing activity, in a case in which the service provider has the right and ability to control such activity” were to be interpreted so that they include the revenue that platforms make through advertisement running on infringing material.

¹⁹¹ Elkin-Koren, *Fair Use by Design*, at 1099 (cited in note 7).

¹⁹² This number should also be made public by the platforms, along with the outputs of their automated infringement technologies. See *infra* Section 5.

¹⁹³ Multidisciplinary and multiparty agencies could be formed to study the conformity of the private decisions with the scope of copyright law, and enact soft law provisions, such as guidelines, to help platforms better train their AIs.

¹⁹⁴ See *Ibid.*

because of the discussed flexible nature of fair use¹⁹⁵. Fair use requires a case-by-case analysis that takes into account not only the type of work under scrutiny¹⁹⁶, but also the context in which the alleged infringement has occurred. The scholar continues, and states that fair use analysis may benefit from this type of interaction with technology¹⁹⁷. As technology requires more predictable outcomes it also imposes a change in fair use assessment. Although persuasive, it is necessary to ask whether the flexibility of judicial interpretation should follow the stricter limitations that code imposes. The role of the judiciary is to do justice, by interpreting and applying the *dicta* of the law in the cases in front of them. The risk with this proposal is to sacrifice justice for a less fact-dependent analysis, to better fit technological needs.

It is true that a more predictable fair use doctrine could help users to behave in a less contestable way. However, it is the flexibility of fair use that also allows it to answer new and unpredictable uses of copyrighted material. There certainly are downsides to this approach, as arguments are oftentimes *ex post* justifications to decisions, instead of logical steps to get there. But sacrificing fair use's flexibility would also paralyze courts when new cases appear in front of them, denying them the possibility to properly assess public and individual interests. Moreover, judges need to be free to create new doctrines and modify old ones to decide cases where novel uses of copyrighted material are under scrutiny. At the end of the day, both secondary liability and fair use were born out of judicial decisions. Finally, if automated enforcement technologies would be mandated to comply with specific values, it should be Congress' power to decide what they are. They would have to be an expression of the democratically-elected legislative power

¹⁹⁵ See *infra* Section 1.

¹⁹⁶ The analysis varies for example, if a work is visual, textual, musical, architectural and so on, as the court developed different tests to give meaning to fair use's four prong test.

¹⁹⁷ Elkin-Koren, *Fair Use by Design*, at 1099 (cited in note 7).

rather than the judiciary¹⁹⁸.

The difficulty in implementing these guidelines, however, is that it is very difficult to check whether private companies, such as YouTube, follow them or not. Trade secret laws prevent public access to the code¹⁹⁹, and it would be unwise to create a disclosure exception for copyright enforcement, as competition would definitely be altered.

5.3. *Duty to disclose*

A useful provision towards a more transparent understanding of these technologies' decision-making process, would be one that requires companies to disclose the outputs of their takedowns. The need for more transparency is entailed in platforms' tendency to train their AIs in secret²⁰⁰, and hide the outputs of their decisions to avoid public scrutiny²⁰¹, generating the so-called "black box" problem²⁰². Platforms lack the public mandate to enforce large-scale decisions in a way that is unilateral, as private means of law enforcement lack

¹⁹⁸ See cited at 184.

¹⁹⁹ Gray, Suzor, *Playing with Machines* (cited in note 98) cites Maayan Perel, Niva Elkin-Koren, *Accountability in Algorithmic Copyright Enforcement*, 19 Stan. Tech. Law Review 473 (2016).

²⁰⁰ Data is "fed" to the AI, which then utilizes it to find patterns and apply these patterns to future decisions. If the training data is obscure, there is no way of knowing whether the original data set contains biases that in turn are applied to decisions.

²⁰¹ Gray, Suzor, *Playing with Machines* (cited in note 98), cites Tarleton Gillespie, *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media* (Yale University Press, 2018).

²⁰² Gray, Suzor, *Playing with Machines* (cited in note 98), cites Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press, 2015).

democratic features and due process safeguards²⁰³. Hence, heightened transparency must be required.

Moreover, this lack of transparency is also reflected in the difficulty that independent researchers face when trying to assess automated copyright enforcement technologies' fitness with the legal framework²⁰⁴. While YouTube's Copyright Transparency Report²⁰⁵ is certainly a much-appreciated step towards the right direction, it also leaves out a lot of useful information. Again, granular data is left out²⁰⁶, forcing researchers to rely on inferential reasoning, which reduce their conclusions' accuracy, or force them to find other imperfect means of collecting them²⁰⁷, which are often costly and carry a certain percentage of error.²⁰⁸ Without these studies, it is difficult to properly criticize the technologies under scrutiny. It is crucial to understand whether they respect the principles inspiring the applicable law, they propagate biases, or they produce an acceptable balance between the involved interests, to better understand if the legal framework needs to be reformed, or not.

The main concern addressed in this paragraph is not that private copyright enforcement outcomes do not mirror courts' decisions perfectly, as fair use analysis tends to be by nature

²⁰³ Gray, Suzor, *Playing with Machines* (cited in note 98), cite Black, *Decentering Regulation* and Diane Zimmerman, *Copyright and Social Media* (cited in note 187).

²⁰⁴ Gray, Suzor, *Playing with the Machines* (cited in note 98).

²⁰⁵ YouTube, *YouTube Copyright Transparency Report* (cited in note 96).

²⁰⁶ Gray, Suzor, *Playing with the machines*, at 1 (cited in note 98).

²⁰⁷ See generally Maayan Perel, Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Copyright Enforcement*, 69 *Florida Law Review* 181 (2017) (For example, one study used experimental uploading and interacting with platforms). See also, Gray, Suzor, *Playing with the machines* (cited in note 98) (Others have created a library by browsing YouTube's library for potentially infringing videos and verifying if after two weeks they were still available). See Sharon Bar-Ziv, Niva Elkin-Koren, *Behind the Scenes of Online Copyright Enforcement: Empirical Evidence on Notice & Takedown*, 2, *Connecticut Law Review* 3, (2017) (Another study used data published voluntarily by Google and relative to Google Search).

²⁰⁸ Gray, Suzor, *Playing with the machines*, at 5 (cited in note 98) (the authors calculated the error rate to be approximately 10%).

somewhat uncertain; the point is that these decisions cannot be substantially discretionary, as shown by available data instead²⁰⁹. Automated copyright enforcement technologies cannot enforce a private body of rules totally detached by the evaluation of the judiciary. Platforms are private companies, but they have a “parapublicistic” role²¹⁰, especially when large scale enforcement is concerned, which justifies the imposition of specific duties to protect online freedoms. Transparency is one of them.

5.4. *Mandatory Licensing*

The most effective way to address the specific issue of creativity being unduly strangled on platforms is through mandatory licensing. As discussed in the previous paragraphs, automated copyright enforcement technologies allow rights holders to easily locate and either block access to or monetize from alleged infringement, with little to no regard to the users’ interest in fair use. Harmless creativity has less room to thrive. If a preemptive block to content upload is involved, the traditional “ask for forgiveness, not for permission” paradigm is inverted. Users need to comply with the rights holders’ requests first, without the chance to argue for fair use. A model shift is needed to better reflect how copyright law operates in an offline setting.

Mandatory licensing rebalances the users’ interests with the rights holders. OSPs should be compelled to enter a licensing agreement with whoever uploads content on their services and the users, to allow them to use protected content almost freely. To account for the potential loss of revenue for the rights holders, and still comply with the utilitarian justification for copyright, a flat

²⁰⁹ Gray, Suzor, *Playing with the Machines*, at 6 (cited in note 98).

²¹⁰ Andrew Shapiro, *The control revolution: How the internet is putting individuals in charge and changing the world we know* (2020).

revenue share could also be imposed. For the sake of argument, this proposal considers a 10% share of the revenues generated by the content creators through advertising to be transferred directly to the rights holders, regardless of whether the use of the copyrighted work is fair or not.

While this proposal may seem in contrast with the critique of the monetization practice allowed by YouTube and other similar services, at a closer look it is not. The main difference here is that not all revenue is lost by the content creator, but only a small part. Moreover, the rightsholder should be compelled to give up the right to block allegedly infringing content at any time. The revenues lost by the users are not actually lost but are used as a fair price in exchange for certainty. Users waive part of their profits to make sure that: no one can claim their work, only 10%, and not more of the revenues, are given up, and that no one can sue them for infringement.

It is true that some content creator's positions would be worse off. If they are convinced that their use of the protected work is fair, or if the use of the copyrighted work was tolerated, then the 10% loss in revenues becomes more burdensome. However, as explained above, even in those circumstances, nothing stops rights holders from filing a notice and taking down a claim, or engaging with ContentID-like technologies. Moreover, in fair use analysis there are many cases that are difficult to assess with certainty whether they fall under fair use protection or not. So even if one is convinced that its use is fair, the other party often has an opposite view. And since the good faith belief requirement of the DMCA protects the rights holders who have filed a notice and take down claims broadly, the user is the weaker party, under the current framework. With the mandatory licensing system, however, this instability is removed. Even users who have experienced few or no copyright claims benefit from it.

Should all types of infringement be covered by the agreement? No. One type of infringement that should still be enforced is literal

infringement. Literal infringement is very harmful to rights holders. If an exact copy of Quentin Tarantino's *Reservoir Dogs* is uploaded on a content-sharing platform, Miramax's²¹¹ other streams of revenues would be significantly limited. This opens a space for automated copyright enforcement technologies. Automated copyright enforcement technologies, in fact, are most effective when they're asked to find literal infringement, which requires a lower degree of context and external factors interpretation. A similarity rate²¹² between the protected work and the allegedly infringing one could be given, and a minimum threshold could be set up in guidelines. For example, if the acceptable similarity rate is 95%, everything that scores below that must be tolerated, and trigger the mandatory licensing revenue-share clause; anything above the similarity rate would be subject to the platforms' chosen enforcement action. Most likely it is going to be removal of content or total revenue share.

What if the platform does not enter licensing agreements with the rights holders? In such cases, they will lose the safe harbor's liability shield. It is entirely possible that a platform may find it economically better to risk secondary liability for their users' infringement if they believe that they have such a good technology to enforce copyright infringement while taking into account the fair use defense. However, very few of them would choose to do so, until the technology reaches an acceptable point, where the exposure to liability and the expected loss are lower than the expected revenues that will be earned by having a system that attracts rights holders from other platforms, because of a more profitable revenue system. If a new platform promises rights holders to make them earn more money than what they would earn by sticking to other platforms, where a flat 10% rate is earned from creators that utilize their

²¹¹ Miramax Films is the copy-rightsholder of the movie.

²¹² Similarity rate would represent the likelihood that the allegedly copyrighted work is literally infringing the protected one.

protected work, then being exposed to secondary liability might be worth the risk.

This mechanism would still leave considerable opportunities for platforms to compete. Who has the best automated copyright enforcement technology is less exposed to secondary liability. Moreover, if an OSPs reaches the point where its technology is good enough, it can choose to opt out of the mandatory licensing agreement, expose itself to secondary liability, but still bet on its technology. Companies that are more willing to take risks, might be encouraged enough to develop a better, more sensitive technology. If they can (proving therefore that the doubts of those who think that fair use can never be coded are wrong), society at large is better off, as traditional copyright's scope would be preserved. If they cannot, however, users' interest in fair use would be better protected than under the current system by mandatory licensing.

Another benefit of the proposal under analysis is that the interests of users, OSPs, and rights holders are aligned. Rights Holders would want to promote the use of their works, as they can extract revenues. Leaving few, but very profitable works to circulate, while blocking less profitable ones would not be possible. Instead, all content would have to be tolerated. This means that if rights holders want to increase their profits, they would have to get as many people as possible to produce content that also utilizes their protected works. A rise in uses that would fall under the category of tolerated use, in the offline world, is to be expected. Online, however, they would not be merely tolerated, but authorized under the mandatory agreement. As it can be already observed online, many companies already tolerate some infringing content, and it does not seem to cause them much harm. On the contrary, in many cases tolerated content promotes the original work and drives attention to it²¹³.

²¹³ Numerous are the examples of tolerated content online. YouTube is filled with "fan art", which, exactly like graffiti art, takes protected characters from copyrighted works and depicts them in made-up situations. An example are anime videos where

To facilitate access to the original, protected work, a duty would have to be imposed on users: citation. Users would have to cite the original source and provide a hyperlink so that anyone could see where the work is derived from. If a video that uses a protected song is uploaded, a hyperlink to the original song would have to be provided. Other users could then click on the hyperlink and land on the copyrighted work's page, and the content creator could then profit also from its own original video, due to the increase of new publicity.

A new condition to qualify for the safe harbor provisions then, would have to be added to §512(c)(1):

A service provider shall not be liable for monetary relief, or, except as provided in subsection (j), for injunctive or other equitable relief, for infringement of copyright by reason of the storage at the direction of a user of material that resides on a system or network controlled or operated by or for the service provider, if the service provider —

(iv) did not implement a mandatory service agreement with the copyright owners and the users of their services.

The same provision should be mirrored for 17 U.S.C. §512 (d)(1).

characters from different literary universes face each other off. In “GAROU vs SAITAMA”, The user “MMS ANIMATOR” imagined a fight between the two characters of the manga and animated them in a fight. The fight scene exists on paper, but has not been animated, yet. The video has been uploaded for months, even though usually it only takes a couple of weeks for infringing content to be removed. It is likely that it fails fair use analysis, as the original author is likely to animate the scene in the ongoing animated series. However, animated videos such as this one are part of what an average user expects to find on YouTube, and content is often left available on the platform. Users who encounter this type of work are often intrigued by it, and look for the original content, available at https://www.youtube.com/watch?v=Ry0cQ_POkR4 (Last visited November 20, 2024).

6. Conclusion

Automated enforcement technologies raise concerns about the balancing of users' and authors' interests. Copyright law changes scope, as the ability of the users to rely on fair use as a defense is reduced. As a result, creativity is stifled to the detriment of society. Moreover, the way copyright is enforced online results in less compliance with the constitutional utilitarian justification for copyright. To re-assess copyright law's equilibrium, four possible solutions are discussed: 1. striking down the safe harbor provisions of the DMCA; 2. The implementation of fair use by AI-powered technology; 3. Imposing a duty to disclose on OSPs; and finally, 4. A mandatory licensing agreement between the OSPs, the rights holders and the users. This last solution is believed to be the best one, as it changes the focus from "restriction" to "permission" of protected content use, without having to rely on the difficult, and often uncertain analysis of fair use, which is fit for a world where courts apply a balancing test, but it is not fit for private enforcement.

CCI v. Sector Regulators: Navigating Jurisdictional Ambiguities for Effective Resolution

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Abstract: The intersection of competition law and sector regulations often leads to jurisdictional overlaps, blurring the line between antitrust and sector regulation. This article delves into the complex landscape of jurisdictional conflicts between the Competition Commission of India (CCI) and sector-specific regulators in India's regulatory framework. The paper meticulously examines the problems arising from these jurisdictional ambiguities, including forum shopping, legal uncertainty, and over-enforcement, which collectively harm consumer interests and undermine the efficiency of market regulation. The paper traces the roots of these conflicts to multiple sources, including ambiguous legislative provisions, inconsistent judicial interpretations, and the inherent challenges in delineating the boundaries between competition law and sector-specific regulations. In response to these challenges, the article proposes a multi-faceted approach to resolution. It advocates for enhanced cooperation between the CCI and sector regulators through mechanisms such as mandatory consultations, memorandums of understanding, and the establishment of dedicated working groups. The paper concludes by emphasizing the need for a harmonized approach that leverages the strengths of both the CCI and sector regulators to create a more coherent and effective regulatory framework in India.

Keywords: The Competition Act; Antitrust; CCI; Sector Regulators; Jurisdiction.

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1. Introduction

The Competition Act, 2002, repealed the Monopolies and Restrictive Trade Practices (MRTP) Act of 1969. The MRTP Act dealt with concentration of economic power and monopolistic and restrictive trade practices. It was enacted with an object to curb these activities. The Act had no provisions for checking abuse of dominance or regulating mergers and acquisitions. The MRTP Act became outdated and ineffective in dealing with modern competitive issues, more so because of the liberalization of the Indian economy in the 1990s. The Competition Act was enacted, keeping in view the economic development of the country, to promote and sustain competition in markets, to protect the interests of consumers, and to ensure freedom of trade. It introduced a more nuanced, dynamic, and effective framework for fostering competition.

The Competition Act exercises regulatory control over three broad kinds of activities of an enterprise, viz., anti-competitive agreements, abuse of dominant positions, and mergers and combinations. Section 3 prohibits any agreement in respect of production, supply, storage, etc. which is likely to cause an appreciable adverse effect on competition (AAEC). Sub-section 3 raises a presumption that any

horizontal agreement¹ resulting in price fixation, market sharing, bid rigging, or limiting production shall cause AAEC. Sub-section 4 prohibits vertical agreements² including tie-in-arrangements³, exclusive dealing agreement, refusal to deal, etc. Section 4 of the Competition Act prohibits abuse of dominant position. An enterprise enjoying dominant position cannot impose unfair price or conditions in purchase or sale of goods and service. It cannot indulge in practices resulting in denial of market access or leverage its dominant position in one market to enter into other market. Section 5 defines a combination and section 6 states that no enterprise shall enter into a combination which is likely to cause AAEC.

The Competition Commission of India (CCI) was established under Section 18 of the Competition Act, 2002⁴ with a duty to eliminate practices having Appreciable Adverse Effect on Competition (AAEC), promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India. The Commission has a responsibility to inquire into any alleged contravention of the provisions of the Competition Act. If the CCI finds out that an enterprise has violated any provisions of the Act, the CCI may impose penalty up to 10% of the average turnover for the

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¹ Horizontal agreements are agreements between enterprises or persons at the same level of the production chain. For example, agreements between two manufacturers or two retailers.

² Vertical agreements are agreements between enterprises or persons at different levels of the production chain. For example, agreements between a manufacturer and a distributor.

³ An arrangement in which a manufacturer sells a product to a reseller only on condition that the reseller also buys another less popular product.

⁴ See The Competition Act, 2002 (12 of 2003).

last three preceding financial years.⁵ The CCI used to levy penalties based on global turnover of the enterprise. This led to inequitable outcomes against multi-national or big corporations. This continued till the Supreme Court in *Excel Crop Care v. CCI*⁶ decided to read “turnover” as “relevant turnover”, considering the position in foreign jurisdictions. The CCI also possesses the same powers that are vested in a Civil Court under the CPC⁷.

Functioning as a watchdog for the market by safeguarding healthy competition and consumer welfare, several sector-specific regulators such as the Securities and Exchange Board of India (SEBI), established under the SEBI Act, 1992⁸ and the Telecom Regulatory Authority of India (TRAI) established under the TRAI Act, 1997⁹ derive similar authority from statutes as does the CCI. However, these institutions are evidently different in their aims and duties from the CCI for obvious reasons. In performing its functions, the CCI may encroach upon the jurisdiction of sector regulators, and their jurisdictions often overlap.

In 2024, the CCI issued a show-cause notice to Muthoot Finance highlighting concerns over jurisdictional overlap between the CCI and the Securities and Exchange Board of India (SEBI)¹⁰. Muthoot filed complaints with the CCI and SEBI over debenture trustees' anti-competitive activities but did not reveal its SEBI complaint to the CCI,

⁵ See S. 27 of The Competition Act, 2002 (12 of 2003).

⁶ (2017) 8 SCC 47.

⁷ See Code of Civil Procedure, 1908 (5 of 1908).

⁸ See The Securities and Exchange Board of India Act, 1992 (15 of 1992).

⁹ The Telecom Regulatory Authority of India Act, 1997 (24 of 1997).

¹⁰ See Pavan Burugula, CCI sends show-cause notice to Muthoot Finance for ‘regulatory shopping’, Moneycontrol (2024), available at <https://www.moneycontrol.com/europe/?url=https://www.moneycontrol.com/news/business/ci-sends-show-cause-notice-to-muthoot-finance-for-regulatory-shopping-12574051.html> (last visited September 5, 2024).

raising worries about forum shopping. The case demonstrates a jurisdictional dispute between the CCI's responsibility in resolving competition problems and SEBI's monitoring of debenture trustees. The Bombay High Court is currently deciding which regulator has jurisdiction.

There hardly exists any vivid demarcation of boundaries of sector regulators and the CCI. It is often noted that sector regulators apply rules *ex-ante*, while the CCI addresses issues *ex-post*.¹¹ This view has little practical value as there are cases that have required concurrent application of both regulation and competition. This jurisdictional conflict raises several problems, such as forum shopping, legal uncertainty, and over-enforcement. In this article, we will first discuss the problems arising due to such jurisdictional issues. Next, we will address the causes of these conflicting jurisdictions and analyze some important cases that have come before the courts. Lastly, we will present plausible solutions, keeping in mind how the relationship between regulation and antitrust is governed in other jurisdictions.

2. Problems due to Overlapping Jurisdiction

The convergence of competition law and sector regulations produces several problems. The major ones are forum shopping, legal uncertainty, and over-enforcement. These issues may lead to overburdening of courts, interference with the judicial process, creation of compliance challenges for a company and even disruption of business operations. These problems may also prove pernicious to the overall economy. A closer look at them is necessary.

2.1. Forum Shopping

¹¹ See CUTS INTERNATIONAL, 15th edition Newsletter, available at <https://cuts-ccier.org/newsletter/spotlight-15.htm> (last visited November 27, 2024).

In India, complaints regarding competition law issues can only be made to the CCI. The Commission's orders can only be challenged against the National Company Law Appellate Tribunal (NCLAT). A further appeal lay to the Supreme Court of India. Civil Courts and High Courts have no jurisdiction to hear competition matters. Similarly, the SEBI covers matters of the securities market, which include stock exchanges, mutual funds, substantial acquisition of securities, insider trading, etc. The Civil Courts have been barred from hearing such matters. An appeal can be made to the Securities Appellate Tribunal and, failing there, to the Supreme Court of India. Other regulators have been constituted in a similar fashion.

There are certain matters over which both the sector regulator and the CCI have a mandate to deal with. This raises the issue of forum shopping, the practice of choosing the court in which to bring an action based on a determination of which court is likely to provide the most favorable outcome¹². It is discouraged in common law countries like the United States of America (USA) and the United Kingdom (UK). Indian courts have systematically categorized and condemned forum shopping as a practice that erodes judicial efficiency and fairness, reiterating its disrepute across multiple rulings. In *Vijay Kumar Ghai v. State of W.B.*¹³, complaints were initiated in Delhi and Kolkata on nearly identical grounds. The Court elaborated on forum shopping, acknowledging its varied forms while underscoring its absence of statutory definition and relied on Merriam-Webster's definition. Supreme Court of India has consistently denounced the practice of forum shopping, emphasizing that litigants cannot be allowed the liberty to choose a forum solely for favourable outcomes. In the landmark *Chetak Construction Ltd.*

¹² See Merriam-Webster, "*Forum shopping*" Merriam-Webster.com Legal Dictionary, available at <https://www.merriam-webster.com/legal/forum%20shopping> (last visited August 27, 2023).

¹³ See *Vijay Kumar Ghai v. State of W.B.*, (2022) 7 SCC 124.

v. Om Prakash¹⁴, the Court asserted that forum shopping undermines judicial integrity and must be dealt with firmly. Further, in *Union of India v. Cipla Ltd.*¹⁵, the Court introduced the “functional test” to identify forum shopping, focusing on whether there exists functional similarity between proceedings in different courts or whether the litigant is attempting subterfuge. This test determines the legitimacy of forum selection.

Forum shopping brings several disadvantages. Many a times, the jurisdictional conflict between the CCI and sector regulators had to be settled by the High Courts. In doing so, the courts have to stay proceedings in one forum and favor it over the other. This may undermine the authority of the forum whose jurisdiction is so restricted. Forum shopping may also hamper the efficiency of the proceedings. If the CCI would have to investigate a matter in the domain of other sector regulators, it would require their technical expertise, assistance, and continued sharing of information and data. This would result in delays and increased expenses, hindering overall efficiency. A lack of decisional uniformity is also a recognized disadvantage of forum shopping.¹⁶ The issue arises when there is a likelihood of different outcome from different forums. It may be unfair for the party (especially the defendant) if the plaintiff chooses a forum where the likely outcome would be more in its favor.

2.2. Legal Uncertainty

A market player may get approval for an action from a regulatory body, which may subsequently be found to have an adverse effect on the market by the competition regime. It also raises the question of mandate and authority as to whether the competition regulator

¹⁴ See *Chetak Construction Ltd. v. Om Prakash*, (1998) 4 SCC 577.

¹⁵ See *Union of India v. Cipla Ltd.*, (2017) 5 SCC 262.

¹⁶ See Markus Petsche, *What's Wrong with Forum Shopping - An Attempt to Identify and Assess the Real Issues of a Controversial Practice*, 45 INT'L L. 1005 (2011).

would supersede sector regulators. One can find inconsistencies in several CCI decisions. There have been instances where CCI has allowed an appeal before it and, on some occasions, in similar appeals/matters, has directed the pursuit of a remedy in other forums.¹⁷ These decisions, in the absence of any defined procedure, raise legal uncertainty. Legal uncertainty may increase disputes and litigations, create compliance challenges for a company, disrupt business operations, and deter investments.

2.3. Over-enforcement

Simultaneous proceedings before different regulators may result in over-enforcement. It is quite possible that a firm will be indicted on both forums. In *CCI v. Bharti Airtel*¹⁸ (discussed later in detail), the TRAI recommended the imposition of a penalty on *Airtel*. A complaint was also raised before the CCI. The CCI launched its own investigation against *Airtel* even though a fine had already been recommended by the TRAI. Fortunately, the Supreme Court stayed the investigation pending further determinations by the TRAI. This kind of over-enforcement would be pernicious not only to the firm but also to the overall economy. In 2021-22, telecom companies recorded 4.17 lakh crores of debt. In such a situation, over-enforcement is likely to have a chilling effect on the market.

3. Causes of the Conflict

Multiple reasons can be cited for the jurisdictional conflicts between the regulators and the CCI. The conflict may be caused by the

¹⁷ See *Subhash Yadav v. Force Motor Ltd. & Ors*, Competition Commission of India Case No. 32 of 2012 (October 5, 2012) where the CCI rejected the complaint holding that is not the correct forum for addressing consumer grievances. However, in *Belaire Owner's Association v. DLF Limited*, Competition Commission of India Case No. 19 of 2010 (August 12, 2011) the CCI acted on consumer complaints.

¹⁸ See *The CCI v. Bharti Airtel* (2019) 2 SCC 521.

legislative framework, regulatory design, or judicial precedents. Legislative provisions such as the 'non-obstante clause'¹⁹ and 'exclusion of jurisdiction of civil court' often create many difficulties. The opinion of the courts in different cases has also created legal uncertainties. Interpretation of statutes rests in the hands of the judiciary, and judicial decisions have played a key role in shaping this conflict.

3.1. *Ambiguous Legislative Provisions*

Ambiguities have arisen from the provisions of the Competition Act. Section 60 states that the provisions of the Act shall have an overriding effect over other enactments. On the other hand, section 62 states that the provisions of this Act are in addition to and not in derogation of the provisions of any other law. The Electricity Act has also been conferred with an overriding effect²⁰. Similarly, the SEBI has been given the power to agree to a settlement in administrative and civil proceedings proposed by the person against whom the proceeding was initiated²¹. This power is given notwithstanding any other law in force. If there is an offense covered by both the Competition Act and the SEBI Act, the SEBI may agree to a settlement, and the CCI may continue with its own proceedings. This would eventually result in a jurisdictional conflict and the statutes would only aid it since they give overriding effects to the regulating bodies. Thus, the provisions of the Act itself become the foremost instance of legislative ambiguity.

Other statutes that were enacted for specific sectors also included the 'promotion of competition' in their objectives. Section 11 of the

¹⁹ A non-obstante clause is a legislative device seeking to confer overriding effect upon a particular provision over other conflicting provisions of the same law or any other laws.

²⁰ See S. 174, The Electricity Act, 2003 (36 of 2003).

²¹ See S. 15JB, The Securities and Exchange Board of India Act, 1992 (15 of 1992).

Petroleum and Natural Gas Regulatory Board Act²² enumerates the functions of the PNGRB. These functions, inter alia, include protecting the interest of consumers by fostering competition and regulating access to common carriers or contract carriers to ensure fair trade and competition amongst entities. This Act also borrows the concept of 'restrictive trade practices' from the erstwhile MRTP Act, 1969. Restrictive trade practices are those practices which may prevent, distort, or restrict competition in any manner and in particular by obstructing the flow of capital or resources into the stream of production, or by manipulating prices or conditions of delivery or affecting the flow of supplies in the market in such manner as to impose on the consumers unjustified costs or restrictions²³.

Similarly, one of the objectives behind the Electricity Act²⁴ is the promotion of competition. The Act has a non-obstante clause too. The confusion of jurisdiction between the Delhi Electricity Regulatory Commission (DERC) and the CCI was seen in *Shri Neeraj Malhotra v. North Delhi Power Ltd*²⁵. The electricity distribution companies (Discoms) alleged that only DERC has jurisdiction to deal with the issues relating to the anti-competitive behavior of electricity distribution companies. A conflict was imminent, but the DERC showed willingness to leave the anti-competitive issues for the CCI and the clash was averted.

In the new amendment to the Competition Act, 2002, the Government of India has accorded statutory recognition to 'hub and spokes cartels' by amending Section 3(3) of the Act, as suggested by the

²² See The Petroleum and Natural Gas Regulatory Board Act, 2006 (19 of 2006).

²³ See S. 2(o), The Monopolies and Restrictive Trade Practices Act, 1969 (54 of 1969).

²⁴ See The Electricity Act, 2003 (36 of 2003).

²⁵ See *Neeraj Malhotra v. North Delhi Power Limited*, 2011 SCC OnLine CCI 20.

Competition Law Review Committee (CLRC)²⁶, to protect against collusion between a common agency (hub) and other participants involved in similar or identical trades (spokes). Notably, now any party involved in or planning to engage in an anti-competitive horizontal agreement can be held liable under Section 3(3), even if it is not engaged in the same or similar business as the other participants. Since the CCI previously had trouble showing cooperation between parties due to their separate trades, the proposed amendment has further broadened the CCI's jurisdictional reach, which can potentially evoke contentions in cross-jurisdictional cases across statutes and statutory forums.

3.2. *Judicial Decisions*

The writ courts had to step in very often to settle jurisdictional disputes between regulators and the CCI. The mandate given to them by their parent statute may overlap at times. If either of them is unwilling to let the other decide a particular dispute, things become uncertain. There is no defined law on what would happen in such scenario and whose jurisdiction would be superior. The courts have attempted to fill the voids created by the legislature. Despite numerous attempts, the controversy regarding the CCI's jurisdiction continues, largely due to the lack of a distinct pattern in judicial decisions and the differing ratios of these decisions. It may be said that the judiciary has been successful in settling the dispute of the CCI with a few regulators, but no general rule or guideline has been provided.

The *CCI v. Bharti Airtel*²⁷ is at the forefront of these decisions. In July 2016, Reliance Jio Infocomm Limited made a complaint before the TRAI against the incumbents namely Airtel, Vodafone, and Idea for

²⁶ See Ministry of Corporate Affairs, Government of India, Report of Competition Law Review Committee (2019) (Chapter 4, Para 3.2).

²⁷ See *The CCI v. Bharti Airtel* (cited in note 7).

denying Point of Interconnections (PoIs). RJIL was an entrant in the telecom market. The TRAI recommended that the Department of Telecom impose a penalty on the incumbents for violating various regulations. In December 2016, Reliance approached the CCI against the incumbents. It filed a case under section 19(1)(a) alleging the violation of section 3 of the Competition Act, 2002. The incumbents approached the Bombay High Court with the prayer that the investigation be quashed. The High Court acceded to the demands. The reasoning adopted by the High Court was that unless the clauses of the interconnection agreements, and the rights and obligations of the parties are defined clearly by the authority under the TRAI Act, the Commission would not be in a position to decide on such allegations. On appeal, the Supreme Court upheld this order. The Apex Court concluded that the matter pertains to the telecom sector, and the TRAI is more competent in dealing with the jurisdictional aspects in the first instance. Once TRAI furnishes its findings, which lead to the *prima facie* conclusion of anti-competitive agreements, the CCI can then be involved.

In the *Monsanto Holdings*²⁸ case, the payment of royalty fees was the subject matter of the dispute. Monsanto, a Fortune 500 company, had developed a second-generation technology cotton seed that was resistant to a certain pest. This particular technology, i.e., BT-II, was patented under the Patents Act, 1970 and was licensed to Mahyco Monsanto Biotech (India) Pvt. Ltd. Several seed producers in India receive sublicenses from MMBL for the BT-II technology. MMBL charged consideration for sub-licensing BT-II technology to Indian seed manufacturers in two parts, a non-refundable fee paid upfront and a recurring fee, known as the "trait fee", which is based on the maximum retail price ("MRP") fixed for the BT-II seeds sold to farmers/buyers by the Indian seed manufacturers. The CCI held that

²⁸ See *Monsanto Holdings (P) Ltd v. CCI*, 2020 SCC OnLine Del 598.

prima facie Monsanto's conduct violated the provisions of sections 3(4) and 4(2)(a)(i) of the Competition Act by charging the "trait fee", imposing "terms and conditions" on businesses seeking to utilize its "patented" method for procuring cotton seeds and further, abusing its dominant position in the cotton seed market by charging unfairly excessive prices for its patented technology. Thus, the CCI ordered the Director General (DG) to investigate the matter under Section 26(1) of the Act.

Monsanto challenged this order of the CCI before the Delhi High Court on the grounds that the CCI does not have jurisdiction to examine the issues raised as they relate to the exercise of rights granted under the Patents Act. It had also contended that the decision in *Micromax/Ericsson*²⁹ case had been overruled by the *Bharti Airtel* decision³⁰. In the *Ericsson* case, the Delhi High Court held that unless there is irreconcilable repugnancy between the Competition Act and the Patents Act, the jurisdiction of the CCI to entertain complaints in respect of patent rights is not ousted. While rejecting the contention that *Ericsson* is overruled by *Bharti Airtel*, the court observed that the role of Controller of Patents is materially different from TRAI with the latter's functions being more perverse. The court made an interesting observation about the Supreme Court's decision in *Bharti Airtel* case. The court noted that the said decision is not an authority of the proposition that wherever there is a statutory regulator, the complaint must be first brought before it and the CCI's jurisdiction depends on the findings of the regulator. Apparently, this interpretation is not in much consonance with what was decided by the Supreme Court. The opinion of the court hampered the chances of the *Bharti Airtel* decision becoming a general rule.

²⁹ See *Ericsson v. Competition Commission of India*, WP(C) 464/2014, DHC.

³⁰ See *The CCI v. Bharti Airtel* (cited in note 7).

In *Amir Khan Productions Private v. Union of India*³¹, the Bombay High Court held that the Competition Commission is competent to decide its jurisdiction given the factual situation of the case. The petitioner had challenged the show cause notices issued by the CCI. The petitioner contended that the Commission had no jurisdiction to initiate any conducted proceedings with respect to films, for which the provisions of the Copyright Act, 1957 contain exhaustive provisions. A similar argument was raised in the *Monsanto Holding* case³². Sections 84, 85(7), and 140 of the Patents Act have provisions on compulsory licensing, revocation for non-working, and restrictive agreements. Even though there existed exhaustive provisions in other statutes to curb abuse of dominance and anti-competitive practices, the courts have not abrogated the jurisdiction of the CCI. On the contention that the Copyright Board is the only authority to decide whether the terms of a license between a copyright owner and a radio broadcaster are reasonable, the Court in *Super Cassettes Industries Ltd. v. Union of India*³³ held that the powers of the Commission are different in their governing aspects and areas under section 3 and 4 of the Competition Act are not covered under the Copyright Act.

While it may seem that courts tend to protect the jurisdiction of the CCI, decisions to the contrary have also been made. In a case before Delhi High Court³⁴, the Court stayed proceedings of the CCI into the alleged anti-competitive practices of Indian Oil Corporation Ltd (IOCL), Hindustan Petroleum Corporation Ltd (HPCL) and Bharat Petroleum Corporation Ltd (BPCL) in relation to the pricing of petrol by them on a plea by the oil companies. Whenever there is a question

³¹ See *Amir Khan Productions Private v. Union of India*, 2010 SCC OnLine Bom 1226.

³² See *Monsanto Holdings (P) Ltd. v. CCI* (cited in note 16).

³³ See *Super Cassettes Industries Ltd v. Union of India*, WP (C) 1263/2005, DHC.

³⁴ See *Reliance Industries Ltd v. Indian Oil Corporation Ltd. & Ors*, WP (C) No 8211 of 2010, DHC.

of CCI's jurisdiction involved, the courts show a propensity towards putting a stay on the Commission's investigation.

The Delhi High Court (DHC) recently delivered a judgment in the case of *ICAI v. CCI*³⁵. ICAI (Institute of Chartered Accountants of India) impugned an order of the CCI in which the Commission had directed the DG to investigate the matter relating to the Continuing Professional Education (CPE) program being conducted by ICAI. This program gives credit hours to the Chartered Accountants and is exclusively conducted by the ICAI. The allegation against the ICAI is that it is abusing its dominant position as a "Regulator" to create a monopoly in the service of providing CPE seminars, clearly violating Sec. 4(1) of the Competition Act. The court stated in the judgment that *the statutory authority, which is vested with the regulatory powers can alone exercise such powers. The Competition Act does not contemplate the CCI to act as an appellate court or a grievance redressal forum against such decisions, which are taken by other regulators, in exercise of their statutory powers and are not interfaced with trade or commerce. A statutory body may in course of its functions, also make decisions which involve trade and commerce*³⁶. The court found that there is no separate learning activity, which is prescribed and is interchangeable with the CPE program conducted by ICAI. The Court noted that CCI's authority is limited to market regulation; it does not extend to resolving any complaint against arbitrary behavior by any governmental entity³⁷ and since, there is no market for organizing CPE seminars, workshops or conferences, the court stated that *the decision of ICAI to frame the CPE Program for maintenance of professional standards cannot be considered as abuse of its dominant position*³⁸. The court held this decision not

³⁵ See *ICAI v. Competition Commission of India*, 2023 SCC OnLine Del 3422.

³⁶ *Id.* at para 57.

³⁷ See *Id.* at para 66.

³⁸ See *Id.* at para 65.

amenable to review by the CCI³⁹. This is an unprecedented decision which strengthens the functioning of sector regulators and further draws the lines between CCI's jurisdictions and sector regulators. However, a lack of clarity still exists in the interpretations of aspects of economic activity, enterprise and market in the courts.

In the same case, the CCI had advanced an argument from a different jurisdiction, relying on the case of *Ordem dos Técnicos Oficiais de Contas(OTOC) v. Autoridade da Concorrência* of the Court of the Justice of the European Union where a certain regulation was published by the OTOC⁴⁰, which stated that the OTOC shall provide two types of training i.e., the “institutional training” which could only be provided by OTOC, and the “professional training” which could be provided by higher education establishments and bodies authorized by law to provide training and bodies registered with OTOC. The Second Chamber held that the regulation which puts into place a system of compulsory training for Chartered Accountants, in order to guarantee the quality of services offered by them constitutes a restriction on competition. The DHC had some reservations about the OTOC decision and pointed out that OTOC was not the only authorized institution to provide training. Consequently, the OTOC precedent failed as in this case ICAI was the only institution providing verified instruction. The organized program and its accompanying activities were solely managed by ICAI. There was no other body offering professional training for obtaining the Chartered Accountant designation or for the ongoing education program, which was critical.

Furthermore, the Hon'ble Supreme Court proceeded with a different approach with regard to Public Sector Undertakings (PSUs) and their market dominance in *Coal India Ltd. v. Competition Commission of*

³⁹ See *Id.* at para 71.

⁴⁰ See *Id.* at para 72.

*India*⁴¹. The court ruled that the claim that the Coal Mines (Nationalization) Act and the Competition Act cannot be harmonized is unfounded⁴². It stated that the Competition Act applies to CIL and its affiliates and that the CCI is empowered to take legal action against them for misuse of a dominant position. The Court acknowledged that while the appellants' actions could be challenged through judicial review or before alternative forums such as the Controller of Coal, the availability of such remedies does not preclude a party from approaching the Competition Commission of India (CCI) for alleged violations of applicable laws⁴³. Moreover, on the point of jurisdiction, the Hon'ble Court held that Section 19(4) gives the CCI the authority to consider "all" or "any" of the considerations when determining whether an organization has a dominating position. According to Section 19(4)(g), a "monopoly" or "dominant position" gained as a consequence of the Statute, by virtue of being a Government Company, a Public Sector Undertaking, or otherwise, is to be considered a significant factor. This shows that rather than excluding governmental entities like government companies, public sector undertakings, or bodies acquired under statutes from the Act's scope, the legislators clearly intended to include those entities within the Act.

There are visible inconsistencies in the decisions of the courts. In one place, the CCI has been given the liberty to decide its jurisdictions, but on other occasions, its actions have been severely restricted. There is irregularity in the stand of the CCI itself. For instance, the CCI acted against DLF⁴⁴ on a complaint by the allottees of an apartment built by it even though National Consumer Dispute Resolution Commission

⁴¹ See *Coal India Ltd. v. Competition Commission of India*, 2023 SCC OnLine SC 740.

⁴² See *Id.* at para 127.

⁴³ See *Id.* at para 121.

⁴⁴ See *Belair Owner's Association v. DLF Limited*, Competition Commission of India Case No. 19 of 2010 (August. 12, 2011).

had decided a number of disputes on the same issue.⁴⁵ The CCI itself in another case held that consumers have other adequate remedy and the real estate regulatory authority would look into the broader issues and concern of the market.⁴⁶ In several other cases, the CCI has closed the complaint that was filed before it for not being the appropriate forum for such disputes. In *Subhash Yadav v. Force Motor Ltd.*⁴⁷, the CCI closed the complaint on account of there being another statute that deals with the subject matter. Also, in the case of *Shri Anand Prakash Agarwal v. Dakshin Haryana Bijli Vitran*⁴⁸, concerning the fixation of the fuel cost surcharge adjustment ("FSA") component, the CCI chose to dismiss the information and directed the informant to file the matter with the relevant state and/or central electricity regulator under the Electricity Act. The CCI noted that FSA charges are computed and levied by electricity distribution companies and any tariff-related complaint would be addressed by the appropriate body under the Electricity Act. Numerous instances like these can be found, and the judiciary is not to be blamed for perpetuating this conundrum. Courts can interpret the laws, but they cannot take the work of lawmaking.

4. Towards Collegiality

The need to resolve jurisdictional issues arises when there is coextensive application of regulation and competition law. While the

⁴⁵ See *DLF v. Kamal Sood*, (First Appeal No. 557 of 2003); *Lalit Kumar Gupta & Ors. v. DLF Universal Ltd.* (First Appeal No. 88 of 1999 and 345 of 2001); *Emaar MGF Land Ltd. v. Karnail Singh*, I.A. No. 3876 of 2014; *Sanjay Goyal v. Unitech Ltd.* (Consumer Complaint No. 344 of 2012).

⁴⁶ See *Jyoti Swaroop Arora v. M/s Tulip Infratech Limited & Ors.*, Competition Commission of India Case No. 59 of 2011 (February 03, 2015) at para 357.

⁴⁷ See *Subhash Yadav v. Force Motor Ltd. & Ors*, Competition Commission of India Case No. 32 of 2012 (October 5, 2012).

⁴⁸ See *Shri Anand Parkash Agarwal v. Dakshin Haryana Bijli Vitran Nigam* (cited in note 14).

purpose and modus operandi of the sector regulators and the Commission may be different at times, the ultimate purpose that they serve is consumer welfare. Bearing that in mind, some suggestions are being made.

4.1. *Enhancing Cooperation*

The first and most obvious solution to this conflict is cooperation. Cooperation would disincentivize forum shopping for market players. The expertise of a sector-specific regulator would help with better analysis of cases. The sharing of information between the CCI and sector regulators would speed up the investigation of the CCI. Cooperation can be achieved in various ways, legally and institutionally.

4.1.1. *Mandatory Consultation*

One way to ensure cooperation is to incorporate the idea into the statute. For instance, the French regulator for communications, Arcep, is required to report to the Autorité de la Concurrence any abuses of dominant position or other anti-competitive acts taking place in the sectors Arcep regulates. Similarly, the Autorité de la Concurrence must inform Arcep of every referral under the regulator's purview⁴⁹.

Sections 21 and 21A of the Competition Act partially incorporate this suggestion. Under section 21, a statutory authority may make a reference to the CCI in cases where its decision would be contrary to the provisions of the Competition Act. Section 21A gives the CCI an option to refer the case to a statutory authority if the CCI's actions or decisions would be contrary to the provisions of the Act whose

⁴⁹ See OECD, *Interactions between Competition Authorities and Sector Regulators* OECD Competition Policy Roundtable Background Note (2022), available at <https://www.oecd.org/daf/competition/interactions-between-competition-authorities-and-sector-regulators-2022.pdf> (last visited August 21, 2023).

implementation is entrusted to the statutory authority. This opinion is not binding on the CCI. The consultation is also at the discretion of the CCI. Clearly, these provisions have not proved very useful as evident from the cases. If consultation were to be made mandatory, one's opinion would be more likely to be followed by another's. Moreover, it would help in achieving better results as specialized sectors are more apt to deal with issues in their respective fields. In the latest amendment to these sections, merely 'provisions of this Act' is substituted with 'provision of the Act'⁵⁰. This would bring provisions of other Acts for reference, but the problem still remains.

The CCI may face issues in complying with timelines in practical implementation of this suggestion. The CCI follows a strict time schedule for compliances. However, only few cases result in jurisdictional overlap. Identifying these cases would be easy since one of the parties would almost always argue that a proceeding in respect of the matter is already ongoing before another forum. Once the CCI identifies these cases, it can consult the other forum. In sections 21 and 21A, a timeline of sixty day has been prescribed for giving the opinion. The time may be reduced for mandatory consultations if the CCI faces difficulty in meeting its timelines.

4.1.2. *Memorandum of Understandings*

In several jurisdictions, the competition authority has signed a Memorandum of Understanding (MoU) with sector regulators. These agreements set out in detail the framework for cooperation. This does not mean that it will be followed but it shows willingness and seriousness to cooperate. The Competition Commission of South Africa has signed MoUs with 14 sector-specific regulators⁵¹. In 2021,

⁵⁰ See The Competition (Amendment) Act, 2023 (9 of 2023).

⁵¹ See OECD, *Independent Sector Regulators – Note by South Africa* (2019), available at [https://one.oecd.org/document/DAF/COMP/WP2/WD\(2019\)22/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2/WD(2019)22/en/pdf) (last visited August 18, 2023).

the Egyptian competition authority signed an MoU with NTRA (telecommunication regulator) to form a joint executive committee to promote competition in the market⁵². In Iceland, the competition authority (ICA) and the telecommunication authority (PTA) have a long-standing cooperation agreement to avoid duplication, increase effectiveness, and promote legal certainty and transparency⁵³.

There are multiple benefits of MoUs. They can be more detailed than legislation, they spell out in detail the methods and framework for cooperation rather than a general call to cooperate. They are entered into by the authorities themselves, who have expertise and experience in the market. As a result, MoUs are more relevant. They can also help in clarifying mandates when there is legal uncertainty and where legislative provisions come short in explaining the authority.

4.1.3. Working Groups

Establishing a working group would facilitate communication and discussion to reach a shared understanding. Working groups may designate an official as a point of contact. Many a time, cooperation is hampered by confusion as to whom to communicate. When there is a point of contact, at least the entry door will be visible. A working group may also bring the competition authority in close contact with sector regulators.

⁵² See National Telecom Regulatory, *Authority NTRA and ECA Sign a Memorandum of Understanding to Enhance Free Competition Practices in Egypt's Telecom Market* (2021), available at <https://www.tra.gov.eg/en/ntra-and-eca-sign-a-memorandum-of-understanding-to-enhance-free-competition-practices-in-egypts-telecom-market-2/> (last visited August 17, 2023).

⁵³ See OECD, *Roundtable on Changes in Institutional Design of Competition Authorities - Note by Iceland* (2014), available at [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD\(2014\)94&doclang=en](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD(2014)94&doclang=en) (last visited August 18, 2023).

In the UK, the Digital Regulation Cooperation Forum (DRCF) was established by the CMA (Competition and Market Authority) to foster greater cooperation between the CMA, the Information Commissioner's Office (ICO) and the Office of Communications (Ofcom). In India, we also have the Forum of Indian Regulators (FOIR). It has 38 members including the CCI. The forum conducts regular meetings of the members. It is not pertinent to discuss its achievements. However, it is safe to assume that its efforts on jurisdictional issues, if any made, have been fruitless. There is a need to revamp and strengthen this forum. Steps should be taken to make harmonious coordination between the CCI and other regulators possible.

4.2. *Achieving Consumer Welfare*

When a party has approached a sector regulator, the Commission must wait for the regulator's findings. If there is no repugnancy in its decision and the consumer welfare has been accounted for, there is no need for the Commission to step in. This can be better understood with reference to two foreign cases - the *Trinko case*⁵⁴ in the USA and the *Deutsch Telekom case*⁵⁵ in the EU. In the *Trinko case*, the incumbent Verizon was accused of not providing necessary interconnections. The rival local exchange carriers (LECs) complained to the regulators, who subsequently imposed penalties on Verizon. LECs brought the case under antitrust laws. Their action failed, and the court found that the existence of a shared provision under regulation militates against the respondent's claim under antitrust law. In the *Deutsch Telekom case*, the CJEU held that the practice of Deutsch Telekom was abusive even though it was approved by the regulator. It was a case of margin squeeze and the retail price of the services offered by the company

⁵⁴ See *Verizon v. Trinko*, 540 US 398 (2004).

⁵⁵ See Case C-280/08 P, *Deutsche Telekom AG v. European Commission*, ECR 2010 I-09555.

was approved by the German national regulatory authority (RegTP). These two decisions may seem contradictory, but they are not. In the Trinko case, the regulatory authority took care of consumer welfare, but it failed to do so in the Deutsch Telekom case.

4.3. *Empowering a Higher Authority*

As there is no defined hierarchy between sector regulators and the CCI, a higher authority may also be conferred the power to decide jurisdictional issues whose decisions would be binding on both. This would prevent litigation in courts. This would also discourage forum shopping as the question of jurisdiction will be decided unambiguously at the threshold. In the UK, the Competition Appeal Tribunal decides cases involving competition or economic regulatory issues. The current functions of the tribunal include hearing and deciding appeals on the merits in respect of decisions made under the Competition Act 1998 by the Competition and Markets Authority ("the CMA") and the regulators in the telecommunications, electricity, gas, water, railways, air traffic services, payment systems, healthcare services and financial services sectors⁵⁶. In India, the National Company Law Appellate Tribunal (NCLAT) hears appeals against the orders of the CCI and sector regulators. It may be conferred the exclusive power to decide the jurisdictional dispute at the outset with a binding decision. Instead of approaching High Courts, the parties would go to the NCLAT which is less burdened and would decide the dispute in a time bound manner.

5. *Conclusion*

There are several market regulators in India, including the CCI. However, the CCI is different from other regulators in many respects.

⁵⁶ See Competition Appeal Tribunal, 'About the Tribunal | Competition Appeal Tribunal', available at <https://www.catribunal.org.uk/about> (last visited August 27, 2023).

It is better equipped with competition enforcement tools. The CCI possesses the power to inquire into any anti-competitive activity and may order the DG to conduct an investigation. The CCI can investigate any combination that is likely to cause an adverse effect on competition. It has also been conferred the power to enter into any memorandum or arrangement with any statutory authority or department of Government or any agency of any foreign country⁵⁷. It is not sector-specific, and it is a stand-alone agency with responsibilities for promoting and enforcing competition in all sectors.

Since the CCI has a duty to eliminate anti-competitive practices in all sectors, it often encroaches upon the jurisdiction of other sector regulators. These jurisdictional conflicts result in litigation before the courts. Legal contentions brought by the CCI, or the sector regulator challenging jurisdiction can slow down or even derail cases. The lack of clarity in the roles and mandates of competition authorities and sector regulators can be due to inefficient legal framework, varied judicial decisions and incapable regulatory design. As a result, it is imperative that the writ courts step in to solve the conflict and that their decisions continue to shape this controversy. In addition, as shown by the international experience, the interaction between sector and competition regulators can be managed through institutional approaches such as a Memorandum of Understanding and establishing working groups. In the end, to reach such a goal, consistency between the actions of the CCI and of sector regulators must be ensured for more pro-competitive sector regulation.

⁵⁷ See The Competition Act at Section 18 (cited in note 1).

Juveniles Neuronal Development and Criminal Justice

When Neurosciences meet Criminal Law

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Abstract: This paper delves into the deepest and most relevant intersections between juveniles brain development and Criminal Law. It aims to understand and analyze current neuroscientific revelations pertaining to brain development in young adults, and how these same findings have impacted jurisdictions and legislations' ways of handling the sentencing of younger individuals. Furthermore this article supports its arguments mainly on the basis of the most current and detailed neuroscientific research, focusing on the neuronal changes interesting adolescents' brains, particularly focusing on the process of myelination, and the effects on behavioral patterns, such as an increase in explorative conducts and a generally diminished perception of danger. Key judicial rulings, such as the ones held in *Roper v. Simmons* (543 U.S. 551, 2005), *Atkins v. Virginia* (536 U.S. 304, 2002), and *Miller v. Alabama* (567 U.S. 460, 2012) are then examined to demonstrate how the U.S. judicial system has started to recognize the objectively diminished culpability in minors. Finally, the paper illustrates potential Italian Criminal Law flaws on the grounds of youth culpability via a comparative approach, moreover taking into account recent successful legislative innovations.

Keywords: Criminal Law; Juveniles; Fairness of Judgment; Death Penalty; Neurosciences.

Table of contents: 1. The Relevance of fixed Legal Ages. – 2. Brain Development in Adolescents and Criminal Intent . – 3. Juveniles and the Death Penalty in the U.S. Supreme Court and State Jurisprudence. – 4. Constitutional Concerns of Legitimacy of the Italian Penal Code: a Comparative Analysis. – 5. Conclusion.

1. *The relevance of fixed legal ages*

In recent years, advancements in neuroscience research have shed light on the functioning of the adolescent¹ brain and its stages of development and maturation, with special regard to the prefrontal cortex, which is the cortical region of the brain that is known to develop the last². Albeit it has always been the age of eighteen being regarded as the bright-line threshold- by which an individual is deemed fully conscious and willing of his actions- recent researches reasonably argue that comprehensive cognitive maturity might not be achieved, especially in areas such as executive function³, risk-assessment, and decision-making, up until the mid-twenties⁴. Given the extreme variability in brain maturation processes, this leads to complicated consequences on adolescents' conduct and predictability thereof, making them more likely influenceable to peer validation,

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¹ Notably, while a precise notion of adolescence has yet to be determined, most scientific literature holds that this period relates to the 10 - 24 years old age range. See generally Kaplan PS. *Adolescence*. Boston, MA: Houghton Mifflin Company; 2004.

² See Arain M, Haque M, Johal L, Mathur P, Nel W, Rais A, Sandhu R, Sharma S. *Maturation of the adolescent brain. Neuropsychiatr Dis Treat.* 2013 at 449-461, available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC3621648/> (last visited 24/11/2024)

³ See, eg., Laurence Steinberg, *Risk Taking in Adolescence: What Changes, and Why?*, 1021 ANNALS. N.Y. ACAD. SCI. 51, 57 (2006).

⁴ See *ibid.*

more prone to finding themselves in risky circumstances⁵, and comparatively more subjected to stress⁶ than adult defendants⁷. Coherently, legislators have always strived to grapple with precise age limits for which an individual is deemed to be responsible for certain acts, and to which extent this individual can exercise specific juridical powers. These legal ages establish rigid thresholds at which individuals gain or lose certain rights⁸ or duties⁹, or are otherwise invested in special responsibilities, for they are considered comprehensively “fit”¹⁰ by the given field of Law. Internationally, legal thresholds do vary across most jurisdictions, considerably so. At large, minors are exempt from obtaining tattoos or piercings without

⁵ Injury and violence are known to be the most frequent causes of death among juveniles. In a U.S.-based study, it was outlined how out of 19 million adolescents aged 15-24 diagnosed with ST illnesses, 39% of them admitted to have had unprotected sex; moreover 30% of them had been involved in motorcycle incidents (41% of which resulted to be fatal); 12% committed suicide; and 15% of them had been involved in homicides (especially as a victim thereof). See Guyer AE, McClure-Tone EB, Shiffrin ND, Pine DS, Nelson EE. *Probing the neural correlates of anticipated peer evaluation in adolescence*, at 1000–1015 (Child Dev. 2009).

⁶ See Giedd JN. *Structural magnetic resonance imaging of the adolescent brain*, 77-85 Ann NY Acad Sci. (2004)..

⁷ See generally Giedd JN, Blumenthal J, Jeffries NO, et al. *Brain development during childhood and adolescence: a longitudinal MRI study*. Nat Neurosci. 1999;2(10):861–863.

⁸ In Italy, the legal voting age is set at 18 years, allowing individuals of this age or older to participate in elections for both local and national offices. See Law No. 39 of 1975, which lowered the minimum voting age from 21 to 18 for most elections.

⁹ In South Korea, compulsory military service is governed by the Military Service Act, which mandates that all able-bodied male citizens serve in the military for a period of 18 to 21 months, depending on the branch. This requirement aims to bolster national defense and applies to men between the ages of 18 and 28. The Act allows for exemptions and alternative service options under certain conditions, such as for those with physical or mental health issues or specific cases involving exceptional talents that contribute to the nation. See Act No. 18003, (Apr. 13, 2021).

¹⁰ For example, Italian Law exempts minors to the general principle of civil unfitness as for labor purposes, as provided by special Laws, recognizing a specific capacity of the child to ‘contract’ its occupational status; See Article 2.2, Italian Civil Code.

their parents' consent¹¹, they cannot purchase cigarettes or tobacco-based products¹², nor can juveniles willingly discontinue their own education¹³. In the U.S., the age required for the individual to be able to legally purchase alcoholic substances is set at twenty-one years old¹⁴ (even though variations within each State legislation do occur¹⁵), whereas the legal age to be eligible for purchasing a long gun from a licensed dealer¹⁶, is set as low as eighteen¹⁷ (without accounting to mere ownership laws, for which, in some States, a long gun can be owned starting at sixteen years old of age¹⁸). The association of different legal ages to different legal effects constitutes a natural consequence of moral, scientific, and legal dogmas, constantly surveilled and subjected to a gradual evolution of values and societal standards. The identification of the utmost precise legal age for assigning criminal culpability is vital in those legal systems honored

¹¹ For example, State of California Penal Code § 653 rules that everyone who “tattoos or offers to tattoo someone under the age of 18 is guilty of a misdemeanor”.

¹² In California, Business and Professions Code § 22958 establishes that individuals must be 21 years of age to purchase tobacco products, except for active-duty military personnel aged 18 or older, who may do so with valid military identification. Civil penalties for retailers who violate this code include fines and potential license suspensions or revocations based on repeat offenses within a five-year period. See California Business and Professions Code § 22958.

¹³ Under Montana law, children must remain enrolled in school until they turn 16 or complete the 8th grade, whichever is later. Exemptions to this requirement exist for specific circumstances, such as illness or other valid reasons permitted by school policies See Mont. Code Ann. § 20-5-103.

¹⁴ For example, the State of N.Y. fixes the legal age for drinking at twenty-one years old. See Alcoholic Beverage Control Law, §65-C.

¹⁵ For example, in Texas, minors may consume alcohol on licensed premises if accompanied by a parent, guardian, or spouse of legal drinking age. See Texas Alcoholic Beverage Code §106.04.

¹⁶ Indeed, while the minimum age to purchase a long gun from a licensed dealer is set at age 18, any unlicensed dealer can sell or otherwise transfer a long gun to a person of any age. Long guns include rifles and shotguns. See 18 U.S.C. § 922(b)(1), (c)(1).

¹⁷ See *ibid.*

¹⁸ See Alaska Stat. § 11.61.220(a)(3).

by the principle of juridical equality, on the grounds of judicial fairness and discretion of treatment. Given these general premises, this paper strives to understand whether two different juveniles, who can be both deemed as being adolescents – by definition, a transitory period - with regard to brain maturation, should be deserving of a virtually unjustifiable differentiation of substantial and procedural legal discourse, based on the latest neuroscientific research, as well as via the analysis of legislative landmarks and groundbreaking historical judicial rulings that shaped our concept of criminal Law.

2. Brain Development in Adolescent and Criminal Intent

The realm of criminal Law is constructed upon notions of both culpability and blameworthiness. While blameworthiness represents a necessary prerequisite for punishment¹⁹ – as no act shall be considered wrong if moral fault cannot be assigned to it - it is far from accounting as a sufficient factor²⁰. For a fact to be deserving of punishment, not only must it be morally inconvenient, but it as well shall be culpable. Specifically, culpability acts as a tape measure of moral reprehension, placing wrongfulness on a vast spectrum of fault, thus classifying the defendant's conduct. For culpability to serve its purpose, mens rea – the need for a certain mental state to get recognized – constitutes an elemental criteria deserving of consideration in assigning criminal responsibility. Even though a state of “intentional” behavior – for which the defendant directly desired the outcome of his conduct – is not always required by the Law, mens rea's inspection helps at identifying and selecting the severity of the defendant's responsibility, thus graduating the seriousness of the penalty. Indeed, as literature underlines, an “act without a mental state is usually not a crime”²¹. I would moreover argue, that not only an act ought not to be

¹⁹ See Jenny E. Carroll, *Brain Science and The Theory of Juvenile Mens Rea*, volume 94 N.C.L. REV. at 539(2016).

²⁰ See Stephen F. Smith, *Proportional Mens Rea*, volume 46 AM. CRIM. L. REV. at 127 (2009).

²¹ See Liza Little, *Miller v. Alabama: A Proposed Solution for a Court That Feels Strongly*

described as felonious if a mental state is not present at all, but also whenever the mental state does not present the specific graduation of mens rea the Law requires²². The concept of criminal intent serves as one of the fundamental pillars which interprets the extent to which an individual shall be criminally prosecuted, acting as a caliper of guilt. On average²³, mens rea stands to verify whether defendants presented, at the time for which the crime was committed, both the understanding of the nature and of the consequences of his actions²⁴, as well as the ability of the individual himself to form intent while performing a specific criminal act. Given these presuppositions on which substantial criminal Law structures itself upon, legislators have always attempted to classify some circumstances²⁵ as capable of excluding or diminishing culpability. Popularly, one of the historical classes that most jurisdictions have regarded as unfit for trial or unblameable are children, purporting how only kids would present an objectively disparate ability to discern between fair and unwarranted behaviors. Based on the evidence I will analyze, these assumptions appear to be a weakly purported vision of reality. Criminal Law's main scope is to tackle and dissuade unwanted reprehensible human behaviors, but for legislators to do so effectively it is crucial to retrace the roots of these same behavioral patterns: we need to understand our brain's ways of functioning to evenly craft efficient criminal norms and dispositions. Current understandings of neuroscience have now demonstrated how human brains grow, particularly as it pertains to the cognitive

Both Ways, Southern California Law Review, Volume 88 at 1493(2015).

²² For example, certain acts require a minimum mental state of recklessness or negligence. Sometimes, certain acts can only be punished when the individual had the intention to produce them.

²³ Ordinarily, mens rea structures do not differ significantly between legal systems, but some elements could be subjected to divergent interpretations.

²⁴ Article 85 pursuant to the Italian Penal Code, refers indeed to the concept of 'imputability', it comprising both the capacity of forming intent towards a specific criminal act, as well as the ability of the defendant to move himself throughout his surroundings, making understood choices.

²⁵ See articles 88, 89, 96, 97, 98 of the Italian Penal Code, for they exclude some precisely identified individuals from being subjectable to criminal penalties.

maturation of juveniles. Neuroscientific research unequivocally establishes that our brain is involved in a series of continuous and gradual processes of development²⁶, spanning well throughout the mid-twenties up to thirty-two years old²⁷, altering relevant behavioral-related areas pertaining to impulse control, assessment of risks, emotional regulation, stress-bearing capabilities, as well as presumably heightening overall aggressiveness²⁸. It is indeed widespread how juveniles are not known for being responsible, rational, or otherwise popular for their prudential way of conducting their lives. According to the U.S.-based study²⁹, teenagers are the ones who are more likely to be found involved in situations concerning risky contexts, such as drug abuse, reckless driving accidents, and sex-contracted transmissible illnesses, via irresponsible unprotected sexual intercourse (e.g. HIV, AIDS)³⁰. The tumultuous changes observable in the stage of life known as adolescence - which can be roughly defined as the period extending from ten to twenty-four years old³¹ - can be traced down to several stressors, capable of impacting several regions of the brain. One of the

²⁶cited in note 2.

²⁷ See Talia Stewart, Note, *Capital Punishment of young adults in Light of Evolving Standards of Science and Decency: Why Ohio Should Raise the minimum age for Death Penalty Eligibility to twenty-five*, volume 70 CLEV. ST. L. REV. 91 (2021).

²⁸ Indeed, adolescents aged 18 to 20 are disproportionately responsible for school shootings, public mass shootings, and overall gun homicides, accounting for 17% of gun offenders in the U.S. See Paul M. Reaping et al., *State Firearm Laws, Gun Ownership, and K-12 School Shootings: Implications for School Safety*, *Journal of School Violence* volume 21, no. 2 at 132–46 (2022); See also Joshua D. Brown and Amie J. Goodin, *Mass Casualty Shooting Venues, Types of Firearms, and Age of Perpetrators in the United States, 1982–2018*, *American Journal of Public Health* volume 108, no. 10 at 1385–387 (2018); See also Jaclyn Schildkraut, *Can Mass Shootings be Stopped? To Address the Problem, We Must Better Understand the Phenomenon*, Rockefeller Institute of Government and Regional Gun Violence Research Consortium (July 2021).

²⁹ See Guyer, McClure-Tone, Shiffrin, Pine, Nelson. *Probing the neural correlates of anticipated peer evaluation in adolescence*, 80 (4) , *SO Child Development* 1000, 2009; available at <https://srcd.onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2009.01313.x> (last visited 24/11/2024).

³⁰ See *id.*, at page number.

³¹ See Kaplan PS. *Adolescence*. Boston, MA: Houghton Mifflin Company; 2004.

most important phenomena taking place in juveniles' divergent minds during this stage of life is myelination, a process tasked with the formation of protein sheaths around axons of neurons³², contributing to a healthy executive functioning of the nervous system and insulation thereof. Myelination is heavily influenced by both external and internal stressors, spanning from caffeine³³ and cannabis³⁴ intake to sex hormones³⁵ (e.g. progesterone, testosterone, estrogen, estradiol), the latter of which are especially found in spiked concentrations during adolescence years³⁶. In addition, chemotherapeutic compounds³⁷ as well as improper nutrition³⁸ during infancy, have been studied to

³² See Georgia Lockwood Estrin, Supriya Bhavani, vol.number *Encyclopedia of Infant and Early Childhood Development*, (insert publisher 2nd ed 2020).

³³ Cited in note 2.

³⁴ In animals, cannabinoid intake during adolescence caused memory and learning deficiencies. In humans, cannabis intake could lead to refinement issues during brain maturation, potentially increasing psychotic illnesses or facilitating mental abnormalities' development. See Palmer RH, Young SE, Hopfer CJ, et al., *Developmental epidemiology of drug use and abuse in adolescence and young adulthood: evidence of generalized risk*, 102 *Drug Alcohol Depend* 78–87 (2009), available at insert link; See also Bossong NG, Niesink RJ., *Adolescent brain maturation, the endogenous cannabinoid system and the neurobiology of cannabis-induced schizophrenia*, 92(3) *Journal's name* 370 370–385 (2010).

³⁵ See generally Peper JS, van den Heuvel MP, Mandl RC, Hulshoff Pol HE, van Honk J. *Sex steroids and connectivity in the human brain: a review of neuroimaging studies*,36(8) *Insert Journal's name* 1101, ,1101–1113 (2011), available at <https://www.sciencedirect.com/science/article/abs/pii/S0306453011001570?via%3Dihub> (last visited 24/11/2024).

³⁶ See *id.*

³⁷ See Vázquez E, Delgado I, Sánchez-Montañez A, Barber I, Sánchez-Toledo J, Enríquez G., *Side effects of oncologic therapies in the pediatric central nervous system: update on neuroimaging findings*, 31(4) *Journal's name missing* 1123, 1123–1139 (2011), available at https://pubs.rsna.org/doi/10.1148/rg.314105180?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed (last visited 24/11/2024).

³⁸ According to a number of studies, nutrition deficiencies could impair certain genes responsible for myelination, eventually resulting in schizophrenia or postpubertal psychoses. See Rayyan , Devlieger , Jochum , Allegaert *Short-Term Use of Parenteral Nutrition With a Lipid Emulsion Containing a Mixture of Soybean Oil, Olive Oil, Medium-*

significantly impact neuronal maturation. Moreover, certain neurotransmitters have been found liable to impairing self-regulation, such as serotonin, melatonin and dopamine³⁹. More importantly, serotonin and dopamine levels tend to decrease during adolescence⁴⁰, determining a reduction in impulse control and causing mood swings. Oestradiol and progesterone are especially found to play a significant role in enhancing risk-taking tendencies⁴¹. Other major changes in brain maturation involve alterations in the limbic system⁴², which is responsible for emotional balance and regulation, possibly triggering a “biologically driven”⁴³, thus inevitable, heightened risk-taking⁴⁴. This amount of predominantly neurobehavioral and neurochemical evidence leads to a well-supported conclusion: the brain pertains in a state of maturation determined by the ongoing process of myelination, together with gamma-aminobutyric acid GABAergic

Chain Triglycerides, and Fish Oil, A Randomized Double-Blind Study in Preterm Infants, 36(1S), American Society for Parental and Enteral nutrition 81S, 81S–94S (2012), available at <https://aspenjournals.onlinelibrary.wiley.com/doi/10.1177/0148607111424411> (last visited 24/11/2024).

³⁹ See Arain et al.,, *Maturation of the adolescent brain*. at 449-461 (cited in note 33).

⁴⁰ See Wahlstrom D, et al., *Developmental changes in dopamine neurotransmission in adolescence: behavioral implications and issues in assessment*, 72(1) *Journal's name* 146, 146–159 (2010), available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC2815132/> (last visited 24/11/2024).. See also Dahl RE., *Beyond raging hormones: the tinderbox in the teenage brain*, 5(3) *Journal's name* 7, 7–22 (2003), available at https://www.researchgate.net/publication/237667972_Beyond_Raging_Hormones_The_Tinderbox_in_the_Teenage_Brain (last visited 24/11/2024)..

⁴¹ See Suzanne O'Rourke et al., *The development of cognitive and emotional maturity in adolescents and its relevance in judicial contexts*, submitted to the Scottish Sentencing Council, Scottish Sentencing Council, pg. 9, 2020.

⁴² See Arain M, et al., *Maturation of the adolescent brain*. , (cited in note 33)

⁴³ See Laurence Steinberg, *Risk Taking in Adolescence: What Changes, and Why?*, 1021 ANNALS N.Y. ACAD. SCI. 51,57 (2006).

⁴⁴ See Choudhury S, Blakemore SJ, Charman T., *Social cognitive development during adolescence*, 1(3) *Journal's name* 165, 165–174 (2006) available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC2555426/> (last visited 24/11/2024).

neurotransmission⁴⁵, the latter found to prevalently interest the prefrontal cortex⁴⁶. The brain engages in a constant process of “rewiring”⁴⁷ throughout adolescence, having experts in the field verified how a surge in neuronal growth⁴⁸, similar to the one observed during infancy, is expected to take place immediately after puberty concludes. This reinforces how relevant this age period is for the purposes of brain maturation and behavioral patterns understanding. The latter evidence is also underscored by the Longitudinal MRI study. After this second surge of neurons has successfully taken place, the process of rewiring, assisted by the processes of myelination and dendritic pruning, can finally start. Dendritic pruning is known to eliminate unutilized synapses⁴⁹, whereas the process of myelination helps better communication between these neuronal connections, improving the speed of impulse conduction within the brain, allowing for better external stimuli processing. During adolescence, the presence of white matter (W.M.) is seen to increase⁵⁰ in the so-called corpus callosum, a major structure connecting the two hemispheres of the brain, enabling the individual to better process external stressors and to more cleverly manage complex situations and events⁵¹. Nevertheless,

⁴⁵ See Li K, Xu E., *The role and the mechanism of gamma-aminobutyric acid during central nervous system development*, 24(3), *Journal's name* 195, :195–200 (2008), available at <https://link.springer.com/article/10.1007/s12264-008-0109-3> (last visited 24/11/2024).

⁴⁶ See Guyer AE, et al., *Probing the neural correlates of anticipated peer evaluation in adolescence*, 80(4) *Journal's name* 1000, 1000–1015 (2009), available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC2791675/> (last visited 24/11/2024).

⁴⁷ See Arain M, et al., *Maturation of the adolescent brain*, (cited in note 33)

⁴⁸ See Baird AA, Gruber SA, Fein DA, et al., *Functional magnetic resonance imaging of facial effect recognition in children and adolescents*, 38(2) *Journal's name* 195, J:195–199 (1999), available at [https://www.jaacap.org/article/S0890-8567\(09\)62897-5/abstract](https://www.jaacap.org/article/S0890-8567(09)62897-5/abstract) (last visited 24/11/2024).

⁴⁹ See *ibid.*

⁵⁰ See Frontline: Inside the Teenage Brain Arlington (TX) Public Broadcasting Service; 2002, available at : <http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/> (last visited 24/11/2024)

⁵¹ See Arain M, et al., *Maturation of the adolescent brain*, at page number (cited in note 33).

because of an underlying physiologically underdeveloped prefrontal-cortex, the juvenile could partake in said experimental behaviors, even if the adolescent himself is able to autonomously deem a specific scenario as dangerous⁵². Indeed, neuroscientific evidence furthermore indicates how the prefrontal cortex - one of the most important regions in the brain located just behind our forehead - experiences significant alterations well beyond the mid-twenties⁵³, since the cortical region develops the slowest⁵⁴. Studies⁵⁵ have shown an increase in myelin secretion in adolescents' frontal lobes, allowing for the growth of new neurocircuitry, which finally tries to counteract emotional imbalances determined by the limbic system⁵⁶. The prefrontal cortex is highly relevant to criminal doctrine in the way it regulates abstract thought, discernments of behavior, and character of the individual, leading to emotional volatility and behavioral impulsivity⁵⁷. Indeed, the prefrontal cortex is said to be tasked with "executing complex behavioral performance". It is safe to conclude how the amount of neuronal morphological and neurochemical evidence that stands in support of the argument of juvenile brain development, is extraordinarily large. The intersection encompassing criminal intent and scientific literature's current knowledge of brain development represents a multiplex challenge for modern legal systems. Therefore, it

⁵² See *ibid.*

⁵³ See generally Casey BJ, Jones RM, Hare TA. The adolescent brain. *Ann NY Acad Sci.* 2008;1124:111–126. doi: 10.1196/annals.1440.010.

⁵⁴ See Arain M, et al., *Maturation of the adolescent brain*, at page number (cited in note 33).

⁵⁵ See Giedd JN, Blumenthal J, Jeffries NO, et al., *Brain development during childhood and adolescence: a longitudinal MRI study*, 2(10), *Journal's name* 861, 861–863(1992).; See also Baird AA, et al., , *Functional magnetic resonance imaging of facial affect recognition in children and adolescents*, at page number (cited in note 48).

⁵⁶ See Arain M, et al., *Maturation of the adolescent brain*, at page number (cited in note 33). *Neuropsychiatr Dis Treat.* 2013;9:449-61. doi: 10.2147/NDT.S39776. Epub 2013 Apr 3. PMID: 23579318; PMCID: PMC3621648.

⁵⁷ See *ibid.*

is increasingly clear how current legal frameworks may not comprehensively reflect the factual observations hereby summarized.

3. Juveniles and the Death Penalty in the U.S. Supreme Court and State Jurisprudence

March 1993, Christopher Simmons, a seventeen-years-old boy from the State of Missouri, conceived and executed an abhorrent crime consisting in the murder of Shirley Crook. Simmons, together with two accomplices younger than him, first trespassed into Crook's home, abducted her tape and electrical wire, bound her hands behind the victim's back, then moved her to the nearest bridge, and eventually threw her in the Meramec river underneath. Crook drowned, in direct consequence of Simmons' atrocious criminal performance. Simmons was steadfastly arrested as he immediately reenacted⁵⁸ and confessed of his crime, which was also supported by the testimony of one of his two accomplices, J. Tessmer. One of his peers the defendant used to 'brag' of his unlawful accomplishment, both before and after Simmons' conduct, sure that he would have gotten "away with it"⁵⁹ because of his juvenile status. Defendant Simmons, in *State v. Simmons* (1997), was eventually found guilty of the crimes of first-degree murder⁶⁰ and abduction, for which the jury advised for capital punishment. Such punishment had already been inflicted in cases of similar nature⁶¹. While the defendant attempted

⁵⁸ Defendant Simmons consented to a videotaped reenactment of the facts. See *Id.*

⁵⁹ See *ibid.*

⁶⁰ The offense of murder of the first-degree is a class A felony under Missouri's Law, punishable either via capital punishment (after *Roper v. Simmons* – U.S. 533: provided the individual is eighteen years old or older at the time of murder) or imprisonment for life without parole under Missouri's current §565.020, Title XXXVIII of Missouri's Statute, also having to consider specifically shaped factors of sentencing pursuant to §565.033, Title XXXVIII, when the trial involves minors.

⁶¹ Indeed, similar aggravating circumstances led to the infliction of the penalty of death in *State v. Copeland*, *State v. Kreutzer*, *State v. Tokar*. In the latter of the cases, the death penalty was advised when the defendant exhibited depravity of the mind and as well committed the murder while the victim had been bound. .;

to argue the disproportionality of the conviction, the jury nevertheless found three distinct aggravating factors of Mr. Simmons' conduct: (a) "depravity of the mind"⁶², (b) having the defendant conducted the murder for the purpose of cold "pecuniary gain"⁶³, as well as (c) having the defendant tried to avoid a lawful arrest⁶⁴. In light of these circumstances, the jury denied Simmons main argument. The trial court finally convicted and sentenced Simmons to death, due to "uncontroverted"⁶⁵ evidence of plotting, kidnapping, and murder. Simmons attempted⁶⁶ to file a Rule 29.15⁶⁷ motion of legality under Missouri's Court Rules, steadfastly overruled by the Supreme Court of Missouri, eventually corroborating the conviction to death of the seventeen-year-old. The death penalty has always been a somewhat unique and longstanding fixture to the American Criminal justice system, that has always gone essentially undisputed and mostly uncondemned throughout the twenty-first century. That is until new protagonists entered the premises of Criminal Law: the newest findings of how human neuronal pathways mature. Since its introduction, the structure of capital punishment underwent serious changes: one of the most important ones is the jurisprudential definition of "exemption

⁶² See also The Court used this case to underscore the proportionality of the conviction to death.

⁶³ In accordance with § 565.032.2 (4).

⁶⁴ In accordance with § 565.032.2 (10).

⁶⁵ Public Defender guilt closing statement. See *id.*

⁶⁶ Simmons argued the Court was illegitimate under *State v. Harvey* (arguing the Court holding jurisdiction for a case of murder), *State v. Lingar* (concerning the identification of the venue whenever a crime has been partially committed in several Counties), and *Wainwright v. Witt* (with respect to Jury's selection criteria). See *Id.*; ; *Wainwright v. Witt*, 469 U.S. 412, 414 (1985).

⁶⁷ Missouri Court Rule 29.15 governs post-conviction relief for individuals challenging the legitimacy of their sentence, conviction, or trial procedures after conviction in a criminal case. This rule outlines procedures for filing a motion to vacate, set aside, or correct a conviction and includes details about deadlines, counsel appointment, and grounds for relief, aiming to streamline post-conviction review and prevent repeated filings. See Missouri Court Rules, Rule 29.15.

circumstances”⁶⁸, whose subsistence juridically impairs the infliction of the death penalty. Some categorical exemptions for which certain classes should be per se excluded from the application of the death penalty in the U.S. (with no regard to the actual crime that was committed or severity thereof) include: (a) juveniles who were younger than sixteen at the time of the crime, as well as (b) individuals bearing “psychiatric delusion” to an extent for which they would be considered incompetent for execution, and (c) juveniles who were younger than eighteen when the t felonious conduct was performed, since *Roper v. Simmons* (543 U.S.) cornerstone ruling. First and foremost, one of the fundamental rulings in U.S. jurisprudence is *Atkins v. Virginia*, a decision that ruled the unconstitutionality⁶⁹ pertaining to the execution of the intellectually disabled persons⁷⁰. Pursuant to the Court’s papers, the ruling’s main issue was to discern which individual actually had an intellectual deficiency of such a rigor and severity capable of justifying the discretion in judicial treatment. Several interpretations and nuances followed the Supreme Court’s decision, such as in *Hall v. Florida* (572 U.S. 701, 2021)⁷¹. held how a rule delineating a person with a sub-average I.Q. of 70 had to be regarded as objectively intellectually underdeveloped. Without the possibility of any spectrum of litigation, it constituted an illegitimate application of *Atkins’* ruling, making it vividly impossible for the somewhat less-smarter-than-the-median defendant to be tried for death, only on the grounds of a mere I.Q. test. Conversely, *Hall v. Florida*⁷² also stated how “borderline” defendants, referring to individuals who scored a slightly higher I.Q. score (e.g., a score of 75), could be unreasonably

⁶⁸ See *id.*

⁶⁹ It held that the VIII and XIV Amendments to the U.S. Constitution prohibited the execution of the mentally retarded, overturning *Penry v. Lynaugh*.

⁷⁰ See *id.* The Court started using the term ‘intellectually disabled’ (I.D.) in place of ‘mentally retarded’.

⁷¹ See, 572 U.S. 701, 704 (2021).

⁷² See *ibid.*

deemed as mentally fit, under *Atkins* skewed interpretation, thus able to receive the death penalty, provoking an unjust imbalance of treatment. While the *Atkins* Court did not handle nor underscore the underlying scientific knowledge, founding its conclusions on superficial I.Q. score tables assessments, it still served as a starter ruling introducing criminal law to neurosciences. With strict regard to the purposes of this article, *Roper v. Simmons* lucidly reflects the cornerstone of today's intersection between neuroscience and criminal law, due to an evolutionary interpretation of the VIII Amendment⁷³ to the U.S. Constitution, for which neurological findings played a critical role in a majorly discussed capital case since several years, as its conclusions and data were efficiently implemented and argued by the Court as factual evidence for the purpose of exclusion of the death penalty in *Simmons'* case. Interestingly, the Court held how juveniles' conducts could not be deemed as morally reprehensible as adults' on the grounds of the latest scientific research findings that supported how youngsters do manifest substantial developmental and psychological divergences when compared to a fully developed adult, showing how society does not trust juveniles with the "responsibilities of an adult"⁷⁴, moreover debating how the general consensus of the fifty States had already moved in favor of a tendentious abolitionist judicial agenda (moreover reinforced by the U.S. being globally perceived as an outcast⁷⁵ in relation to the infliction of death penalty sentences), especially towards juveniles. In several rulings, the Supreme Court

⁷³ The VIII Amendment to the U.S. Constitution prohibits the federal government from imposing excessive bail, excessive fines, or cruel and unusual punishments. This amendment serves as a critical protection in the criminal justice system, ensuring that punishments are proportionate to the offense and that individuals are safeguarded against inhumane treatment. See U.S. Const. Amendm. VIII.

⁷⁴ See 543 U.S.

⁷⁵ Indeed, the U.S. had not ratified, and hasn't yet ratified, as of October 2024, the Convention on the Rights of the Child of the United Nations (Nov.1989), which negates the imposition of capital punishment towards minors, pursuant to §37 of the CRC.

argued that capital punishment can coexist in harmony within the VIII Amendment legal design, provided that the death penalty deserves not to be the product of “arbitrary and capricious” application⁷⁶, and only when its infliction is reasonably narrowed down to that class of individuals who are “the most deserving of execution”⁷⁷. In *Simmons*’ case the Supreme Court argued that a textual interpretation of the VIII Amendment must always constitute the reflection of “evolving standards of decency that mark the progress of a maturing society”⁷⁸, once again emphasizing the need for a clearly defined and specific class of individuals considered eligible for execution.. The procedural story of Mr. *Simmons* is one of an intricate nature. Whereas *Simmons*, after being sentenced to death, appealed several times and every single appeal got rejected, the Supreme Court of Missouri suspended *Simmons*’ capital sentencing in the same time period in which the U.S. Supreme Court was deciding *Atkins v. Virginia*, notably ruling the unconstitutionality pertaining the execution of the “mentally retarded”. Due to the solid decision defined in *Atkins v. Virginia*, the Supreme Court of Missouri decided to reconsider *Simmons*’ position, to later find the execution of minors – originally considered acceptable under *Stanford v. Kentucky* (1998)⁷⁹ - to be in plain divergence with the aforementioned Amendments to the U.S. Constitution, requiring the former for penalties to never integrate a “cruel or unusual punishment”⁸⁰, with a staggering six-to-three decision, based on a more recent report stating how the majority of Americans found the subjection of juveniles to be in contrast with the constitutional design. Eventually, the Supreme Court of Missouri appealed the U.S. Supreme Court, that ruled in *Roper v. Simmons* how the still-maturing brain of juveniles, on the basis of an empirically less sophisticated and thus

⁷⁶ See 465 U.S., 37, 49-50 (1984).

⁷⁷ See 536 U.S. at 319; See also, 462 U.S. 862, 877 (1983).

⁷⁸ See 356 U.S. 86, 100-01 (1958)

⁷⁹ See In 492 U.S. 361 (1997)

⁸⁰ See VIII Amendment to the U.S. Constitution

culpable behavior, exempts them from finding themselves at the receiving end of the death penalty. Juveniles under the age of eighteen at the time of the capital crime were deemed reasonably unfit, for that “the retribution is not proportional if the law’s most severe penalty is imposed on one whose culpability or blameworthiness is diminished, to a substantial degree, by reason of youth and immaturity”⁸¹, as outlined by Justice Kennedy writing for the prevailing opinion. Even though the Court formed its decision on the available neuroscientific findings, Roper’s ruling set a rigid demarking line for execution unsuitability at the age of eighteen. According to literature, this determines an “illogical exclusion” so that individuals who committed the crime on their eighteenth birthday are to be deemed more culpable with respect to the ones who abstractly performed the same heinous genre of crimes on the day preceding their eighteenth birthday, whose conduct would be considered less reprehensible. Arguably, the Court justified this age cut-off by stating how “(...) for the reasons we have discussed, a line must be drawn, and eighteen is the point where society draws the line for many purposes between childhood and adulthood”⁸². The Court’s statement admits that an artificialized legal age term, for is the age eighteen only relevant in our society’s tradition and customs, is an arguable threshold of mere convenience. Similar acknowledgments were underscored within *Miller v. Alabama*’s case⁸³. *Miller v. Alabama* delved with a fourteen-year-old boy, Evan Miller, who murdered his mother’s drug dealer by repeatedly smashing a baseball bat onto the victim’s body⁸⁴. *Miller*’s is a story of tragedy: he grew up in an toxic household⁸⁵ – being his mother an alcoholic and his father abusive – leading to a tormented childhood, filled with

⁸¹ See *ROPER v. SIMMONS* 543 U.S. 551 125 S. Ct. 1183; 161 L. Ed. 2d 1; 2005 U.S. LEXIS 2200; 73 U.S.L.W. 4153; 18 Fla. L. Weekly Fed. S 131.

⁸² See *ROPER V. SIMMONS* 543 at 574.

⁸³ See 567 U.S. 460

⁸⁴ See *ibid.*

⁸⁵ See *id* at 2455, 2462-2463.

immense grief. At a blush, this case is as pivotal as *Roper v. Simmons*, as the Court held the unconstitutionality of existing sentencing schemes ordering mandatory life sentences without the possibility of parole whenever the defendant is a minor, moreover cautioning how “sentencing juveniles to this harshest possible penalty (...) [should be] uncommon”⁸⁶. In *Miller v. Alabama*, the Court additionally outlined how the juvenile’s “chronological age and [youth’s] hallmark features”⁸⁷ – such as “impetuosity, immaturity, and failure to appreciate risks and [future] consequences”⁸⁸ - had to be weighted when convicting younger individuals. According to the Court, States shall be responsible for ensuring that circumstances of mitigating nature would make this kind of sentencing outcome, indeed, unusual. In doing so, Justices designed a sort of clever “youth discount”⁸⁹, built on purely arithmetical calculations⁹⁰, in so assigning youthfulness the right notion of “[a process of] developmental reality”⁹¹. Illustratively, Barry Feld, one of the most involved scholars⁹² on juvenile sentencing, suggested how adult sentences could get diminished by “categorical” fractions, in the mathematical terms of 25–60% reductions, logically adapted to the defendant’s age. Just as in other landmark cases previously discussed, Alabama’s Court likewise took into account the neuroscientific findings lying at the base of adolescent’s erratic behaviors, especially considering the correct age at which a defendant shall be considered “fit” for individualized consideration, on the grounds of criminal sentencing

⁸⁶ See *id* at page 2469.

⁸⁷ See *id* at page 2468.

⁸⁸ See *id* at pages 2455-2468.

⁸⁹ See Barry C. Feld, *Abolish the Juvenile Court, Youthfulness, Criminal Responsibility, and Sentencing Policy*, 88 J. CRIM. L. & CRIMINOLOGY 68 (1997).

⁹⁰ *Ibid*

⁹¹ See Barry C. Feld, *A Slower Form of Death: Implications of Roper V. Simmons for Juveniles Sentenced to Life Without Parole*, 22 NOTRE DAME J.L. ETHICS & PUB. POL’Y 9, pg. 57-59, 2008.

⁹² See Liza Little, *Miller v. Alabama: A Proposed Solution for a Court That Feels Strongly Both Ways*, *Southern California Law Review*, Volume 88:1493, 2015.

to mandatory life without the possibility of parole. Indeed, as for Miller's holding, it was already clear, based on the available research, that juveniles are constitutionally different from adults, thus requiring States to consider the "offenders' age for it is relevant to the VIII Amendment"⁹³, finally affirming how "criminal procedure laws that fail to take defendants youthfulness into account at all would be flawed"⁹⁴. Even though it is not yet simple, nor otherwise practical to define the 'perfect age' at which an individual can be regarded as an adult, setting this age as low as eighteen undoubtedly counteracts current neuroscientific understandings of how the brain works and develops, for there is not a lot of divergence between a sixteen and twenty years olds on the grounds of cognitive maturity. Without prejudice to the U.S. Supreme Court's rulings, it is inequitable to subject individuals presenting similar developmental patterns to different judicial rights and guarantees, being that the Court's conclusion in *Roper v. Simmons* is significantly not congruent with the neuroscientific evidence upon which the same ruling rested itself on. Because of Roper's low age of demarcation, legal scholarship movements, spanning from the American Bar Association to the American Psychological Association, rightfully advocated for this strict threshold to be elevated, ranging from twenty-one years old⁹⁵ proposals, to even twenty-five years old age limits. Conclusively, there's no doubt to be casted on criminal Law's inherent nature and ultimate goals of deterrence: it necessarily requires for the functioning of the brain to be peculiarly investigated, pertinently appraising the age and maturity presented by the defendant at the time for which the actus reus was performed, for "there can be no

⁹³ See *MILLER V. ALABAMA* at 2466.

⁹⁴ See *ibid.*

⁹⁵ See John H., Blume et al., *Death by Numbers: Why Evolving Standards Comple Extending Roper's Categorical Ban Against Executing Juveniles from Eighteen to Twenty-one*, 98 *TEX. L. REV.* 921 (2020); Andrew Michaels, *a Decent Proposal, Exempting Eighteen to twenty-one-years-olds from Death Penalty*, 40 *N.Y.U. REV. L AND SOC. CHANGE* 139.

keener revelation of a society's soul than the way it treats its children"⁹⁶.

4. Constitutional Concerns of legitimacy of the Italian Penal Code: a Comparative Analysis

The Italian legislator is not extraneous to legal age refined demarcations. Upon reviewing the Italian Penal Code, with consistent regard to dispositions pursuant to articles 97 and 98, an attentive eye can observe the potentially significant constitutional implications of these dispositions. Article 97 correctly provides an "ex lege" exclusion of culpability operating in favor of minors whose age was under fourteen at the time of the illicit conduct, whereas article 98 stipulates a nuanced approach to juveniles aged fourteen to eighteen, wherein a diminished degree of culpability may be judicially recognized - by the means of an assessment of the defendant's intellectual maturity - thus determining a mandatory reduction of the penalty. However, as previously discussed, neuroscientific research highlights the development of the adolescent brain to be a continuous process of maturation, extending well beyond the mid-twenties, thus underscoring the ambiguity of article 98 of Italy's Penal Code on the grounds of equality of treatment under the Law. While this rigid distinction may have been historically supported and validated by the morals and values of the time in which the norms were drafted, today this same disposition could be found to be considerably inconsistent with advanced neuroscientific standards, taking into account juveniles' gradual stages of brain development. An almost literal interpretation of articles 3.1 and 3.2⁹⁷

⁹⁶ Nelson Mandela's citation during a speech at the Launch of the Nelson Mandela Children's Fund, Mahlamba Ndlopfu Pretoria South Africa, May 8th, 1995.

⁹⁷ "All citizens have equal social dignity and are equal before the law, without distinction of sex, race, language, religion, political opinion, personal and social conditions. It is the duty of the Republic to remove those obstacles of an economic or social nature which constrain the freedom and equality of citizens, thereby impeding the full development of the human person and the effective participation of all

to the Italian Constitution strictly requires analogue situations to be deserving of similar juridical effects⁹⁸. In this respect, the Italian Constitutional Court affirmed how “(...) legislators stand in due violation of the principle of juridical equality whenever they subject citizens ongoing similar situations to diverse juridical outcomes, without no solid reason justifying this decision”⁹⁹. Indeed, how can a seventeen-year-old be considered so distant in comparison to an eighteen-year-old peer who just recently celebrated his birthday, given today’s neurological and doctrinal understanding of culpability? As Justice Kennedy smartly held in *Roper’s* ruling, “the qualities that distinguish juveniles from adults do not disappear when an individual turns eighteen”¹⁰⁰. Likewise, in 1993 the Constitutional Court of Italy (C.C.) preached for the need “of a system of punishment sculpted, both procedurally and substantially, on the child”¹⁰¹. One year later, the same Court ruled the partial constitutional noncompliance with article 22 – concerning life in prison - to the Italian Penal Code where it “does not state that the penalty of life imprisonment must not be imposed on the child”¹⁰². Interestingly, the C.C. of Italy further held how the presence of a rightly articulated normative system would stand in clear irony within a framework which deliberately permits imposing life in prison to an “individual withstanding evolutionary processes”¹⁰³. The aforesaid legal disposition to the Italian Penal Code may have

workers in the political, economic and social organization of the country”. See art. 3, Constitution of the Italian Republic.

⁹⁸ See Constitutional Court of Italy, July 9, 1958 no. 53. (The Court interprets article 3 affirming how the principle of equality is violated whenever legislators treat equal situations presenting different hallmarks).

⁹⁹ See Constitutional Court of Italy, March 29, 1960, no. 15.

¹⁰⁰ See *Roper v. Simmons*, U.S. 543, 574 (Supreme Court 2005) (here Justice Kennedy underlined how the identification of age 18 serves as a filter to protect and shield all those under the age of 18 from certain responsibilities or acts).

¹⁰¹ See Constitutional Court of Italy, April 1, 1993 no. 140.

¹⁰² See Constitutional Court of Italy, December 2, 1994, no. 168.

¹⁰³ See *ibid.*

become obsolete, potentially generating detrimental consequences to the dignity of young adults unreasonably excluded from the procedural¹⁰⁴ and a substantial framework, fitted on the ideologically and culturally made-up concept of “being adult”. Moving from the aforementioned neurological considerations and evidence, the initiative of this article would entail extending the normative content set out in article 98 – as well as procedural and judicial guarantees – up until the defendant’s twenty-fifth birthday. Unfairly, the ones who would support for the applicability of categorical exemptions provisions to adolescents older than eighteen, in light of the existence of a partial or total mental defect – pursuant to articles 88 and 89¹⁰⁵ – would fail to align with the literal wording provided by Italian Law, as the application of these exemptions lies on the ascertainment of a pathological mental alteration, qualifiable as a physical or mental illness: an abnormality or otherwise consisting in an unexpected deviation of the mind. In fact, adolescents’ cerebral fallacies do not constitute an alteration of any sort, rather they represent physiological manifestations of the subject’s expected neuronal development, and, as such, not possibly subjectable to the same procedural burdens as the mentally disabled. Therefore, only through a judicial assessment, tasked with determining the presence of a sufficient cognitive maturity (or lack thereof), by any means available¹⁰⁶, will it be possible to consider the Italian Penal Code as

¹⁰⁴ In Italy, juvenile criminal proceedings are governed by Presidential Decree 22 September 1988, no. 448 (“Provisions on Criminal Proceedings Against Juvenile Defendants”), applicable to individuals under 18 years of age at the time of the alleged offense. This decree emphasizes the rehabilitative purpose of the juvenile justice system, taking into account the minor’s age and maturity level to apply measures that favor reintegration and education. Notably, children under 14 are considered not criminally responsible and are therefore exempt from prosecution unless security measures are warranted for public safety .

¹⁰⁵ Articles 88 and 89 of the Italian Penal Code establish a categorical exclusion from punishment dependent on the ascertainment of a mental defect capable of totally eradicating the defendant’s culpability or at least able to diminish it.

¹⁰⁶ See Italian Supreme Court of Cassazione, 2009 no. 23006.

neurologically consistent. It is the Law that stands¹⁰⁷ in duty to adapt to recently validated understandings of human behavioral patterns offered by ‘hard’ sciences. Unfortunately, the maturity of the adolescent individual is not linear, nor constant¹⁰⁸. The lack of homogeneity in the neuronal development of juveniles has led scientists to conclude that, although it cannot be established with absolute certainty the exact instance of achieving full cognitive capacity, this very moment can be usually affirmed to occur no earlier than twenty-one years. Indeed, in *Roper v. Simmons*, the U.S. Supreme Court’s ruling was harshly criticized as being “flawed”¹⁰⁹, for it held the suitable age for death penalty had to be set as short as eighteen years old, being this demarcation an arbitrary choice imposed by the Court in apparent contradiction with neuroscience. Critics argued that this age had to be elevated to at least twenty-five years old, on the basis of the most recent international policy, as to comport with “evolutionary standards of decency”¹¹⁰. Italian scientific and legal scholarship is not exactly unprepared when it comes to grappling with neuroscientific findings and legal applications thereof, especially when dealing with mental deficiencies or aberrant behaviors¹¹¹. For example, Di Giovine, an

¹⁰⁷ See Lebel C., Beaulieu C., *Longitudinal development of human brain wiring continues from childhood into adulthood*, 31(30) *The Journal of neuroscience: the official journal of the Society for Neuroscience* 10937, (2011).

¹⁰⁸ Studies caution for the need for future longitudinal research to understand individual onset of pubertal maturation. See Herting M Megan, Sowell R Elizabeth, *Puberty and structural brain development in humans*, 44 *Frontiers in Neuroendocrinology*, 122-137.

¹⁰⁹ See Alexa Johnson-Gomez, *The Brain on Death Row: Reconciling Neuroscience and Categorical Exemptions from Execution*, 24.2 *Minnesota Journal of Law, Science & Technology* 447, (2023).

¹¹⁰ See *Roper v. Simmons* 543 U.S. at 587.

¹¹¹ See Ombretta Di Giovine, *Ripensare il Diritto Penale Attraverso le (Neuro-)Scienze?*, (G. Giappichelli Editore, Sezione Saggi, 2022, [1st edition 2019]). (Here Di Giovine explains the underlying intersections between pedophilia and criminal law, as well as investigating the relationship between the latter and psychopathy).

Italian author, describes the potential intertwinings connecting current research findings on juveniles' prefrontal-cortex stages of development to the inherent consequences pertaining to the capacity "to intend"¹¹², advising not to lower any further current anagraphical thresholds. The apparent disinterest demonstrated by a fraction of European scholarship could be traced down to the conservatism of certain mental paradigms, potentially disabling adaptive judgment. At a glance, it may be argued that extending the concept of adolescence to as late as twenty-five years old could be seen - by doctrinal standards and societal needs - as an act of excessive condescension, which sacrifices criminal Law's inherent retributive scopes. In relation to this issue of multidisciplinary significance, a report commissioned by the Scottish Sentencing Council has addressed the matter in Scotland, specifically demanding how "in light of the continuous maturation of the adolescent brain up to the age of twenty-five, the resulting cognitive maturity deserves to be considered for procedural purposes (...)"¹¹³. According to the report, the "young person" merits to be identified in the defendant younger than twenty-five¹¹⁴ at the time of the crime, thus requiring a peculiarly shaped evaluative regard towards younger defendants within Courts of Law, particularly when assessing individual maturity¹¹⁵. These guidelines so far outlined by the Scottish Sentencing Council highlighted how it is extremely relevant for the Court to have "access to sufficient information for assessing the subjective maturity of the young person"¹¹⁶, thus shall the Court impose rationally "shorter"¹¹⁷ custodial sentences to those eligible. According to the scottish report,

¹¹² See *id* at pages 37-38.

¹¹³ See Scottish Sentencing Council, Sentencing guideline, Sentencing Young People, Parliament House, Parliament Square, Edinburgh, EH1 1RQ, effective as of 26 January 2022.

¹¹⁴ See *id* at page 2.

¹¹⁵ See *id*, at pages 4-5.

¹¹⁶ See *ibid*.

¹¹⁷ See *id* at page 8.

it is vital for judicial systems to “verify the ability of the adolescent to engage with the Court process”¹¹⁸, as well as to understand the defendant’s “fitness to plead”¹¹⁹, for the exercise of sentencing of a young person is different from that of the sentencing of an “older individual”¹²⁰. Despite the ambiguous doctrinal silence on the matter, the legislative provision pursuant to article 98¹²¹ to the Italian Penal Code, where it extends its nuanced effectiveness solely to offenders who “(...) have reached the age of fourteen, but not yet eighteen (...)”¹²², produces an apparently unjustified disparity in consideration of the accused’s procedural guarantees under articles 3, 111¹²³, 27¹²⁴

¹¹⁸ See Suzanne O’Rourke et al., *The development of cognitive and emotional maturity in adolescents and its relevance in justice*, submitted to the Scottish Sentencing Council, page 4-5, 2020.

¹¹⁹ See *ibid.*

¹²⁰ “Older individuals” must be regarded, for sentencing purposes, and according to the guidelines, as anyone over the age of 25. See Scottish Sentencing Council, *Sentencing Young People*, Parliament House, Parliament Square, Edinburgh, EH1 1RQ, page 3, effective as of 26 January 2022.

¹²¹ Article 98.1 to the Italian Penal Code recites as follows: “È imputabile chi, nel momento in cui ha commesso il fatto aveva compiuto i quattordici anni, ma non ancora i diciotto, se aveva capacità di intendere e di volere(1); ma la pena è diminuita [169, 224 4, 223-227](2)”.

¹²² See *ibid.*

¹²³ Article 111 of the Italian Constitution, often cited as Costituzione della Repubblica Italiana art. 111, establishes key due process rights within the Italian judicial system. It mandates that trials be fair and conducted within a reasonable time, ensuring transparency, impartiality, and the right to appeal. It also guarantees that all parties have equal opportunity to present their cases, establishing foundational principles for judicial proceedings. See Cost. It. Art. 111.

¹²⁴ Article 27 of the Italian Constitution, often cited as Costituzione della Repubblica Italiana art. 27, addresses fundamental principles related to criminal justice and human dignity. It provides that criminal responsibility is personal, meaning individuals can only be punished for crimes they personally commit. It also upholds the presumption of innocence until proven guilty, stating that no one shall be considered guilty until a final conviction. Additionally, Article 27 mandates that punishments must aim at the re-education of the convicted, rejecting any inhuman or degrading treatment. See Cost. It. Art. 27.

and 31¹²⁵ to the Italian Constitutional Chart, insofar as it does not expand the normative provision on subjective evaluation of maturity in favor of the defendant aged up to twenty-five. Nevertheless, it is correct to argue that raising this age limit poses some reasonable arguments¹²⁶, such as the absence of a clear, scientifically-proven, tipping point for which a juvenile must be considered to have transcended into the adult stage, being it unclear when this exact moment falls within the stages of one's life¹²⁷. Given this strenuous limit, an alternative solution could consist in tagging youthfulness as a mitigating factor in juvenile's hearings, rather than for it to be classified as a straightforward categorical exemption on the grounds of culpability. In this fashion, defendants within the eighteen-to-twenty-five years old bracket may reasonably argue the necessity for Courts to positively balance their youth in opposition to virtually aggravating circumstances picturing the case. Either way, the Sentencing guidelines provided by the Scottish Sentencing Council moreover smartly require for Justices to weigh in the "maturity and personal circumstances"¹²⁸ of the person aged under twenty-five,

¹²⁵ Article 31 of the Italian Constitution, cited as *Costituzione della Repubblica Italiana* art. 31, focuses on the protection and support of the family, particularly concerning motherhood, childhood, and youth. It mandates that the Republic must assist and safeguard the family institution by providing economic measures and other support necessary to fulfill its functions. Additionally, Article 31 requires the state to protect mothers, children, and young people, promoting their welfare and development. See *Cost. It. Art. 31*.

¹²⁶ See Alexa Johnson-Gomez, *The Brain on Death Row: Reconciling Neuroscience and Categorical Exemptions from Execution*, 24 *MINN., J.L. SCI. AND TECH.* 447 (2023).

¹²⁷ See Herting MM, Sowell ER. *Puberty and structural brain development in humans*. *Front Neuroendocrinol.* 2017 Jan 1;44:122-37.

¹²⁸ See Scottish Sentencing Council, *Sentencing Young People*, Parliament House, Parliament Square, Edinburgh, EH1 1RQ, page 6, effective as of 26 January 2022.

cautioning for the diverse “nature” and “duration”¹²⁹ of sentencing, inferring the need for shorter sentences of a lesser invasive essence.

5. *Conclusion*

This continuum of neuroscientific evidence hereby illustrated points to the need for renovations in most jurisdictions of the world, pertaining to the identification of unreasonably rigid age-bracket thresholds charged of legal significance. Even though the inherent neuroscientific findings have proved how juveniles, up to the mid-twenties, do in fact exhibit diminished self-regulation abilities and emotional regulation physiological deficiencies, legislations around the world have continued to deadly implement adult-level juridical responsibilities and consequences towards young-adults, apparently disinterested in neuroscience’s investigations. This inflexible loyalty to mens rea standards calibrated on adults evidently tarnish mens rea purpose as a measure of guilt and liability. These observations do not imply – nor do they stress - that adolescents are lacking free will, rather they do underline the existence of a proved qualitative divergence in decision-making processes, thus signaling a consequential reduction in the level of culpability. While some jurists would argue that an age cut-off fixed at the age of eighteen should be considered ‘reasonable’, for it is the product of societal¹³⁰ and juridical convenience, a decision of such illogical strictness is undoubtedly sacrificing judicial fairness, unreasonably subjecting individuals - indeed presenting similar, if not equal, neurological profiles - to potential disastrously different juridical consequences.

¹²⁹ See *ibid.*

¹³⁰ For example, Constitutional Law No.2 of 1975 lowered the overall age of legal maturity of the child from 21 to 18, modifying article 58 to the Italian Constitution, potentially showing how social standards do in fact help shaping legal discourse.

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