UNDERSTANDING DEEPFAKE TECHNOLOGY IN THE ASPECT OF COPYRIGHT LAW

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ABSTRACT

As one of the applications of artificial intelligence methods like deep learning and generative adversarial networks, deepfake technology has altered the digital content making and manipulation many times over. Even though deepfakes are novel and promising in the entertainment, educational, and creative sectors, they pose considerable issues regarding copyright law. This paper explores the deepfake technology in the view of copyright based on the problem of authorship, originality, ownership and infringement. It examines the question of whether a deepfake-generated content is considered a work under the current copyright laws and determines problems with attributing authors in case of autonomous or semi-autonomous AI generation of content. The inequal rights of copyrighted work, image and audiovisual material use that was created in deepfakes are also studied and discussed to point out the danger of infringement and violation of moral rights. Through a critical review of the available legal texts and judicial interpretations, the paper presents gaps in the current laws and regulations of copyright and the necessity of introducing changes to the legal framework to reconcile technological innovation with the establishment of author rights in digital times.

Keywords: Artificial intelligence, Deepfake, Moral rights, copyright.

INTRODUCTION

Artificial Intelligence (AI) is one of the transformative forces of 21st century. AI technology is transforming society like electricity in the past. AI technology is the ability of a machine to display human capabilities like learning, creation and reasoning. Technology has both merits as well as demerits depending on its use. Technology can be used for creating highly realistic images, video and audio of the person using Deepfake technology. The technology has is highly useful in many industries like film industry as it helps in creation of highly realistic videos, in health sector as it helps in detecting tumors. However, recently technology has been used for creating defaming materials as well as revenge pornography. In this chapter we will be dealing with the history of AI technology, and the legal issues in copyright law we face due to AI technology especially copyright.

EVOLUTION OF AI

The general definition of AI is the science of making machines that requires the intelligence of a human being. There is no general definition for AI. According to Marvin Misky, AI technology is the science of making machines do things which require human intelligence.[1] For Bellman AI is the machine activity that is associated with human thinking, decision making, problem solving and so on[2]. Nilson defined AI as an activity that makes machines intelligent and with that intelligence functions to work properly for the environment[3]. According to Russel and Norvig AI has four categories, humanly thinking and acting and rationally thinking and acting [4].

The development of AI was started by the concept of a 'thinking machine'. John McCarthy an Assistant professor of Mathematicians called a group of people to study and improve the concept relating to the "thinking machine". The birthplace of AI was started in Dartmouth college, New Hampshire, USA. The term Artificial intelligence was coined by John McCarthy. The workshop was named 'Dartmouth Research project on Artificial Intelligence'. The idea to

[1] Marvin Minsky defined AI as "the science of making machines do things that would require intelligence if done by men"
[2] Bellman defined AI as "the automation of activities that we associate with human thinking, activities such as decision-making, problem solving, learning, creating, game playing, and so on
[3] Nilsson described AI as "activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment."
[4] Russell and Norvig defines AI into four categories: thinking humanly, acting humanly, thinking rationally and acting rationally.

organize the workshop was John Mcarthy's and he is considered as one of the founding fathers of AI.

By the beginning of the 1960's there was a disinterest of the society towards the Artificial Intelligence. This period is called the AI winter. The disinterest towards the research by the society was due to many reasons, firstly, due to over hype. The organisers could not provide what they promised, this eventually caused a public interest to lose as a result drying of the funds for the development works. Secondly, the economic status of the countries caused the fund allocations for the project. But this situation was changed during the period of 1970's by the introduction of 'Expert system'. By the beginning of 2000, there was a surge in the research of AI by the introduction of Machine learning (ML) technology. ML is one the important tool of the AI. Machine learning can be defined as the machine with its programmed methods and its experience to improve its performance and its predictions. Machine learning is a division of AI that focuses on the algorithm that learns the patterns and then make accurate inference for the new data. This recognition ability helps in the decision making or predictions without any new instructions. Machine learning uses the Neural network model that helps in decision making like that of human brains.

Deep learning is a subset of Machine learning[5]. This method process data like human brain. The main difference between a Machine learning and the Deep learning is that Deep learning technology uses multilayered neural networks called Deep neutral network.

DEEPFAKE TECHNOLOGY

Generative Artificial Intelligence is a new form of AI which generates algorithms that can create new contents like text, images, or any other media in response to the input we give. Deepfakes technology is created by the Generative AI technology and are used for creating highly realistic images, audios and videos. The term Deepfake is derived from the terms 'deep learning' and 'fake' referring to the media created using deep learning algorithms. In certain cases, it is difficult to differentiate between the original and the deepfake material. Deepfakes is one of the most advanced and controversial application of AI [6]. The technology contributes to the education, entertainment fields and at the same time creates highly realistic images,

[5] G. Bharathi Mohan, An analysis of large language models: their impact and potential applications
[6] On Machine Learning and Deep Learning based Deepfake Generation and Detection Mohd Tahir Irfan

videos and audios which causes concerns of privacy rights and the IP protection.

In recent times GAI has emerged as a transformative tool in the film industry, in the way the visual content is created, edited and enhanced. Traditionally, the film industry relied on Visual effects (VFX), CGI or stunt doubles. The GAI models collect the vast datasets of text, images and videos, allowing to learn the underlying pattern and generate a closely resembling real world material. Deepfakes provide cost effective alternative by digitally recreating actors or for the de aging of the actors without the makeup or reshooting. This function makes the technology useful in the filmmaking. Generative Adversarial Networks (GAN) is one of the prominent applications of GAI. GAN has two neutral networks, a generator that produces new data and a discriminator that evaluates the authenticity of the content created i.e., the discriminator decides whether each data reviewed belongs to the actual training dataset[7]. By these tools, GAI can produce realistic characters, backgrounds or even the entire scenes that blends the existing footage. In addition to this, the technology also facilitates the regeneration of deceased actors' images or videos[8]. After the death of James Dean, an American actor in 1955, he was recreated to a new movie after acquiring the rights of the use the image.[9]

Another important function of Deepfake technology is in the field of advertising and marketing industry[10]. Advertising companies have begun experimenting advertisements using deepfake technology which enable highly personalised, interactive and cost-efficient campaign. The advantage of using Deepfake technology is that, by comparing with the traditional method of video shooting which require actors, multiple shooting locations and extensive editing on the same time deepfake technology provide realistic content without any actor or editing. By using the datasets of the images and videos, the GAI can recreate faces, voices and expressions to deliver the message to the audience[11]. This way the company can reduce the cost of creating advertisements. Another advantage is that the creator does not even need the actual presence of the actor, the video can be created using the Deepfake technology[12]. Another advantage is that the deepfake can dub the ad in different language and it can break the barrier of the

[7] Chris Nicholson, A Beginner's Guide to Important Topics in AI, Machine Learning, and Deep Learning.
[8] Robin Pomeroy, 'This iconic filmstar will star in a new movie' - from beyond the grave, WORLD ECONOMIC FORUM
[9] How AI is bringing film stars back from the dead, S.J. Velasquez
[10] Deepfakes in Advertising Research, Mai Nguyen
[11] 'Deepfakes' of Celebrities Have Begun Appearing in Ads, With or Without Their Permission *by Patrick Coffee, THE WALL STREET JOURNAL*
[12] Deepfakes in advertising – who's behind the camera? https://www.hsfkramer.com/notes/tmt/2024-02/deepfakes-in-advertising-whos-behind-the-camera?utm_source

language. The actors or the brand ambassador of the advertisement can speak in multiple languages with perfect lip synchronisation and accent. This prevents the reshooting of the same ad in different languages by the same brand ambassador and thereby marketing the product cost efficiently in different countries.

Another advantage of Deepfake technology is in education as it has an ability to provide enhanced learning experience through realistic simulations. The technology can also provide personalised training, and role plays by making real life professional scenarios for training especially in medical and corporate sectors. Deepfake technology also helps in bridging the language barrier and accessibility gaps in education. Lectures and training modules can be delivered perfectly by using AI based lip synching and dubbing tools in multiple languages with synchronised facial movements and lip synch.

Even though there are many uses, the Deepfake technology has many disadvantages. One of the alarming issues is the threat to privacy and reputation to individuals. Deepfake can be used to create faces, voices, gestures to create realistic media which can cause misunderstandings. The traditional concept that "I know it when I see it" is under question as faces and sounds can be made using this AI tools[13]. Experiments shows that the AI generated content have real resemblance to real human or better than human level, which causes confusion regarding which is original. Another problem faced is through deepfake pornographic videos which is disproportionately targets women and girls[14]. The videos can be created with an intension to defame notable celebrities to cause harm to their reputation.[15] Recent studies shows that deepfakes emerged from and still concentrate in pornographic field which can cause severe issues in dignity, privacy and mental health[16]. Beyond the pornographic issues, deepfakes are used to spread the fake news or any declarations of the government.[17]

Deepfake technology gained global attention in 2017 when Motherboard journalist, Samantha Cole first reported in her article 'AI Assisted porn is here and we're all fucked' about the AI

[13] AI-synthesized faces are indistinguishable from real faces and more trustworthy, by Sophie J. Nightingale, Hany Farid, JSTOR
[14] Sexual Privacy, Danielle Keats Citron, *The Yale Law Journal*, Vol. 128, No. 7
[15] Regina Mihindukulasuriya, Why the Manoj Tiwari deepfakes should have India deeply worried, THE PRINT
[16] What can you do if someone makes deepfakes of you? by Sahana Venugopal THE HINDU https://www.thehindu.com/sci-tech/technology/what-can-you-do-if-someone-makes-deepfakes-of-you/article67894942.ece
[17] Wakefield, J. (2022). Deepfake presidents used in Russia-Ukraine war. BBC https://www.bbc.co.uk/news/technology-60780142

manipulated porn video of actress of the movie "Wonder woman" Gal Gadot of the Reddit platform. The technology was later called as deepfake as they found an easy way to swap faces using a machine learning algorithm. Similarly, videos of Scarlett Johanson, Taylor Swift also emerged raising serious threat to our personality rights and privacy. Later in 2017 deepfake videos of Barak Obama, Tom Cruise and the Queen emerged saying things that they did not say. In 2018, a desktop app called FakeApp launched and later people without any knowledge of AI tools can make Deepfake contents. In Australia, a notable issue involving a student created and distributed deepfake images of approximately 50 female students leading a major trauma to the victims. The major issue of the Deepfake content is that it is difficult to recognise which is original.

The evolution of deepfake marks a trajectory of AI and a stepstone on the field of digital innovations. Deepfake provide a significant advancement in the society in the fields of entertainment, education, advertising and many other industries. At the same time these technology poses great threat to copyright protection and privacy rights. By the unauthorised reproduction of the or alteration of any copyrighted material challenges the ownership rights conferred to the author and very foundational principle of the Intellectual Property law. While the deepfake technology showcase remarkable potential on many fields, it also presses the legal and ethical issues which need to be addressed.

PERSONALITY RIGHTS

Personality rights, also known as the right of publicity, include a person's legal right to use their identity for commercial purposes including their name, image, likeness, or other unequivocal identifiers. These rights differ from, but are closely connected to, the right to privacy, which is commonly defined as the right to be left alone. These rights are inherent and inalienable in India, derived from the natural right to life and liberty under Article 21 of the Constitution of India. This constitutional basis has been reiterated by landmark judicial rulings like Auto Shankar Case (R. *Rajagopal v. State of Tamil Nadu*) and ICC Development (International) Ltd. v. Arvee Enterprises that declared the right to publicity as an aspect of the right of privacy. An essential duality supports the law that defines personality rights. It serves both as property right, protecting the business value of a persona – a very real concern in the case of public figures and celebrities whose careers are founded on their name and image and as a personal right, protecting an individual's dignity and the right to retain control over their

own identity. This dual nature makes deepfake technology such a multifaceted threat. The damages inflicted by deepfakes are not strictly commercial, there may also involve defamation, political disinformation and the production of sexually explicit content that is non-consensual, direct violations of a person's dignity and privacy. This requires a legal approach beyond conventional commercial defences like passing off and proactively interacts with the constitutional ideals safeguarding a person's integrity and personal identity.

ARTICLE 21 AND THE RIGHT TO PRIVACY

Deepfake are the AI generated images, audios or videos of any real person that imitates the real person's face, voice or any manner. This action can be done to:

1. Invade the privacy of an individual
2. Commercial use of a person's voice or image
3. Harm reputation or dignity of an individual[18]

In India, personality rights are not defined in one special statute but are a product of common law and more importantly the Constitutional right to life and liberty under Article 21. Personality rights refer to an individual's right to protect his identity from commercial use, this right includes using his name, image, voice, actions or any other distinct persona. In Indian perspective, there is no specific statue, but the courts have recognised them through various judgements. The foundation for the personality rights was made in the case of *ICC Development (International) Ltd v. Arvee Enterprises*.[19] Later in the case of Justice *K.S Puttaswamy (Retd.) v. Union of India*[20], the court expanded the scope of Article 21 of the India Constitution by recognising right to privacy as a fundamental right. The court also emphasized that privacy also includes the control over one's personnel data, image, and identity. The case is not strictly for the personality rights in the Intellectual property aspect but laid a foundation by providing a constitutional backing for the future cases. In the case of *Shivaji Rao Gaikwad v. Varsha Productions*[21], actor Rajnikanth challenged against the producer of the movie Main hoon Rajnikanth which the name, style and persona for getting a public attention to the movie.

[18] Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security, by Bobby Chesney and Danielle Citron, California Law Review.
[19] 2003VIIAD (DELHI)405, 2003(26) PTC245(DEL), 2004(1) RAJ10
[20] 2017 10 SCC 1
[21] 2015 SCC Online Mad 158

Rajnikanth approached the court seeking an injunction to the movie as violated the personality rights of the actor without his consent. The court granted injunction to the petitioner. The case is a landmark judgement as the court formally acknowledged the personality rights. The judgement also underscored that identity- name, image, likeness cannot be commercially exploited without consent.

THE LIMITED EFFICACY OF THE COPYRIGHT ACT, 1957

The Copyright act 1957, protects the authorship of authors original work including literary, dramatic, musical and artistic work, cinematographic films and sound recordings. The core objective of the act is to protect the owner's creativity and to ensure that the owner gets the economic and moral right over the property. The owner gets the exclusive rights to reproduce, communicate, adapt and distribute their work. There are some additional rights such as performer's right mentioned under section 38[22] and 38A[23] and moral rights under section 57 which ensure that the author can enjoy his ownership and prevents others from obstructing it. However, the copyright act focuses on the work rather than the identities or personas. The act neither defines "personality" nor "celebrity" but instead has provisions for Performers right" which apply to an individual who makes the performance and shall remain for fifty years following the calendar year following the year of making performance. Still in the case of deepfake the acct has yet to address the issue. This causes challenges in case of deepfake technology which causes any personality right infringement.

The primary issue with relying on the Copyright Act is its premise. Copyright law mostly safeguards "original works of authorship" that are "fixed in a tangible medium of expression". A deepfake, however, is an AI-created production, and the issue of authorship is problematic. In case of *Thaler v. Perlmutter*[24], U.S court upheld the Copyright Office's denial of a copyright for an AI-created artwork, holding that human authorship is required for a valid copyright. This applies to deepfakes; as AI systems frequently create them, they may not be eligible for copyright protection, and more significantly, they are not usually a "derivative work" of a, copyrighted performance. The violation is to the identity, rather than an existing performance

[22] Performer's right. — (1) Where any performer appears or engages in any performance, he shall have a special right to be known as the "performer's right" in relation to such performance.
(2) The performer's right shall subsist until 3[fifty years] from the beginning of the calendar year next following the year in which the performance is made.
[23] Exclusive right of performers
[24] Stephen Thaler v. Shira Perlmutter, et al., No. 22-1564 (BAH) (D.D.C. 2023) JULIA MAININI*

or work. While a performer's rights under Section 38 might in theory be triggered in some situations, the structure of the Act is an unsuitable first resort for combating the fundamental harm of deepfake abuse: unauthorised creation of a new, non- existent performance or statement. This inappropriateness compels courts to look beyond more adequate legal tools.

JOHN DOE ORDERS

John Doe is a protective shield for the owners of the Intellectual property rights. The order is used in cases when the infringers involved is unidentified.[25] A John Doe order is a judicial device that permits a court to grant a blanket injunction against anonymous or "nameless" defendants. This is especially useful in cybercrime cases where the criminal tends to be anonymous. The Delhi High Court granted the first-ever John Doe ordered to safeguard the personality rights of actor Amitabh Bachchan[26] in 2022, generally prohibiting unauthorised use of his name, image, or voice in traditional and new media, including NFTs and the Metaverse.

This procedural advance has emerged as an indispensable tool for victims because it enables them to seek legal redress and to compel intermediaries to act, even if the identity of the offending party is not known. The ensuing use of these orders in proceedings against Anil Kapoor and Ankur Warikoo shows that the judiciary is not just enforcing law but experimenting with procedural instruments to develop a de facto legal regime for deepfakes. This judicial activism is a strong deterrent to public policymaking, filling the void that cannot be met by the lack of legislation and forcing platforms to respond.

CELEBRITY RIGHTS CASE STUDIES

Recent celebrity cases have shown how the courts are broadening the scope of protecting personality rights against deepfakes:

1. AMITAB BACCHCHAN

In the case of *Amitabh Bachchan v Rajat Nagi & Ors*, the actor approached the court for restraining the defendants from using his name, image, voice and likeness in the advertisement in lottery scheme and other promotion works which gives the consumer a wrong impression that the petitioner is related to the lottery business and thereby gaining defendants gaining

[25] Hunting down India's nameless infringers, Binny Kalra and Achuthan Sreekumar
[26] *Amitabh Bachchan vs Rajat Nagi & Ors.*, CS(COMM) 819/2022

economic benefits without his consent. The court prima facie held that there was a case and granted an ex parte interim injunction, restraining the defendants from misusing his personal traits. The case is a landmark as the court recognised the personality right protectable under the Indian law. The case was first in India to get the John Doe order which is the given only in the case to prevent the personality right violation by any unknown party. The case is a notable one as the court's interference on protecting the digital misappropriation against the deepfake, which replicated the voice, image of the petitioner.

2. ANIL KAPOOR

In the case of Anil Kapoor[27], the actor filed a suit to protect his personality rights to protect his name, photographs, voice and even a catchphrase "*jhakaas"* without his consent. The court in this case recognised the unauthorised use could cause harm the reputation and cause his commercial value. The court granted an ex parte interim injunction and restrains the defendants from using his identity traits including in digital platform. The court expanded its scope of protection of personality rights beyond name and image and to include the unique gestures, voice and expressions.

3. ARJIT SINGH

In the case of Arijit Singh[28], the petitioner who is a renowned playback singer sued the defendants for misusing name and image to promote a live musical event without his consent. The court granted a ex parte interim injunction restraining the defendants his personal traits. The judgement highlights the judiciary's approach in tackling the digital and commercial misuse of the identity created using AI technology.

These cases together illustrate an emerging legal concept of "persona" that extends beyond an individual's name and appearance to encompass their voice, catchphrases, and other distinctive features. The judiciary is well placed to appreciate that the damages from deepfakes are often symbiotic; an embarrassing video, for instance, not only offends a person's dignity but can also result in a loss of business opportunities, illustrating the gap the courts are bridging between commercial and social harm.

[27] Anil Kapoor vs Simply Life India & Ors
[28] Arijit Singh v. Codible Ventures LLP & Ors. (2023, Delhi High Court)

BEYOND CELEBRITY: THE PROTECTION OF PUBLIC DIGNITY

Although most initial deepfake instances have concerned celebrities, a ground-breaking ruling in the Ms. Kamya Buch case[29] is a pivotal shift. The Delhi High Court judged on a nationwide cyberbullying campaign against Ms. Buch, a leading scholar and activist, with manipulated and profoundly humiliating materials, including pornographic deepfakes. The ruling was not based on the business value of her image but on a blatant and flagrant abuse of her essential rights to privacy, dignity, and reputation. This judgment redefines the legal war against deepfakes. It sets a strong precedent that this technology is not only an issue for public figures whose commercially valuable identity poses a problem, but a weapon of personal violation directed against all citizens. The court's emphasis on human dignity as a central legal justification puts the Indian judiciary at the apex of international legal scholarship on safeguarding fundamental rights against AI abuse.

PERFORMERS RIGHTS

The recent leap in generative artificial intelligence has led to a new generation of digital doppelgangers, AI-generated media content that can impersonate people with unnerving precision. This tech, informally referred to as deepfakes, has destroyed the conventional notion of authenticity and identity in the digital world. This section offers a multifaceted legal environment at the intersection of performers' rights, copyright law, and deepfakes. It illustrates that the existing legal framework a fractured tapestry of intellectual property and tort law is largely incapable of responding to this new and emerging danger[30].

The section concludes that deepfake violations are not one but a multifaceted series of concomitant offences that reveal the deep-seated shortcomings of current legal norms. The demands of the U.S. Copyright Office for human authorship, a popular fair use argument for satirical deepfakes, and the legal immunity of Section 230 of the Communications Decency Act all contribute to huge legal lacunae. Although various states and global organisations are working to create new legislation to fill this gap, no unified, federal framework is still in place. The best way forward involves a multi-pronged approach: uniform federal law that helps establish the rights of individuals over their digital image, industry-based ethical standards that encourage consent and remuneration, and technological protections in the form of digital

[29] Kamya Buch v. JIX5A & Ors., Writ/Civil Suit (OS) 465/2025, Delhi High Court
[30] Deepfake Technology and Individual Rights Author(s): Francesco Stellin Sturino

watermarking and content provenance standards.

A FRAGMENTED LEGAL SHIELD: COPYRIGHT, PERFORMANCE, AND PUBLICITY

Examining legal problems tied to deepfakes necessitates a clear delineation among three essentials, frequently confused realms of intellectual property and personality law. The basis is the law of copyright, which guards "original works of authorship" that are fixed in a tangible form, like a musical composition or screenplay. An essential right awarded to a copyright holder is the right of public performance, which guarantees that the creator has authority over how their work is presented and made accessible.[31] Separate but close to this are performers' rights, or neighbouring rights. These rights are interested in the performance and not the underlying work, giving the people who perform a literary, dramatic, or musical work the right to control unauthorised records and broadcasts of their live performances. Performers also have moral rights, which are non-transferable and ensure that their right to be attributed and to prevent any treatment of their performance likely to damage their reputation is safeguarded.

In a distinct yet growing area is the right of publicity, a doctrine of law that safeguards a person's name, image, likeness (NIL), and other identifying features against improper commercial use. This is not a single federal statute but was established via disparate state codes and court decisions, giving the subject an added layer of jurisdictional nuance. The fragmentation of the law is most starkly exposed when one deepfake infringes several separate doctrines of law. So, for instance, an actor deepfake might simultaneously give rise to a claim of copyright infringement over the underlying script or music, a performer's rights claim for copying a distinctive performance, and a right of publicity claim for using their NIL without consent. The lack of a comprehensive federal law for online identity protection worsens this issue. This creates a problematic environment for attorneys and allows dishonest actors to exploit jurisdictional differences, leading to costly litigation and dubious outcomes.

IMPACT OF AI-GENERATED DEEPFAKES ON PERFORMERS' RIGHTS

It is made more difficult by two issues: the U.S. Copyright Office's requirement of "human authorship" and the shortcomings of conventional legal claims. The requirement of "human

[31] Philip Boyd, Fakes and Deepfakes: Balancing Privacy Rights in the Digital Age, 74 ALA. L. REV. 517 (2022).

authorship," established in recent cases such as *Thaler v. Perlmutter*[32], complicates copyrighting a deepfake if an AI creates it with little input from a human. This opens a legal loophole in which deepfakes, which are typically trained using copyrighted content, can be pitted against original works without paying remuneration to the original producers. This subverts the primary rationale of copyright law, which is to motivate human creativity.

Conventional legal channels, such as defamation and trademark infringement, are usually insufficient for rectifying the damages inflicted by deepfakes. Defamation law is a poor weapon since it is based on proving false statements of fact, and that can be not easy to do with deepfakes that don't contain overtly false statements. It's also difficult to prove intent and attribute anonymity. Likewise, trademark law only covers commercial use and doesn't touch non-commercial deepfakes, like political disinformation. One standard defence deepfake creators use is the doctrine of fair use, specifically the theory of "transformative use," which states that the new work carries a new message or meaning. However, such a defence is not automatic and will be scrutinised closely by judges.

TESTING THE BOUNDARIES OF THE LAW

Current legal cases involving public figures illustrate how deepfakes challenge and reformulate legal principles. The *Scarlett Johansson vs. OpenAI* case is a good example. When Johansson refused to license her voice to OpenAI's AI assistant, the company launched a voice that was "eerily similar" to hers, leading to a lawsuit by her. This case underscores the increasing legal and ethical issues involved in voice cloning and points to the necessity of overt consent and licensing agreements. The case revolves around the right of publicity and intellectual property rights to her voice, and the court's decision would set a precedent for regulating AI, especially regarding the use of personal traits.

Likewise, the litigation initiated by the estate of George Carlin against producers of an AI-created comedy special poses serious questions regarding posthumous rights and the bounds of imitation. The litigation claims that the defendants had no authorisation to use Carlin's image or copyrighted material from his content to produce a new special. Such litigation gives a practical insight into how legal principles are applied to deepfakes, but it also exposes a

[32] THALER V. PERLMUTTER: HUMAN AUTHORS AT THE CENTER OF COPYRIGHT? By *Matt Blaszczyk*1

systemic weakness in the existing legal system.

Although celebrity trials attract plenty of headlines, the most insidious and harmful impacts of deepfake technology disproportionately affect the most disadvantaged. Non-consensual deepfake pornography is a particularly egregious case, with much of the deepfake content posted online being sexually explicit. The Taylor Swift deepfake controversy brought this problem into the public sphere, but the issue disproportionately affects non-celebrities who lack the financial and public resources to respond in kind.

This establishes a two-tiered system of protection. A celebrity has the commercial value of suing for the right of publicity, while a non-celebrity cannot show commercial value in their likeness. The only option for many of these victims would be low-bar, high-consequence torts like Intentional Infliction of Emotional Distress, which requires one to prove severe psychological harm. This financial and judicial hurdle permits the most injurious types of deepfake abuse to continue spreading unchecked against the most vulnerable. The reality that celebrities possess a unique and significant advantage in pursuing legal relief for the commercial use of their likeness highlights the necessity for a new law that offers a straightforward and readily available legal remedy for everyone, not only those who possess a commercially valuable public image.

AI GENERATED CONTENT AND ITS OWNERSHIP RIGHTS

The current technological advancement has affected the core concept in intellectual property law, as generative artificial intelligence systems increasingly demonstrate the capacity to produce expressive outputs that were historically the exclusive domain of human cognition. This transition from AI as a passive tool to a semi-autonomous creator challenges the anthropocentric foundations of copyright regimes worldwide. At the centre of these changes gives raise to legal question of authorship and ownership: can a non-human machine be recognized as the author of a work, and can such an entity, or its human operator, claim the proprietary rights traditionally reserved for natural persons? Identifying the owner is an actual issue as in the case of infringement, the actual question raises is who can be made liable for such act[33].

[33] F Mazzi, *Authorship in Artificial Intelligence-Generated Works: Implications for Copyright Law*, 2024 J. World Intell. Prop. (2024),

THE IDEA- EXPRESSION DICTOMY

The idea–expression dichotomy is a fundamental rule of copyright law. It states that copyright protects only the expression of an idea, not the idea itself. An idea is a general concept, theme, or thought. It is abstract in nature. For example, the idea of writing a story about artificial intelligence taking over the world is broad and conceptual. An expression is the specific and detailed way that idea is presented. It includes the actual words used in a novel, the particular arrangement of scenes, the style of writing, or the artistic details in a painting. Copyright law protects this specific form of expression because it reflects creative choices. However, the underlying idea remains free for everyone to use.

When a person gives a prompt like "Write a motivational speech about success," they are giving an idea. The AI creates the specific speech.

Under the idea–expression doctrine:

- The prompt (idea) is not protected.
- The speech (expression) may be protected only if there is sufficient human creative involvement.

If the human only gives a short instruction and accepts the AI's output without significant editing or refinement, the human may not be considered the author of the expression. Since copyright protects expression created by humans, and not ideas or machine-generated content, ownership becomes uncertain in AI-generated works.

International framework

The basic rules of international copyright protection are found in the Berne Convention for the Protection of Literary and Artistic Works. This Convention created a common global standard to protect the rights of authors. [34]However, it does not clearly define who an "author" is. This was not a mistake. At the time the Convention was created in the nineteenth century, there was a general understanding across countries that an author was naturally a human being. So, there

https://doi.org/10.1111/jwip.12310

[34] Berne Convention for the Protection of Literary and Artistic Works art. 2(6), Sept. 9, 1886, as revised at Paris July 24, 1971, 828 U.N.T.S. 221, https://www.wipo.int/treaties/en/ip/berne

was no need to define it separately because everyone assumed that authorship belonged to human creators.[35]

Article 2(6) of the Convention states that copyright protection exists for the benefit of the author and their successors. This wording assumes that the author is a legal person who can own property, transfer rights, and pass them on to others. In simple terms, the Convention is written with the understanding that an author is a human who can hold legal rights and responsibilities[36].

This human-centered approach is common among all the countries that signed the Convention. It is based on the philosophical idea that a creative work carries the "imprint" or personality of its creator. In many civil law countries, this connection between the work and the human creator is very strong. A work must show the personal and subjective expression of a human mind to qualify for copyright protection. The law views creativity as something deeply connected to human thought, intention, and personality.

Artificial intelligence systems do not have personality, emotions, or independent intention. They do not possess consciousness or personal identity. Because of this, they do not fit within the traditional understanding of an "author." Under current international copyright principles, only works created by humans are clearly protected. If an AI system creates a work entirely on its own, without meaningful human involvement, that work is generally considered not to have a human author. As a result, such works may fall into the public domain, meaning they are not protected by copyright and can be freely used by others[37].

United States of America

The United States has taken a very strict position on the requirement of human authorship in copyright law. Both the United States Copyright Office (USCO) and federal courts have clearly stated that copyright protection requires a real connection between a human mind and creative expression. This means that a work must be created by a human being to qualify for copyright protection. This approach is not just a policy choice. It is also connected to the U.S.

[35] Anthi Gaidartzi & Irini Stamatoudi, *Authorship and Ownership Issues Raised by AI-Generated Works: A Comparative Analysis*, Laws 57 (2025), https://doi.org/10.3390/laws14040057
[36] Daniel J. Gervais, *The Machine as Author*, 105 Iowa L. Rev. 2053 (2020), https://ilr.law.uiowa.edu/print/volume-105-issue-5/the-machine-as-author/
[37] Andres Guadamuz, *Artificial Intelligence and Copyright*, 27 WIPO J. 1 (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2981304

Constitution. Article I, Section 8 of the United States Constitution gives Congress the power to grant rights to "Authors and Inventors," and courts interpret the word "Authors" as referring to human creators.

A very important case on this issue is Thaler v. Perlmutter. In this case, Dr. Stephen Thaler tried to register a visual artwork called "A Recent Entrance to Paradise." He claimed that the work was created entirely by his AI system, known as the "Creativity Machine." In his application, Thaler listed the AI as the author and argued that he should own the copyright under the "work-made-for-hire" doctrine because he owned the machine. His goal was to test whether U.S. law would recognize AI as an author.[38]

The USCO rejected his application. Thaler challenged the decision in court, and the case eventually reached the U.S. Court of Appeals for the District of Columbia Circuit. In its 2025 decision, the court clearly stated that the Copyright Act of 1976 requires that a work must first be authored by a human being to receive protection. The court explained that copyright law has always been understood as a way to encourage human creativity. While machines and tools can assist in the creative process, they cannot be considered authors because they are not legal persons[39]. The court also rejected Thaler's work-for-hire argument. It clarified that the work-made-for-hire doctrine only applies when a valid legal person or entity creates a work. Since an AI system is not a legal person, it cannot be the original author whose rights are later transferred.

Another important development came from the "Zarya of the Dawn" case involving a graphic novel created by Kristina Kashtanova using the AI tool Midjourney. In this situation, the USCO allowed copyright protection for the text of the graphic novel and for the selection and arrangement of images. However, it cancelled protection for the individual images generated by Midjourney. The key issue was "creative control." The USCO reasoned that because the AI system generates images in a highly unpredictable way, the user does not fully control the specific visual details. Therefore, the user cannot be considered the author of those AI-generated images in the same way a photographer or illustrator would be[40].

[38] Thaler v. Perlmutter, 687 F. Supp. 3d 140 (D.D.C. 2023), aff'd, No. 23-5233 (D.C. Cir. 2025), https://www.cadc.uscourts.gov/
[39] U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16,190 (Mar. 16, 2023), https://www.copyright.gov/ai/ai_policy_guidance.pdf
[40] Daniel J. Gervais, *The Machine as Author*, 105 Iowa L. Rev. 2053 (2020),

In March 2023, and again in later guidance, the USCO made its position clear. Applicants must disclose if their work contains AI-generated material. They must also explain what parts were created by humans. Copyright will be granted only to the human-authored parts that are independent of the AI-generated content. This creates a higher burden for artists who use AI tools. They must show that their contribution through detailed prompts, repeated revisions, editing, or post-processing reflects traditional elements of authorship such as creative choices, arrangement, and originality[41].

Overall, the U.S. approach strongly emphasizes that copyright exists to protect human creativity. AI can be used as a tool, but it cannot replace the human author. Only the parts of a work that reflect meaningful human creative control are eligible for protection[42].

UK

Under the Copyright, Designs and Patents Act 1988 (CDPA), Section 178 defines a "computer-generated" work as a work created by a computer where there is no human author. Instead of placing such works in the public domain, Section 9(3) states that the "author" will be the person who made the necessary arrangements for creating the work. This means the law creates a legal assumption that focuses on the human or company behind the process, rather than the machine itself.

This issue was discussed in Nova Productions Ltd v Mazooma Games Ltd,[43] where the court held that the programmer who wrote the game's code was the author of the images generated during gameplay. The player was not considered the author because they only triggered the output, not the underlying system.

More recently, in Getty Images v Stability AI[44], the court ruled that AI "model weights" are not infringing copies of training images, as they are only statistical data, not stored reproductions. This decision supports AI developers by clarifying that the learning process

https://ilr.law.uiowa.edu/print/volume-105-issue-5/the-machine-as-author/

[41] Andres Guadamuz, *Copyright and Artificial Intelligence: An Analysis of the Reward Structure of Copyright Law*, 14 J. Intell. Prop. Info. Tech. & Elec. Commerce L. 15 (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4088189

[42] Barton Beebe et al., *The Meaning of Authorship in Copyright*, 100 Cornell L. Rev. 859 (2015), https://www.cornelllawreview.org/wp-content/uploads/2015/09/Beebe-et-al-final.pdf

[43] Nova Prods. Ltd. v. Mazooma Games Ltd., [2006] EWHC (Ch) 24 (UK), https://www.bailii.org/ew/cases/EWHC/Ch/2006/24.html

[44] Getty Images (US), Inc. v. Stability AI Ltd., [2025] EWHC (Ch) (UK), https://www.judiciary.uk/

itself may not amount to copyright infringement[45].

European Union

In the European Union, originality is based on the standard of the author's "own intellectual creation." This principle was developed by the Court of Justice of the European Union (CJEU) in cases like *Infopaq International A/S v Danske Dagblades Forening* [46]and *Eva-Maria Painer v Standard VerlagsGmbH*[47]. The court held that a work must reflect the author's personality and free creative choices. In simple terms, copyright protects works that show a human's personal touch.

Because AI systems cannot make free or personal choices, fully autonomous AI outputs are generally not protected under EU law and may fall into the public domain. However, if a human uses AI as a tool and keeps creative control—by selecting, editing, or refining the output—the work can still receive protection. In such cases, AI is treated like a camera or software that assists human creativity.

The Artificial Intelligence Act does not recognize AI as an author. Instead, it focuses on transparency, requiring AI providers to disclose summaries of copyrighted training data. The Act separates the "input" (training data) from the "output" (generated content), protecting right holders while maintaining the human authorship requirement[48].

India

India presents an interesting example of how law is adjusting to AI. The Copyright Act, 1957 states that the author is the "person who creates the work." Under Section 2(d)(vi), for computer-generated works, the author is the "person who causes the work to be created." Traditionally, the word "person" in Indian law refers only to a natural person (a human) or a juristic person (like a company). It does not clearly include machines[49].

[45] Andres Guadamuz, *Artificial Intelligence and Copyright*, 27 WIPO J. 1 (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2981304
[46] Case C-145/10, Eva-Maria Painer v. Standard VerlagsGmbH, 2011 E.C.R. I-12533, https://curia.europa.eu/
[47] Case C-5/08, Infopaq Int'l A/S v. Danske Dagblades Forening, 2009 E.C.R. I-6569, https://curia.europa.eu/
[48] Eleonora Rosati, *Originality in EU Copyright: Full Harmonization Through Case Law*, 8 JIPITEC 9 (2017), https://www.jipitec.eu/
[49] Copyright Office, Government of India, Registration No. L-110121/2020 (Suryast) (Nov. 2020), https://copyright.gov.in/

A major development came in 2020 with the RAGHAV AI case. An artwork titled *Suryast*, created using an AI tool called RAGHAV (developed by Ankit Sahni), was granted copyright registration by the Indian Copyright Office.[50] The AI was listed as a co-author along with Sahni. This was seen as a historic moment because it appeared to recognize a machine as an author. However, in 2021, the Copyright Office issued a withdrawal notice questioning whether an AI could legally be an author. As of 2026, the issue remains uncertain, showing hesitation within the Indian legal system about granting rights to non-human creators.

By 2025–2026, the government began reconsidering its copyright framework. The Department for Promotion of Industry and Internal Trade (DPIIT) formed an expert committee to study AI-related issues.[51] A working paper proposed a "one nation, one licence" system, where AI developers could use copyrighted works under a blanket licence while paying royalties to creators. This approach aims to balance innovation and creator rights without giving AI the status of an author[52].

CONCLUSION

Deepfake technology is one of the most important threats that the copyright law encounters in the digital era. Although there are valid purposes of technology in cinema, education, satire and scientific studies, its misappropriation has revealed the serious flaws in the current copyright laws. The copyright legislation was initially created to guard the human innovation and recognizable authorship, yet deepfakes might make use of mechanical mechanisms that create, alter, or copy the previous materials and acts. This complicates the task of identifying the author, the right owner and the problem of determining whether the subsequent content is original. Copyright-wise, deepfakes often imply the illegal use of copyrighted content in the form of movies, music, photos, and other pieces. It may have an effect of reproduction or adapting without the authorization, which would directly violate the economic black rights of the copyright possessors. Moreover, deepfakes are also a significant risk to moral rights, in terms of right of attribution and right of safeguarding the wholeness of a work. Distorted content may exhibit misinterpreted intention of an author or an image of a performer, which can damage his or her reputation and creative identity. Even though there are already some

[50] Ankit Sahni v. Union of India, Diary No. 10983/2021 (Delhi High Ct.) (pending), https://delhihighcourt.nic.in
[51] Department for Promotion of Industry & Internal Trade, Ministry of Commerce & Industry, Government of India, https://dpiit.gov.in/
[52] Shamnad Basheer, *Artificial Intelligence and Copyright Law in India*, 5 NUJS L. Rev. 1 (2012), https://nujslawreview.org/

established doctrines like fair use, fair dealing, etc., in specific situations, they remain insufficient as the scale, speed, and deception of the process of deepfakes creation and distribution are beyond what the given doctrines can possibly resolve. The absence of clear legal standards poses an uncertain condition to both creators and platforms, as well as the users. Thus, the urgent need to reconsider the way the copyright law should react to AI-generated and AI-modified content is significant. Finally, the closeout of the deepfake technology through the lens of copyright law helps to spot the major necessity of clarity over the law and its reform. An equitable solution is needed, which will safeguard authors and performers against their exploitation whilst maintaining the room of technological advancement and justified creativity. Moral rights empowerment, establishment of rules on authorship and specific guidelines to AI can be used to make sure that the copyright law is effective and relevant even in the age of deep fakes.