

Deepfakes, Copyright, and Personality Rights: A Cross-Jurisdictional Analysis

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Abstract

A major threat to privacy, identity and intellectual property rights has been the rapid rise of deepfake technology, an artificially intelligent type of media manipulation, which can create hyper-realistic manipulations. Although deepfakes have been deployed in such creative ventures as art and satire, their nefarious applications in political manipulation, defamation, and non-consensual explicit material have brought immediate concerns to the legal sphere. This paper traces the use of deepfakes in criminal law, focusing on the implications of deepfake usage on copyright law and personality rights in the contexts of the Indian, the United States, and the European Union jurisdictions. Using real life situations like the one on Lindsay Lohan. Take-Two Interactive and Rana Ayyub verus. The doctrine as addressed in the paper illustrates the exposure of individuals to the right of publicity and privacy in the world of digital manipulation, aka Deepfake Pornography Campaign. It points to the inadequacies in the current legal systems that leave the individuals without an appropriate legal remedy because the extent of the harm the individuals have suffered is not covered by legal frameworks. Among the possible solutions, the paper also speaks about the training of AI-based deepfake detectors, the emergence of international legal frameworks, and the reshaping of the existing laws related to defamation and privacy. It suggests the thorough amendment of the law to defend the digital likeness of individuals and personal rights based on examining legal precedents. The developing nature of deepfake technology requires versatile response, implemented by the use of law, technological measures, and cross-border cooperation to uphold the rights of individuals in the era of the Internet.

Keywords: Deepfakes, Copyright, Personality Rights, Privacy, Defamation, Right of Publicity, Deepfake Detection

1. Introduction

In the era of fast technological development, deepfake technology can also be considered as one of the most disrupting innovations in the online world. With deepfake technology, AI-generated videos, audio files, and pictures it is possible to confuse the boundaries between the real and fiction. It is, in large part due to this creation of synthetic media, that individuals can be created doing or saying something that they never did with or without their knowledge and consent. The technological process of allowing this to happen started as a means of entertainment and satire but has now brought forward key ethical, legal and social concerns. Even though deepfakes can be employed in benign ways, including engaging in artistic, satirical or parody art, they can also be and have been utilized as a malicious feature. This is in the form of making deceptive videos used in politics, fake news, personal defamation, and even publication of explicit materials without the consent of the individuals. The accessibility of the deepfake technology represents a significant, influential threat to privacy, identity and reputation: rights established in multiple constitutions world-wide.⁴ This piece of work will discuss the intersection of deepfakes and copyright and personality rights and the ramifications of the same in diverse jurisdictions and fair use jurisdictions such as India, the United States and the European Union. With the analysis of real cases and case laws, we evaluate the reaction of various jurisdictions to this emerging challenge by deepfakes.

Another issue that deepfakes present a challenge to is the image and likeness rights of individuals where deepfakes can be seen as an infringement to their personhood as well. These types of technologies can cause a great deal of damage to the reputation, identity and legal rights of the individuals as they become more accessible. As an example, deepfakes have been applied to the impersonation of popular people, to meddle with elections, and even to use celebrities to their advantage without their knowledge. Often the current legal frameworks do not weakly even adequately describe the complexities

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⁴ Kunal Kamra v. Union of India, WP(L)/9792/2023.

brought about by deep fake technology, particularly in regards to unauthorized use of the image, use of likeness, or use of voice of another person.⁵ A case-in-point that underlines these fears is the recent 2020 Delhi Legislative Assembly elections where a deepfake video featuring BJP leader Manoj Tiwari was put on the internet and circulated, causing confusion in the political discourse. Similarly, in *Lindsay Lohan v. Take-Two Interactive (2013)*⁶, The appropriation of likeness of an individual by a video game brought up very important issues regarding the safeguard of one in the online world. This nature of cases necessitates the importance of a detailed legal counteraction to deepfakes to prevent the malign uses of the technology.

This paper is a cross-jurisdictional discussion of CRC and its interaction with copyright and personality rights, and a focus on India, the United States, and the European Union. It is meant to:

- 1) Study the legal consequences of deepfake on copyright and personality rights in various jurisdictions.
- 2) Discuss actual sector cases of deepfake use in political, commercial and personal applications.
- 3) Decide the usefulness of the present legal regimes in mitigating the evils produced by deepfake technology.
- 4) Make recommendations on possible legal reform to safeguard the rights of individuals in the era of digital manipulation.

The increasing popularity of the deepfake technology has already resulted in some important legal issues, as evidenced by the high-profile cases which took place. An example is that of deep fake videos deployed in political campaigns where the Manoj Tiwari incident in India reveals the ease of a manipulated media to influence the general perception and disrupt democracy. On the same note, celebrities and prominent persons in the U.S. have filed claims against companies who use their likenesses without their authorization in deepfake videos as in the case of *Lindsay Lohan v. The case of Take-Two Interactive*. In the future, as deepfake technology advances further, the legal community will deal with another set of problems of discerning between genuine and faked footage. Increase in deepfake defense measures in court (e.g. arguments that evidence is a deep fake) may threaten the validity of digital evidence, thus complicating the legal procedure. Besides, the growing sophistication of AI-based technologies, such as deepfakes, is putting mounting pressure on legislation bodies across the world to amend the current copyrights and personality rights laws. These reforms need to strike a delicate balance between the freedom of expression and protecting the individual rights guaranteeing that the legal system in question is not left unprepared to face the burden of AI technologies.

2. Deepfakes and Their Legal Implications

The deepfake technology has become one of the highly controversial innovations of the digital era. The AI created media manipulations have the potential to edit images, videos, and even audio recordings, to false-authenticate completely created, yet realistic media. Although deepfakes were first perceived as an engaging and imaginative instrument, the fact is that their uncontrolled usage has become a serious issue where the sphere of copyright violations and personality rights infringements can be discussed. The copyright law traditionally gives ownership of the work to its creator giving him the exclusive rights to reproduce, distribute and perform the work publicly. Deepfakes disrupt such norms by letting people draw on copyrighted works (the image of an actor or voice of a public figure) without his or her approval. Since deepfakes can be used to recreate the likeness of a person or to even copy their voice incredibly accurately, the question to be asked would be a question of rights; who owns the rights of such a person to their likeness in digital form?

Case Study: *Lindsay Lohan v. Take-Two Interactive (2013)*⁷

The court battle between actress Lindsay Lohan and Take-Two Interactive illustrates how courts respond to the unauthorised use of the likeness of a celebrity in the United States. Lohan filed a lawsuit against the producers of the famous video game *Grand Theft Auto V* insisting that the producers based one of the characters in the game on her image without her approval. The court sided with Lohan, and said that her right of publicity was infringed. This case does not

⁵ Mika Westerlund, *The Emergence of Deepfake Technology: A Review*, Technology Innovation Management Review, November 2019, <https://timreview.ca/article/1282>,(last visited 15 July 2023)

⁶ Linton Weeks, *A Very Weird Photo of Ulysses S. Grant*, NAT'L PUB.RADIO (Oct. 27, 2015 11:03 AM), <https://www.npr.org/sections/npr-history-dept/2015/10/27/452089384/a-very-weird-photoof-ulysses-s-grant>,(last visited 2 June 2024)

⁷ Linton Weeks, *A Very Weird Photo of Ulysses S. Grant*, NAT'L PUB.RADIO (Oct. 27, 2015 11:03 AM), <https://www.npr.org/sections/npr-history-dept/2015/10/27/452089384/a-very-weird-photoof-ulysses-s-grant>,(last visited 2 June 2024)

focus directly on deepfakes, but it shows how the problem associated with the unregulated likeness in digital media was addressed in the past. Deepfake technology increases the problem because any person having access to such software has the ability to create any content of the significantly likeness of a person or even voice (there is no licensing or permission required). Copyright law in various jurisdictions including the U.S. has not taken on this particular issue-leaving ordinary folks open to the spoil of their likeness in deepfake productions.

The transmission of Deepfake content material can also breach the rights of a copyright by appropriating the benefits of digital works without the appropriate licensing and approval. Take an example, deepfake authors will most frequently utilize video materials in films, speeches or interviews to create fake materials, which infringes the copyright of the original owner. Nevertheless, the copyright law has a tendency to speculate the physical production of art and may not take into consideration the depth of the impact of digital manipulation using the deepfake technology.

Case Study: *The Social Dilemma* (2020)⁸

The Social dilemma episode participated by Netflix highlighted the potential menace of deepfakes and illustrated how easily altered video could be deformed to make victims say something they never said. Although, in the current documentary specific references to copyright infringement as applied to deepfakes were not made, the circumstances that are described in it demonstrate how the infringement of copyrights by individuals and creators of content can take place when their appearance is distorted or used within a synthetic environment.

Personality rights refer to a wide range of rights which defend the image, name and likeness of a person as well as his or her voice. Such rights are essential in the scenario of deepfakes, when personal looks of people are frequently modified or misused. Unauthorized exploitation of likeness and voice of individuals is prevented under personality rights because they give individuals the right to control their use in commerce and commerce related activity. In most nations, rights of personality are treated as a subset of the right of publicity. Such rights are time-specific and differ among different countries with some such as United States providing better protection compared to others. As an example, California and some other states provide strong laws on the right of publicity, which helps protect against the commercial exploitation of the person without their consent in the form of their likeness or voice.

Case Study: *Anil Kapoor v. Simply Life India and Ors.* (2019)⁹

In India, Anil Kapoor, an actor, was successful in getting an injunction against the Deepfake of him which was being shared online. The video was doctored to portray Kapoor, this created a bad image to his reputation. The court approved the demand of Kapoor and issued an injunction to challenge the distribution. This example shows that deep fake laws will be needed outside of the context of an individual libel or defamation right, as the personality rights of the individual, and their use of likeness, is in a sense violated not by a complete reproduction but the creation of a twitter account based on the individual.

Much in the same way, politicians and celebrities can be affected by deepfake videos which can severely influence and prevent them from reaching publicity. Deepfakes also violate personality rights and cause an emotional trauma to the affected individuals especially when their likeness is modeled in obscene or disparaging content. Along with copyright and personality rights, privacy rights represent a kind of protection against deepfakes. The right to privacy is an acknowledged human right by various jurisdictions and it protects the individuals against unauthorized use of his or her image or identity.

Case Study: *Rana Ayyub v. Deepfake Pornography Campaign* (2021)¹⁰

The instance of the fake pornography videos of Indian journalist Rana Ayyub, whose privacy was tried to be compromised to discredit the journalist, is a prominent example of this sort. A deepfake videos were produced and became very popular on the internet and show Ayyub in exposing situations, which caused considerable emotional damage. In response, Ayyub sued the case, indicating how deepfakes can interfere with the privacy of an individual by using his/her image to perform actions that are detrimental and have not been consented. Although the case of Ayyub is not the earliest in which deepfake

⁸ Shannon Reid, *The Deepfake Dilemma: Reconciling Privacy and First Amendment Protections*, PENN LAW (Jan 2021), <https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1754&context=jcl>, (last visited July 28, 2023)

⁹ CS(COMM) 652/2023

¹⁰ *Journalist Rana Ayyub Targeted with Deepfake Porn*, INDIA TODAY (Nov. 21, 2018), <https://www.indiatoday.in/trending-news/story/journalist-rana-ayyub-deepfake-porn-13934232018-11-21>

pornography was used, it exemplifies the concern over the abuse of privacy and the right to control the image with the advances of digital technologies. Privacy rights, enshrined in Article 21 of the Indian Constitution and in the international law (including such norms as the General Data Protection Regulation (GDPR) in Europe), have to be modified to become a sufficient defense against such manipulations in the digital realm.

Both copyright and personality rights are identified in many legal systems, but they could not handle issues evolved by deepfake technology. Existing statutes governing defamation, copyright and right of publicity may lack the power to address deepfake manipulations on a scale and on a level that is more sophisticated than existing laws. In the U.S. the Digital Millennium Copyright Act (DMCA) ways of takedown request of infringing materials are provided; however, they do not mention any use of AI-manipulated media and, in particular, deepfake videos. Likewise, the Indian Copyright Act, 1957 is archaic and fails to take into consideration the intricacies posed by digital technologies such as deepfakes. The law systems of various countries are struggling to find a means, which allows them to create an equilibrium between freedom of expression and the right to personal protection, especially in the context of the newly editable information. The fast-evolving generation and extensive distribution of deepfake technology have presented a great challenge to copyright and personality rights jurisdiction-wide. Even though the current laws partially protect, the depth of deepfakes demands updated legal systems that can specifically deal with these matters. By examples such as *Lindsay Lohan v Take-Two Interactive*, *Rana Ayyub*, deepfake pornography case, and *Anil Kapoor image misuse* are some of the instances discussed in this paper that portrays the real consequences of deepfakes on the rights of individuals. The courts and the judicial system needs to be updated in order to guarantee the protection of copyright and personality rights in these times of digitized manipulation.

3. Cross-Jurisdictional Analysis: Legal Responses to Deepfakes

Deepfakes pose a challenging issue to jurisdictions around the world, as they stretch the boundaries of conventional law in guarding against copyright infringement, personality rights and privacy. Countries have therefore applied different solutions to regulate and curb the rising menace of deep fakes. This section shall consider the three frameworks, that is, India, the United States and the European Union based on the treatment of infringement of deepfake issues based on contractual infringement of intellectual property and personality rights.

3.1 India: The Protection of Personality Rights and Copyright

In India, the protection of personality rights is intertwined with constitutional rights, particularly the right to privacy. In *K.S. Puttaswamy v. Union of India* (2017)¹¹, The right to privacy In a landmark verdict, the Supreme Court of India ruled that the right to privacy is a fundamental right under the Indian Constitution under Article 21. In this historic decision, the privacy category was extended to control over personal data, image, and likeness, which is being manipulated to greater extents by deepfake- and other- technology. Besides, Indian personality rights have their place of origin in a mix of privacy and defamation laws but they are still undeveloped compared with the other countries like the United States. Unavailability of relevant provisions under the law as far as the production and dissemination of deepfake content is concerned implies the victims have to resort to other laws, including the provisions on defamation or intellectual property rights to address the matter.

The Indian Copyright Act, 1957 provides copyright to original literary works, sound recordings and cinematographic films. Nonetheless, the application of deepfakes is not specifically covered under the act and in most cases the unauthorized use of an active persons likeness or voice is involved.

Case Study: *Anil Kapoor v. Simply Life India and Ors.* (2019)

One case of Indian interest and that borders on personality and copyright is that of Bollywood actor Anil Kapoor. Kapoor applied to court to obtain an injunction against the authors of a deepfake video, which portrayed him in a compromising position, falsely. The Delhi High Court favoured Kapoor stating that his image and likeness were used illegally without his approval. The decision of the court brought up the importance of having better protection against the malafide usage of deepfake content on Indian ground as the right to control the usage of their image, voice, and likeness was emphasized by people. "Celebrity has the right to privacy, and does not want his or her picture, voice and appearance to be emblazoned in a dark or gloomy manner as on the porn sites. In addition, the Plaintiff is having her image morphed with other actresses in images and videos produced in a way, which is not only offensive or derogatory about the Plaintiff, but also about such other third-party celebrities and actresses." Although there has been positive change at the individual level such as the case of Anil Kapoor, the Indian legal framework is yet to have extensive laws to counter deep fakes. The existing legal realms

¹¹ K.S. Puttaswamy and Anr. vs. Union of India, (2017) 10 SCC 1

of the copyright and personality rights are not comprehensive enough to ferry the intricacies of the deepfake technology. This dumps the victims with very few options other than traditional defamation litigation or privacy torts. Moreover, the Information Technology Act, 2000, although dealing with cybercrimes, does not penalize the creation and/or sharing of deepfake material.

- India ought to pass new laws to guard against the fabrication, circulation, and abuse of deepfake material, specifically with regards to slander or illicit business utilisation of an individual image.
- Personal rights needs to be extended to specifically include digital images and voices besides the existing version under copyright law.

3.2 United States: The Battle for Intellectual Property and Personality Rights

In the US, copyright law provides the creators of original works the right to be granted exclusive rights over their works, including the right over their image, voice, and likeness depending on the situation. Nonetheless, deepfakes disrupt the established concepts of restricting and using copyright since they can exploit the image or voice of a person to produce manipulated media without their authorisation, sometimes in violation of their moral rights. The protections offered to personality rights in the United States are in the form of state laws which regulate the right of publicity. Strictest protection of public figures and celebrities rights against the unauthorized use of their image is offered by the states such as California and New York. Yet, deepfakes create an unprecedented problem in this legislation since this technology is capable of altering not only the appearance but also the voice and behavior of people.

Case Study: *Jordan v. Jewel Food Stores* (2016)¹²

In this case Michael Jordan (ex professional basketball player) sued Jewel food stores which had used his likeness in an advertisement without his authorization. Although it is not a deepfake example, it demonstrates the way in which use of an individual likeness can include infringement of personality rights in the U.S. especially when utilized commercially. The legal protection of digital media, including deepfakes, has become increasingly standard in the courts that recognize these privileges. In the United States, the First Amendment (freedom of speech) often provides a legally delicate balance between the right of publicity and the freedom of expression. With deepfake cases, the First Amendment may be applied to act as a defense in cases that involve parody or satire, in which parody creations are made because it is a piece of art. There are no federal laws on deepfake content in general, but its growing nature is increasingly being viewed as a problem. The Malicious Deepfake Accountability Act, first proposed in 2018, gave the government the power to criminally prosecute creators and distributors of deepfakes which were seemingly created to intentionally harm, but this has not been fully passed yet. The absence of federal regulation on deepfakes has also contributed to varied responses in the law in treating victims of deepfake attacks inadequately.

- The U.S. must develop federal policies in regards to deepfake creation and distribution, especially pertaining to the potential damages to privacy, reputation, and copyright.
- Existing laws on the right of publicity need to be amended to specifically refer to deepfake technology and the effects it has on the use of the likeness.

3.3 European Union: A Privacy-Centric Approach to Deepfakes

In the European Union, the privacy and data protection laws are some of the most extensive in the world, which are mainly regulated by the General Data Protection Regulation (GDPR). The GDPR gives people the right in how their personal information is used, including their image and voice that are manipulated to create deepfake media. GDPR however, is silent on the issue of deepfake technology, but individuals can defend themselves against its application of deepfake under the right to be forgotten, which GDPR has provided a right to. The EU Copyright Directive (2019) is designed to modernize copyright law and especially, the digital space. The directive acknowledges the right to authors on their works or the digital content. Nonetheless, given that deepfakes may frequently be infringements on the likenesses of people and not a copyright infringement that covers the works of authorship, we may still need to adapt the copyright legislation to cope with deepfake issues in the EU.

¹² *Michael Jordan v. Jewel Food Stores, Inc.*, 749 F.3d 717 (7th Cir. 2016).

Case Study: *Gonzalez v. Google* (EU, 2021)¹³

In this EU-requirement case, the Court of Justice of the European Union (CJEU) stipulated the right of individuals to be forgotten under the GDPR and Google and other services had to comply. In this case, deepfakes* were not present, but it demonstrated how digital content and manipulated media in general could violate the right to privacy. The case is an eye-opener in regard to protecting privacy in the fight against propagation of deepfake materials.

Although the GDPR and the EU Copyright Directive exist, the gap in the legal framework in the field of deepfake technology remains. Since deepfakes allow someone to be portrayed in a certain image wherein they do not desire to live or characterized with, the GDPR does not clearly focus on it compared to privacy breaching or violations.

- EU policy should also take the time to revise GDPR so that the creation, as well as distribution of deepfake content is specifically covered.
- The EU Copyright Law has to be modified by introducing some deepfake-related regulations that will help to preserve the images and voices of different people in the era of technology.

The legal implications of deepfakes in India, the United States, and the European Union follow different directions depending on the extent of protection and regulation there in. India and the U.S are yet to have a problem of keeping abreast with the high-speed of development of AI and deepfake generation, but the two nations have started applying case law addressing the implications of deepfakes created using intellectual property rights and rights of personality. The European Union with its privacy-focused method offers quite good examples on how to incorporate the privacy safeguards yet at the same time, the union does not have any dedicated laws involving deepfakes. With the evolution of the deepfake technology, the laws of the world will have to be modified to become more detailed and thorough in coping with these challenges. This will entail a convergence of an amended legislation, technological support and international collaboration that can secure copyright, personality rights and privacy of individuals in the more digital and doctored world.

4. The Legal Challenges of Deepfakes in Copyright and Personality Rights

The use of Deepfake technology has raised major legal issues that have so far eluded the existing legal guidelines. The main issues that these challenges revolve around are authenticity, invasion of privacy, harm to reputation, and the legal involvement of AI-based content into the intellectual property legislation, as well as personality rights. In this section, we examine the legal loopholes, issues, and future resolutions to handle the evils of deepfakes.

The main problem, in application of deep fake content in the legal system, is the impossibility of authenticity. The emerging development in deepfake technology is making it harder to detect which reality or manipulated media is real and which is not. This is a challenge not only to copyright owners who want to guard their intellectual property but also those whose right to personality is infringed as a result of using their likeness or voice without permission. In most jurisdictions, such as the United States and India the legal proceedings usually turn around the capability to demonstrate that a work has been mismanaged. In situations of deepfake, it is hard to prove that a recording is a manipulation of the original presentation unless the help of sophisticated technological tools aimed at revealing the AI-generated changes. The lack of establishment of clear standards of deepfake detection throughout the legal process leaves people and organizations exposed to nefarious use of their likeness or voice.

Case Study: *Rana Ayyub v. Deepfake Pornography Campaign* (2021)¹⁴

Researchers have also found deepfake pornography campaigns against Indian journalist Rana Ayyub. Inability to show/prove the authenticity of the deepfake content further complicated the legal proceedings since the viral distribution of the videos made it tough to find the source of the content. The case shows that development of new forensic tools to detect deepfake content and transparent legal procedures to deal with privacy infringements caused by such manipulations are needed. When in legal proceedings, a serious consequence could be presented by the issue of legitimacy and evidentiary criteria. A presentation of deepfake information as a legitimate piece of evidence to the court may as well result in an unfair conviction or acquittal on account of a false piece of evidence. This condition questions the adequacy of the fairness of a trial especially where juries or the judges cannot be able to distinguish well between actual and manufactured evidence.

¹³ *Google Inc. v. Gonzalez, C-507/17, Court of Justice of the European Union (2021).*

¹⁴ *Rana Ayyub vs. Deepfake Pornography Campaign, 2021.*

Deepfakes can be utilized in order to smear someone that way they are shown in a false and negative light. The nature of the ability to control videos and audio recordings to make a person seem to do something he/she never did is a direct threat to personal reputation and privacy either of a public figure, celebrity, or an ordinary person. When such content is published it can be difficult, or indeed impossible, to completely reverse the harmful effect it has on the personal life and reputation of an individual. Defamation law can be relied upon by victims of deepfake-related harm in many jurisdictions, but these laws may not be suitable to the digital era. Deepfakes may live in a grey area where the victim may not be able to successfully show evidence of malicious intent or financial loss and content may travel to platforms with alarming rapidity making platforms unaccountable.

Case Study: *Manoj Tiwari Deepfake Video (2020)*¹⁵

In 2020, A deepfake video of BJP leader Manoj Tiwari circulated online during the 2020 Delhi Legislative Assembly Elections. The video manipulated his words by editing on his voice and using his image. Although Tiwari took a police complaint and an injunction to stop further circulation, the case also demonstrates how controlling information published in the social media is hard after its release. The damage in terms of reputational harm that was a result of the manipulated material could not really be repaired even after the video was removed. The legal issue in deepfake defamation cases is that the traditional law of defamation is not quick enough in case of viral information and also does not allow the identification of its creator. It is also clear that special legislation is required to deal with defamation generated by AI-created texts, and such laws would help introduce an orderly system by which malicious authors could be identified and victims could get prompt access to the courts.

Deepfake technology exists in an ambiguous realm between the freedom of expression, and the protection of the personal rights. On the one hand, deepfakes could be utilized to create artistic works, create criticisms, or political statements, which are accepted by the laws sustaining the freedom of speech. However, in case of deepfakes used to inflict violent acts on the victims, such as compromising privacy or damaging personality rights, the right to privacy can be violated. The deepfake phenomenon raises tensions between the freedom of artistic expression and the negative impact of the technology as it is possible to create deepfake content without subject agreement, most often it is done maliciously in the name of revenge pornography, bullying, and disinformation. Under such laws, such as the United States First Amendment, the freedom of speech, satire, and parody can be used as a legal defense when dealing with deepfakes. This however poses difficult issues as to whether making a deep fake that misrepresents someone and does so to be humorous or satiric should qualify as expressive, and as such have protections under the First Amendment. The artistic character of deepfakes is rather confusing the boundary between personal rights and freedom of art.

- Governments are required to formulate laws that strike a balance between the freedom of expression and the right to privacy since deepfakes can misrepresent the perception of people about political candidates, or they can cause harm to individuals individually.

The legal challenges introduced by deepfakes are complex and working out the solutions involves the combination of new legislative frameworks, technological solutions, and judicial guidance. The legal framework has to change to make sure that the rights of individuals in terms of copyright and position abuse and privacy are ensured in a digital era.

Among the approaches to overcoming the threat of deepfake abuse, there is a combination of new technologies and the detection tools of deepfake manipulation. Machine learning and AI can be utilized to construct systems, which automatically identify and mark-up manipulated content. Such technologies are already being invested in by platforms such as YouTube and Facebook, but they need to be improved and incorporated into the legal system, so that they can both assist in the protection of the rights of individuals.

Case Study: *Deeptrace (2020)*¹⁶

Deeptrace, a company specializing in cybersecurity, has made innovations that can identify deepfake videos and how they originated. The detection software of the company utilises AI in detecting inconsistencies such as facial expression, solidity, and others in the videos. The technology would play a critical role in legal inquiries and application to content moderation, where the image or likeness of a person has been used/irregularly tampered with.

¹⁵ *Manoj Tiwari v. Unknown Persons, 2020 FIR No. 36/2020.*

¹⁶ *Deeptrace.ai, "Deepfake Detection Technology", 2020. (Available at: <https://www.deeptrace.ai/>)*

A number of jurisdictions have started to enact certain laws that discuss deepfakes. As an example, in the United States, the bill Malicious Deepfake Accountability Act (introduced in 2018) proposed criminal penalties on making deepfake accounts with malicious intent, i.e. political manipulation or defamation. In a similar manner, the Copyright Directive of the EU ought to be revised by incorporating specific provisions regarding the technology of deepfake so that the faces and voices of people should not carry out their capabilities into illegal hands. Because of the globalization of the internet and the ease with which deepfake content traveling through it, cross-border collaboration will be critical to the development of consistent legal standards regarding deepfake content. Governments, tech companies, and international organizations will be able to work closely and address the issue of deepfake technology being used responsibly and the legal frameworks do keep up with the change in technology.

Legalisms of deepfakes are intricate in many ways and are related to several areas in intellectual property law, personality rights, privacy and expression. The juridical frameworks of the United States, India, and the European Union continue to face the challenge of establishing appropriate safeguards on the use of deepfake technology to protect people against its detriments. Although there exist prevailing legal provisions that can be modified, there will be a need to enact specific laws and technology to curb the fast changing threat posed by AI-generated materials. International collaboration will also be instrumental in terms of ensuring that statutory protection is uniform and effective across the borders.

5. Deepfakes' Impact in the Courtroom

Although harms associated with prevalent use of deepfake strike at many levels of society, but in this research article we will stick the discussion on the issue of deepfake being imminent threat to courtroom integrity and investigative process.

Deepfake technology can be used by complainant to produce fabricated audiovisual evidence in order to obtain judgement in its favour, and on the other hand, defence lawyer can plant the seeds in judge's mind to question the authenticity of digital evidences produced by other party, even though he or she knows that the evidence produced is genuine. Therefore, even in situations there are no fake videos, the simple fact that deepfakes exist will make it more difficult to verify the veracity of actual evidence. In the long run, this can create bias and scepticism in the mind of judges regarding admissibility of audio-visual evidence in general.

So far, there are two major instances where deepfake had negatively impacted the legal proceedings.

- i. Deepfake Evidence was produced in British court in one of the cases, where mother used a doctored threatening audio of father, in order to obtain the custody of child ¹⁷.
- ii. Another recent example shows that how mere allegation of production of deepfake video can negatively impact the trial. In March 2021, Raffaella Spone was detained in March 2021 and charged with harassing her daughter's cheering opponents by reportedly creating deepfakes that showed them nude, drinking and vaping. However, Spone denied the charges of deepfake creation. Experts in forensics and technology concluded that it was real and not a fabrication, but the poor video quality and dearth of additional evidence prevented them from reaching a definitive verdict. Later, the office of prosecutor announced that case's lead officer came to the naked eye conclusion that the video was phony and hence they are no longer pursuing the deepfake video as the foundation for the complaint.¹⁸

First case shows that, parties, by producing easily created fabricated evidence, can make the role of judges burdensome, as they have to take extra steps to verify the reliability of evidence produced. Luckily, in that case husband was able to find out the original audio which was doctored and compared the metadata and proved to the court that audio is manipulated, but it would not be so easy for parties and as well as the judges, in every case, to determine the authenticity of evidence produced in absence of recovery of original file and technical aid from experts. Moreover, nature of evidence like video recordings or audio recordings make them so trustworthy, that they are taken at face value by judges.

¹⁷ The Telegraph, <https://www.telegraph.co.uk/news/2020/01/31/deepfake-audio-used-custodybattle-lawyer-reveals-doctored-evidence/>, last accessed 2023/09/13.

¹⁸ BBC News, <https://www.bbc.com/news/technology-56404038>, last accessed 2023/09/13.

Second case, is a perfect example where defense lawyer can manipulate the proceedings by allegedly creating a doubt in the mind of judges that even an authentic video is deepfake. In that situation, Spone had already suffered harm by the time the prosecution revised its strategy. Spone was overcome with unfavorable attention. According to her lawyer, her reputation has been destroyed and, in her neighborhood, she was ridiculed and insulted and received death threats.¹⁹

In addition to above two cases, in United States, deepfake evidence was produced as a proof in defamation cases²⁰, a federal civil rights action²¹, child pornography²², and assault with attempt to murder²³. Hence As sophistication of technology increases with time, the deepfake evidence shall be the central focus of the litigation²⁴.

These cases of other jurisdiction are a notable warning for India to frame and amend laws in order to cater the demanding exigency of sophistication of deepfake technology. It is a matter of time that such fake evidences could be presented in district courts of India and adversarial system of justice may actually fail before this technology due to absence of relevant detection system and expert opinion.

Although, existing Indian law contains procedure of authentication of digital evidence, but it falls short majorly because rules were developed before the emergence of deepfake technology. Hence, in the digital age, when video and audio recordings would be frequently presented as evidence, there is need to verify and amend the rules of evidentiary standards in India, for authenticating video and audio evidence to counter the impact of deepfake technology.

Manipulation of Evidence

Deepfakes pose a serious threat to the integrity of legal cases, as they can be used to manipulate or fabricate evidence presented in court. By altering audio or visual content, attackers can create misleading or entirely false evidence, leading to potentially wrongful convictions or acquittals.

In court, digital evidence, includes photos and videos are considered to be sources having high credibility in the eyes of law. Deepfakes lack credibility if they are produced in large enough quantities to make image and video authentication more difficult and ambiguous. As a result, the court must once more rely on the insufficient eyewitness testimony. this can be witnessed in the recent case of *Nirmaan Malhotra vs. Tushita Kaul*²⁵, Delhi High court said, we are living in the era of deepfakes and, therefore proving adultery by other spouse through photographs which was unclear, would have to prove by other way of evidence before the Family Court. it shows that credibility of digital evidence is now questionable and it requires corroboration.

In a scenario where a deepfake video of a suspect appears to show them committing a crime, the video could be introduced as evidence, even though the events depicted are entirely different from what actually occurred. Such fabricated evidence

¹⁹ THE WASHINGTON POST, <https://www.washingtonpost.com/technology/2021/05/14/deepfakecheer-mom-claims-dropped/>, last accessed 2023/09/13

²⁰ *In re Woori Bank*, 2021 WL 2645812, p. *1-2 (N.D. Cal. 2021) (plaintiff sought discovery from social media platform to support his defamation action based on claim that a “deepfake” image of the plaintiff engaging in an improper intimate act had been posted on a social media platform).

²¹ *Hohsfield v. Staffieri*, 2021 WL 5086367, p. *1 (N.J. 2021) (plaintiff brought a 42 USC 1983 action against police officers, claiming that they created a deepfake photo of him engaging in a lewd act to frame him and justify his arrest).

²² *Schaffer v. Shinn*, 2021 WL 6101435, p.*7 (Ariz. 2021) (defendant attacked sufficiency of the evidence supporting sentencing enhancement arguing that the pornograph image was a deepfake).

²³ *People v. Smith*, ___ N.W.2d ___, 2021 WL 641725, p* (Mich. 2021) (defendant challenged the admission of Facebook posts belong to others which purportedly included his image and gang moniker, suggesting that they were fake).

²⁴ Rebecca A. Delfino, F.: *Deepfakes On Trial: A Call to Expand The Trial Judge’s Gatekeeping Role To Protect Legal Proceedings From Technological Fakery*, LOYOLA LAW SCHOOL, 1-6 (2022).

²⁵ MAT. APP.(F.C.) 180/2024 &CM Nos.32316-18/2024

can mislead judges and juries, tainting the entire legal process and jeopardizing the pursuit of justice.²⁶ The authenticity of evidence becomes increasingly difficult to verify when deepfakes are involved. Traditional methods of evidence authentication may be insufficient to detect sophisticated deepfake manipulations. This uncertainty compromises the fairness of the trial, as it becomes challenging to ascertain the truth and differentiate between authentic and manipulated evidence.

The potential consequences of deepfake-based evidence in legal cases are far-reaching. Wrongful convictions can lead to innocent individuals being incarcerated for crimes they did not commit, while wrongful acquittals can allow guilty individuals to evade justice. Moreover, the erosion of trust in the legal system due to the proliferation of deepfake evidence may erode public confidence in the judiciary and the rule of law.²⁷

In a recent child custody battle in the UK involving a Dubai resident, a concerning incident of using a 'deepfake' audio recording as evidence has come to light. Byron James, a lawyer representing his client in the dispute, revealed that a heavily altered recording of his client had been presented in court.

The manipulated audio contained direct and "violent" threats supposedly made by the child's father towards his wife. However, upon further examination by experts, it was discovered that the recording had been tampered with, and words were added that were never spoken by the client.²⁸

This incident highlights the potential dangers and challenges posed by deepfake technology in manipulation of evidence. The use of manipulated audio recordings as evidence can have serious implications, leading to misleading or false information being presented in court.

Therefore, it may be necessary to use several intricate, costly proofs to support the evidence in order to demonstrate the authenticity of a picture or audio recording. Additionally, developing and securing such proofs may take longer, which could prolong the discovery process and any ensuing trial. The success of the parties in pursuing their claims may eventually be impacted by the extra resources that are needed from both the parties and the court.²⁹

Witness Credibility

Deepfakes present a serious threat to the credibility of witness testimonies in legal proceedings. Malicious actors can exploit this technology to create fabricated videos or audio clips, showing witnesses providing false testimonies. These deepfake testimonies can be used to undermine the credibility of genuine witnesses or falsely implicate innocent individuals. As deepfake technology continues to advance, the challenge of differentiating between authentic and manipulated witness testimonies becomes increasingly complex for legal professionals. The potential for deepfakes to deceive judges, juries, and lawyers raises concerns about the reliability of evidence presented in court.³⁰

²⁶ Brent Gurney, Matthew Ferraro, *The Other Side Says Your Evidence Is A Deepfake. Now What?*, WILMER HALE (December 21, 2022) <https://www.wilmerhale.com/insights/publications/20221221the-other-side-says-your-evidence-is-a-deepfake-now-what> (last visited July 23, 2023)

²⁷ Jack Langa, *Deepfakes, Real Consequences: Crafting Legislation to Combat Threats Posed By Deepfakes*, BOSTON UNIVERSITY LAW REVIEW, 101 (2021), page 761, 781, <https://www.bu.edu/bulawreview/files/2021/04/LANGA.pdf> (last visited July 23, 2023)

²⁸ Patrick Ryan, *'Deepfake' audio evidence used in UK court to discredit Dubai dad*, THE NATIONAL NEWS (Feb 08, 2020), <https://www.thenationalnews.com/uae/courts/deepfake-audio-evidenceused-in-uk-court-to-discredit-dubai-dad-1.975764> (last visted July 23, 2023)

²⁹ Rebecca A. Delfino, *Deepfakes on Trial: A Call To Expand the To Expand the Trial Judge's Gatekeeping Role To Protect Legal Proceedings from Technological Fakery*, 74 HASTINGS L.J., 293 ,309, (2023), https://repository.uchastings.edu/hastings_law_journal/vol74/iss2/3, (last visited June 2, 2024)

³⁰ S. Gregory, *Deepfakes, misinformation and disinformation and authenticity infrastructure responses: Impacts on frontline witnessing, distant witnessing, and civic journalism*, SAGE JOURNALS, 23(3), 708–729, <https://doi.org/10.1177/14648849211060644> (last visited July 24, 2023) ¹⁰² *Mother 'Used Deepfake to Frame Cheerleading Rivals'*, BBC NEWS (March 15, 2021), <https://www.bbc.com/news/technology-56404038>, (last visited July 28, 2023). ¹⁰³ MAT. APP.(F.C.) 180/2024 &CM Nos.32316-18/2024

The existence of deepfakes stimulates parties and their lawyers to take use of them, sowing doubts about the veracity of all digital audio and image evidence in judges minds even when the lawyer is aware that the data is real. This "deepfake defence" had its legal debut and arrived in the most recent instance, in which where Raffaella Spone, a Pennsylvania lady, was detained and charged with numerous counts of harassment after it was claimed that she had created deepfakes to frame her daughter's cheering competitors. At the time, the prosecutor made headlines across the country and around the world by claiming that Spone, who went by the name 'deepfake cheerleader mom', had fabricated a video purporting to show a teenage girl smoking and had changed the victims' social media profiles to make them look like they were drinking and vaping. digital forensics experts and other experts concluded that it did not appear like a deepfake¹⁰².

In the recent case, *Nirmaan Malhotra vs. Tushita Kaul*¹⁰³, Delhi High court said, we are living in the era of deepfakes and, therefore proving adultery by other spouse through photographs which was unclear, would have to prove by other way of evidence before the Family Court. This shows that there are most probable chances of taking "deepfake defence" by lawyers of defendant and creating the doubt in judge mind about the credibility of evidence.

The use of deepfake testimonies can have significant implications for the justice system, potentially leading to wrongful convictions or acquittals based on falsified evidence. Legal practitioners must remain vigilant and develop strategies to detect and combat deepfake threats in the courtroom to ensure the integrity of witness testimonies and uphold the principles of justice. Additionally, raising awareness among legal professionals about the existence and potential impact of deepfakes becomes essential in addressing this emerging challenge.³¹

Impersonation and False Confessions

Deepfakes have the capacity to impersonate individuals participating in legal proceedings, including suspects, victims, or witnesses. Using this technology, attackers can produce fake videos or audio recordings in which these individuals appear to confess to crimes they did not commit. Such false confessions derived from deepfake manipulation can have severe consequences, resulting in wrongful convictions and a miscarriage of justice. The potential for deepfakes to deceive and mislead legal authorities underscores the importance of robust authentication measures in the legal system to ensure the integrity of evidence and protect against the misuse of this technology. Preventing the acceptance of manipulated confessions is vital to safeguarding the fairness and reliability of legal proceedings.³²

Impact on Public Trust

The utilization of deepfakes in legal cases has the potential to undermine public trust in the justice system. When individuals begin to doubt the authenticity of evidence and testimonies presented in court due to the prevalence of deepfake technology, it can raise questions about the fairness of trials and the overall reliability of the legal process. The erosion of public trust in the justice system can result in far-reaching consequences. It undermines the legitimacy of the legal proceedings, causing doubt and scepticism among the public. As trust diminishes, there is a heightened risk of social unrest and dissatisfaction with the system's ability to deliver justice effectively.

Deepfake technology poses significant threats to due process and fair trial, challenging the integrity of evidence, witness credibility, and the authenticity of legal proceedings. The use of deepfakes in legal cases can lead to wrongful convictions, erode public trust in the justice system, and undermine the principles of justice.

5. Recommendations and Solutions

Deepfakes present numerous and complicated legal issues, so the following section briefly offers several recommendations and solutions to mitigate the damages that result due to the misuse of AI-generated content. These solutions include legislative changes and improvements of technology coupled with international collaboration in order to realize the existence of decent protection of copyright, personality right, and privacy under the conditions of deepfakes.

Legal frameworks ought to initiate particular legislation that criminalizes the production and dissemination of deepfake content that is mal Colombia. The penances might be in form of fines only or imprisonment only or both depending on the

³¹ Saul Steinberg, *how deepfakes harm the criminal justice system*, ZSW LAW (Jul 13, 2020) <https://www.zswlaw.com/blog/2020/07/how-deepfakes-harm-the-criminal-justice-system> (last visited July 25, 2023)

³² Jon Bateman, *Deepfakes and Synthetic Media in the Financial System: Assessing Threat Scenarios*, CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE (JULY 08, 2020),

<https://www.jstor.org/stable/resrep25783.10> (last visited July 25, 2023)

level of damage done by the deepfake in question. Legislation must evolve so that the rights of personality can be better safeguarded, and that both celebrities, public figures as well as ordinary individuals can utilize a legal enforcement tool in cases where their face or voice are misused in a deepfake without their permission. The copyright law should be amended to reflect the wrongful use of the likeness or the voice of the person in deep fake videos. This would enable individual creators and persons in the public eye to defend their intellectual property rights on the web. In California, generally there are already existing laws on the Right of Publicity that does not allow the commercial use of an individual without their permission. As a broader increase in digital manipulations, such as deepfakes, would benefit individuals, their extensions would be a sound addition to safeguards.

Existing Defamation laws face difficulties of keeping abreast with the rate of spread of deepfakes. Deepfake may be easily spread and enhanced on social media; thus, these technologies are fast and anonymous, making people unaccountable as the recipients of the damage they do. The guiding principle of any legal reforms must be establishing a relatively easy way to distinguish that deepfakes are a defamatory content and similarly, victims can enforce them relatively easily. Courts must also have the authority to issue temporary injunctions, to block the future spread of defamatory deepfake material, until it can be addressed in court in a more permanent manner. It must be made mandatory that social media websites like Facebook, Twitter, and YouTube delete malicious deepfakes when reported and liaise with the police to find the perpetrators.

Technology should be of critical importance in ensuring that the wrongful use of deepfakes is fought with. The application of AI-based detection systems is critical because it would help detect deepfake videos and pictures and label them as potentially harmful. Some of the technology vendors are already working on deepfake detection tools; yet overall implementation and betterment of such tools is vital to safeguarding people, and compliance to the law. Deepfake technologies AI and machine learning can be applied to develop systems based on detecting minute indicators of deepfake content, including irregularities in facial expressions, voice generation, or the discrepancies between the lighting conditions. These tools need to be incorporated into the digital networks where individuals are able to detect deepfakes automatically as they are uploaded, thus permitting the intervention to happen quicker. Cybersecurity firm Deeptrace has created a deepfake detection software that uses artificial intelligence to detect the patterns in digital material to determine the authenticity of deepfake video by analyzing them. Social platforms could embrace this tool to detect and eliminate deepfakes before they gain expanded circulation. One possible solution to this problem that promises to deliver the authenticity of digital media presents itself in the form of blockchain technology. By keeping record of who creates or modifies a digital content with the use of the blockchain technology, sites and users can be sure that a picture or video could not be tampered or edited. This has the potential of mitigating the dangers of deepfake to a large extent. Governments are supposed to stimulate the application of block chain technology to establish uninterrupted records in digital media. To use an example, video producers can use blockchain to make their videos registerable hence viewers can be certain where it was initialised and that the contents have not been altered.

6. Conclusion

Deepfakes are an emerging technology that are posing a challenge to the current standing legal framework and the individual rights of persona and copyrights. As is evident in case studies conducted in India, the United States and the European Union, existing legal frameworks are failing to cope with the complexity of the issue of deepfakes. Nevertheless, the strategies should include law enforcement (enhanced legal policies), technology, international collaboration, and social awareness, which can reduce the threats of deepfakes. To ensure the implementation of the necessary regulations, respective laws should be introduced at governmental levels. The usage of IA-driven detection mechanisms and blockchain verification will become important components of verifying the integrity of the digital materials. Lastly, collaboration on a global level is essential to providing the law to evolve to meet the cross-border aspect of deepfake manipulation. Unified action in the legal, technological, and educational fields is the only way of preserving personal freedoms and fostering trust in the era of online interactions.

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