DeepFakes: A Challenge to Copyright Law

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Deepfakes, a type of Artificial intelligence that utilizes Generative Adversarial Networks (GANs) have emerged as a technology, with the ability to create realistic digital impersonations and manipulate reality. While deepfakes have been used for malicious purposes they also have potential for applications within the entertainment industry. However, concerns arise regarding content moderation due to their dissemination on social media platforms. This article explores how copyright laws in the US, India, and the UK address the implications of deepfakes. In the US fair use doctrine protects deepfakes by employing a four-factor test, those created with malicious intent. This lenient stance considers deepfakes as used. Thus, weakens safeguards against copyright infringement. Furthermore, limited protection for authors' rights under US law poses challenges in preserving the reputation and integrity of their work. In India, the concept of fair dealing takes a stance by excluding certain actions from being classified as infringement. While this approach can be helpful, in tackling deepfakes it might not fully safeguard the uses of the technology. Provisions for attribution and maintaining originality rights provide some means to address distortions caused by deepfakes. On the other hand, the fair dealing provisions in the UK, although criticized for their inflexibility, strike an approach. They protect deep fakes used for research, artistic imitation, humoristic imitation, and non-commercial purposes while considering the intentions behind their creation. This approach allows for a nuanced evaluation of deepfake content, by differentiating between malicious motives. To sum up, when it comes to safeguarding copyright, it is crucial to assess the intentions, behind deepfakes due to their nature. Legislators and courts must establish copyright regulations that address the challenges brought about by deepfakes while also acknowledging their uses in fields.

Keywords: *deepfakes, copyright law, intellectual property, AI-generated content.*

INTRODUCTION

Deepfakes involve two algorithms that compete; one is the content generator, which is responsible for producing various pieces of content. Alongside it, there is a discriminator whose primary role is to assess and distinguish between content that is considered original and content that is fabricated or fake. The generator and discriminator together form a system that can produce and evaluate content authenticity. This system, known as a Generative Adversarial Networks (GAN) network[1], is designed to learn and improve over time. Whenever the discriminator identifies content as fake it provides feedback to the generator enabling it to generate images and videos, in subsequent iterations. These architectures consist of two networks; a generator network that generates synthesized data and a discriminator network that aims to distinguish between real and synthetic data. Through a process, the networks are trained until the discriminator can no longer differentiate between the synthesized data. This adversarial training technique has been hailed as one of the developments in the field of machine learning. Deepfakes can be both incredibly useful and extremely dangerous depending on how they're used. This technology has found applications in industries. For instance, it has been utilized in the healthcare sector to help train AI systems in tumor detection.[2] Additionally, the entertainment industry has leveraged deepfakes to create parodies and even resurrect actors.

However, it is concerning that this technology has also been misused for purposes such as revenge porn and promoting post-reality politics. The legal implications of deep fake content have sparked debates across jurisdictions as they intersect with areas like copyright law, defamation, privacy protection, data security and intermediary liability. One significant challenge in tackling deepfakes is the capability of social media platforms to detect them due to a lack of technology. To address this issue companies like Facebook, Amazon, and Microsoft

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[1] Neeraja Seshadri , 'Implications of Deepfakes on Copyright Law' (*World Intellectual Property Organization*, 2020) <https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ind_seshadri.pdf?cv=1> accessed 29 July 2023

[2] Jackie Snow, 'Deepfakes for Good: Why Researchers Are Using AI to Fake Health Data' (*Fast Company*, 24 September 2018) <https://www.fastcompany.com/90240746/deepfakes-for-good-why-researchers-are-using-ai-for-synthetic-health-data> accessed 29 July 2023

have initiated the Deepfake Detection Challenge aimed at developing detection methods. However, there was a winner in the challenge with a 65.18% accuracy rate, for their developed technology.[3] In this context, it is crucial to examine inquiries regarding the effectiveness of utilizing copyright law to address the issue of deepfakes. As intellectual property rights are governed by jurisdictions this article will focus on the positions of India, the UK and the USA.

COPYRIGHTABILITY OF DEEP FAKES

The prevalence of Deepfake material has sparked debates regarding its eligibility for copyright protection and the determination of its 'Creator'. Given that it's generated by computer algorithms there are two primary interpretations of the term 'Creator'.

1. The individual is responsible for creating the deepfake program.

2. The person who utilizes an existing program as a tool to bring their vision to life.[4]

Certain individuals hold the belief that AI systems, in and of themselves, do not possess rights since human involvement remains critical throughout their operation. The Apex Court of the USA has definitively stated that copyright protection exclusively extends to works that are genuinely original and crafted by human creators.

On the other hand, copyright regulations in the UK classify creations made by Artificial Intelligence as 'computer-generated works'. According to Section 178 of the CDPA Act,[5] this pertains to content that is generated solely by a computer without any input. This definition inherently encompasses Deepfake material since it falls under the category of AI-generated work. As outlined in Section 9(3)[6] of the Act the individual responsible for establishing the conditions, for producing such work is deemed its author.

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[3] Seshadri (n 1)
[4] *Ibid*
[5] Copyright, Designs and Patents Act 1988, s 178
[6] Copyright, Designs and Patents Act 1988, s 9(3)

In the case,[7] the High Court of India explained that copyright belongs to individuals who create works through their skills and efforts. However, there has been a development in India regarding the recognition of AI authorship rights, in artistic creations. 'Suryast' a painting created by RAGHAV,[8] 'an AI program was registered with Ankit Sahni as co-author and the copyright holder. An Adopted Resolution was the basis for this decision, asserting that AI-generated works may be eligible for copyright protection provided there is some degree of human involvement in the creative process.[9]

To summarize, the issue of copyright protection for Deepfake content is a legal matter that varies across different jurisdictions. Some countries prioritize creativity as the foundation for copyright while others acknowledge the involvement of AI in generating artistic works, in certain scenarios. As AI technology progresses it becomes crucial for systems to adjust and provide clarity regarding the rights and obligations related to content generated by AI.

COPYRIGHTABILITY OF DEEP FAKES IN DIFFERENT JURISDICTIONS

Legislation surrounding deepfakes often overlooks the copyright implications. Some may mistakenly assume that existing copyright protection can be used to combat deepfakes. However, it's important to note that copyright laws, in different jurisdictions, don't always protect against deepfake violations. In this study, we delve into the concept of 'fair use' as outlined in the US Digital Millennium Copyright Act 1998 as well as 'fair dealing' under the Indian Copyright Act of 1957[10] and the UK CDPA Act 1988[11]. By exploring these approaches, we aim to understand how copyright law addresses the challenges posed by this disruptive technology.

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[7] *Camlin Pvt. Ltd. v National Pencil Industries* (1986) AIR Del 444
[8] 'India Recognizes AI as Author of a Copyrighted Work' (*Lex Campus*, 11 August 2021)
<https://www.lexcampus.in/india-recognises-ai-as-author-of-a-copyrighted-work/> accessed 29 July 2023
[9] 'Copyright in Artificially Generated Works' (*International Association for the Protection of Intellectual Property*, 19 September 2019)
<https://www.aippi.org/content/uploads/2022/11/Resolution_Copyright_in_artificially_generated_works_English.pdf> accessed 29 July 2023
[10] Copyright Act 1957
[11] Copyright, Designs and Patents Act 1988

THE UNITED KINGDOM APPROACH

In the UK there are provisions, within the CDPA Act 1988 that safeguard usage. Specifically, Section 29 and Section 30 of the CDPA offer exceptions to the framework of copyright law.[12] These exceptions are designed to safeguard the utilization of copyrighted material, in scenarios where permission, from the copyright owner, is not sought. The provisions cover three scenarios: commercial research and private study criticism/review purposes and reporting on current events. The UK statutes do not specifically define fair dealing as what can be considered fair. In the case of Hubbard v Vosper[13] Lord Denning stated that 'fair dealing' cannot be precisely defined and depends on the circumstances. This ruling was the attempt by the judiciary to establish a test for determining fairness as it was not feasible to define fair dealing. Since then, various factors have emerged to consider, such as the nature of the work how it was obtained, the extent of its use the character and purpose of the usage whether it has implications the motive behind the usage its impact, on the works market value and if there were any alternative non copyrighted works available. Additionally, fair dealing also extends protection to works created as parodies, caricatures, or pastiches under Section 30A[14], 'Schedule 2 (2A) of the CDPA'.[15]

Like in India, there has been criticism in the UK regarding the strictness and limitations of dealing with the stance that allows for flexibility when dealing with deepfakes. Deepfakes created for reasons may be eligible, for protection if they are used in research or as a form of expression. The Civil Division of the Court of Appeal, in England and Wales ruled on this matter in the case involving Hyde Park Residence Ltd. and Yelland & Ors[16] emphasized the importance of considering the motive of an alleged infringer when assessing fair dealing, which also applies to deepfakes created with bad intent.

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[12] *Ibid*

[13] *Hubbard v Vosper* [1972] 2 QB 84

[14] Copyright, Designs and Patents Act 1988, s 30A

[15] *Ibid*

[16] *Hyde Park Residence Ltd v Yelland & Ors* [2000] EWCA Civ 37

THE US APPROACH

Under US law fair use is a concept that offers flexibility and is protected by Section 107 of the Copyright Act of 1976.[17] It involves the following tests[18] that consider the following aspects.

1. The Nature of the use

2. The characteristics of the work

3. The amount and significance of the content borrowed

4. The impact of use, on the market

The fair use doctrine has a scope compared to fair dealing. Deep fakes, being created for different purposes than originally intended for the original work and having distinct characteristics in most cases fulfill the criteria of purpose and character. Furthermore, it has been consistently established by U.S Courts that in cases where there may be the copyrighted material or a considerable amount borrowed from another work if the purpose of the usage is transformative, it can be considered as falling within the realm of 'fair use'. In the Bill Graham Archives case[19] the United States Court of Appeals, for the Second Circuit stated that when a copyrighted work is used in a manner that differs from its expressive purpose it is considered excusable. In a similar vein, considering the current early stage and limited market value of this technology, it does not present a significant threat to the market of original creations. This aspect is also fulfilled.

Consequently, in the United States, copyright laws permit content creation to be regarded as fair use. However, these laws do not distinguish based on the creator's intent, leading to the possibility of deep fakes being categorized as parodies and consequently receiving protection. To address this issue systematically several states in America are proposing bills to eliminate

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[17] Copyright Act 1976, s 107

[18] Cicely Wilson and Mary Minow, 'Copyright and Fair Use' (*Stanford Libraries*, 30 November 2021) <https://fairuse.stanford.edu/category/featured/> accessed 29 July 2023

[19] *Bill Graham Archives v Dorling Kindersley Ltd* [2006] 448 F.3d 605

instances where replicas and other actions related to depicting individuals and events are used. Additionally, there is a focus on addressing pornography in this context. Virginia is at the forefront by amending laws to include provisions, for dealing with content classified as 'Falsely created material'.[20]

THE INDIA APPROACH

In India, the concept of fair dealing as defined in Section 52 of the Indian Copyright Act 1957 (ICA)[21] determines which works are exempt, from being considered copyright infringement. Unlike the approach in the United States fair dealing in India is viewed as an exception to copyright infringement. The law provides a list of acts that are not considered infringing. While some criticize India's approach for being rigid it proves effective when dealing with created deepfake technology since such use does not fall within any of the acts mentioned in Section 52 of ICA. However, it's important to note that this provision may not safeguard the use of deepfake technology.

Moreover, Indian courts have begun embracing the notion of dealing especially concerning the term 'review' mentioned in Section 52(1)(a)(ii) of the Indian Copyright Act.[22] This can be seen in cases like the University of Oxford and Ors. v Narendra Ors[23] where courts have incorporated use principles within dealing to protect certain types of work due, to their societal benefits. However, it's worth noting that previous Indian legal precedents related to use have primarily focused on guidebooks and may not directly apply to deepfakes.

Section 57 of the ICA grants individuals the right to integrity in line with the rights stipulated in the Berne Convention of 1886. When it comes to deep fakes, the right to integrity specified in Section 57(1)(b) of ICA becomes significant as deep fakes can be considered distortions, mutilations, or alterations of a person's work. Sections 55 and 63 of ICA encompass provisions

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[20] 'Virginia bans 'deepfakes' and 'deepnudes' pornography' (*BBC News*, 02 July 2019) <https://www.bbc.co.uk/news/technology-48839758> accessed 29 July 2023
[21] Indian Copyright Act 1957, s 52
[22] Indian Copyright Act 1957, s 52(1)(a)(ii)
[23] *University of Oxford v Narendra Publishing House* ILR (2009) 2 Del 221

for criminal liabilities, including penalties such as damages, injunctive relief, imprisonment, and fines against those who infringe upon these rights.

Regarding intermediary liability, as per Section 79 of the Information Technology Act, 2000 (IT Act), it is applicable for copyright infringement following the Myspace Inc. v Super Cassettes Industries Ltd. Judgment.[24] The Delhi High Court interpreted the provisions of the ICA and IT Act in a way that holds intermediaries responsible for removing infringing content upon receiving notification from private individuals, even without a court order, in cases of copyright infringement. However, detecting deepfakes remains challenging due to technological limitations, making it difficult for intermediaries to enforce content moderation policies regarding deepfake content removal.

CONCLUSION

To sum up, this research article has shed light on the challenges brought about by deepfake technology in relation, to copyright laws in the US, India, and the UK. Deepfakes, which utilize machine learning to generate impersonations and manipulate reality have raised concerns while also serving purposes. The US takes an approach based on the fair use doctrine; however, it faces criticism for granting protection to maliciously intended deepfakes. While it allows for transformative use it may undermine copyright infringement safeguards. Pose content moderation difficulties on social media platforms. Conversely, India follows a fair dealing doctrine that excludes specific acts from copyright infringement. While this approach tackles maliciously intended deepfakes it fails to recognize the uses of the technology for entertainment, education, and other positive endeavors.

The UK strikes a balance with its dealing provisions by considering both fair use principles from the US and narrower fair dealing concepts from India. The UK's approach considers the creator's motive as relevant. Allows room for protection, dealing with legitimate deep fakes created primarily for research or pastiche purposes. Considering the diverse characteristics of deepfakes it becomes imperative, for lawmakers and the legal system to consider the underlying

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[24] *Myspace Inc v Super Cassettes Industries Ltd* (2016) SCC Online Del 6382

motivations behind their creation while establishing copyright safeguards. While deepfake technology presents difficulties it also carries possibilities, for lawful purposes.

In summary, it is crucial to have a flexible legal system in place to effectively deal with the consequences of deepfakes on copyright. This system should aim to find ground between safeguarding the rights of creators and acknowledging the applications of deepfake technology for the betterment of society. Moreover, it is imperative to enhance the development of accurate deepfake detection methods that can work alongside initiatives in countering malicious uses of this disruptive technology. By implementing measures and fostering collaboration we can successfully navigate the intricate challenges posed by deepfakes and their impact on copyright law.