
GENERATIVE AI AND THE CINEMATIC UNIVERSE: COPYRIGHT'S BATTLE AGAINST SYNTHETIC ACTORS AND SCRIPTS

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ABSTRACT

This research paper delves into the fascinating and increasingly complex intersection of generative artificial intelligence (AI) and the world of cinema. The world today is seeing a revolution in filmmaking, with AI capable of creating incredibly realistic synthetic actors and even generating entire scripts. This is exciting, but it throws a massive wrench into our established understanding of intellectual property rights. India's Copyright Act, like many around the world, was conceived in a time before this technology was even imaginable. This raises crucial questions about who owns the copyright to these AI creations: Is it the programmer? The user? Or does the AI itself deserve some recognition? This research explores the evolution of this technology, the specific challenges it poses to Indian copyright law, considers the ethical and economic implications, and examines some key legal precedents. Ultimately, the paper suggests some ways we can adapt our legal frameworks to both protect creative rights and encourage further innovation.

1. Introduction

The cinematic universe has always been a mirror reflecting our technological progress. From the first flickering silent films to today's immersive digital spectacles, technology has been the handmaiden of artistic vision. We are now at another turning point, perhaps the most disruptive yet, with the rise of generative AI. This is not just about special effects anymore; we are talking about AI that can *create*, write scripts, conjure up realistic actors, and even edit footage.

This technological leap forward is exhilarating, offering filmmakers previously unheard-of creative freedom and the potential to drastically reduce production costs. But it also presents a profound challenge to our legal system, particularly copyright law. The Indian Copyright Act of 1957, like many copyright regimes globally, is built on the foundation of '*human authorship*' and '*originality*'. When a machine can seemingly "*create*" independently, we are forced to confront some very fundamental questions. Can an AI truly be an "*author*"? Who, if anyone, owns the copyright to a film script dreamed up by an algorithm or a performance delivered by a digital actor? And what about the moral rights of actors whose likenesses can be resurrected and manipulated with unprecedented ease? This paper will grapple with these thorny issues, analysing the legal consequences of generative AI's impact on cinema, with a particular emphasis on the Indian legal landscape.

2. Background

2.1 Evolution of Generative AI

To proceed with clarity, we must first define the term 'generative AI'. This branch of artificial intelligence differs fundamentally from its predecessors in its focus on *de novo* content creation. Rather than analysing or acting upon pre-existing data, generative AI utilizes algorithms, frequently based on complex neural network architectures, to synthesize novel outputs.¹ These outputs can include, but are not limited to, images, text, audio, and video content.² The real game-changers here are technologies like:

- **Generative Adversarial Networks (GANs):** Imagine two AI networks locked in a creative duel. One, the "generator," creates content, while the other, the

¹ Ian J Goodfellow and others, 'Generative Adversarial Networks' (arXiv preprint, 10 June 2014) <<https://arxiv.org/abs/1406.2661>> accessed 25 February 2025.

² OpenAI, 'DALL-E 2' <<https://openai.com/dall-e-2/>> accessed 25 February 2025.

“discriminator,” tries to tell if it is real or fake. This constant back-and-forth leads to increasingly realistic outputs.³

- **Transformer Models:** These are particularly good at understanding language. They use something called “attention mechanisms” to grasp context and relationships within data, allowing them to generate remarkably coherent text. Think of OpenAI’s GPT series as a prime example.⁴
- **Variational Autoencoders (VAEs):** These are often used for image and video generation, creating new data points that are similar to the data they were trained on.⁵

These technologies have evolved at an astonishing pace, fueled by more powerful computers, vast amounts of data, and breakthroughs in deep learning. We’ve gone from generating simple pixelated images to crafting high-resolution video and incredibly lifelike digital humans.

2.2 The Cinematic Universe and Digital Innovation

Film, from its inception, has been intertwined with technological progress. The introduction of sound, color, and later, computer-generated imagery (CGI), each revolutionized storytelling. CGI, in particular, allowed filmmakers to create worlds and characters that were previously confined to the imagination.

Generative AI is the next logical step, but it’s also a *leap*. It’s not just about enhancing what’s already there; it’s about generating entirely *new* content. This includes:

- **Synthetic Actors:** Digital recreations of actors, living or deceased, capable of delivering entire performances.
- **AI-Generated Scripts:** Scripts written, at least in part, by AI, based on analyzing patterns in existing scripts and story structures.
- **AI-Assisted Editing:** Tools that can automatically select shots, create transitions, and

³ Ian J Goodfellow and others, ‘Generative Adversarial Networks’ (arXiv preprint, 10 June 2014) <<https://arxiv.org/abs/1406.2661>> accessed 25 February 2025.

⁴ A Vaswani and others, ‘Attention is All You Need’ (arXiv preprint, 12 June 2017) <<https://arxiv.org/abs/1706.03762>> accessed 25 February 2025.

⁵ Kingma DP and Welling M, ‘Auto-Encoding Variational Bayes’ (arXiv preprint, 20 December 2013) <<https://arxiv.org/abs/1312.6114>> accessed 25 February 2025.

even piece together entire scenes.

2.3 Intellectual Property and Copyright Law in India

The bedrock of copyright protection in India is the Copyright Act of 1957. This Act defines “author” and “work” in ways that, at the time clearly envisioned human creators. For instance:

- **Section 2(d)⁶:** Defines the “author” – for a film, it is the ‘*producer*’. For a literary work, it’s the person who *creates* it.
- **Section 2(o)⁷:** Includes computer programmes and databases in “literary works”
- **Section 13⁸:** Lists the types of works protected by copyright – original literary, dramatic, musical, and artistic works, and cinematograph films.
- **Section 14⁹:** Spells out the exclusive rights of copyright holders the right to reproduce, distribute, adapt, and publicly perform their work.
- **Section 17¹⁰:** The first owner of copyright.
- **Section 57¹¹:** Protects the author’s “moral rights” – the right to be attributed as the author and to prevent distortion of their work.
- **Originality and Authorship:** The Act requires that a work be original, interpreted by courts to mean it must originate from the author and demonstrate a minimal level of creativity and human judgment. This was clarified in *Eastern Book Company v D.B. Modak*¹², where the Supreme Court held that originality requires independent skill, labor, and judgment, emphasizing human input. Section 2(d) defines “author” differently for various works, with clause (vi) stating that for computer-generated works, the author is “the person who causes the work to be created.”

⁶ Indian Copyright Act 1957, s 2(d).

⁷ Indian Copyright Act 1957, s 2(o).

⁸ Indian Copyright Act 1957, s 13.

⁹ Indian Copyright Act 1957, s 14.

¹⁰ Indian Copyright Act 1957, s 17.

¹¹ Indian Copyright Act 1957, s 57.

¹² [2008] 1 SCC 1.

- **AI-Generated Works:** Given the human authorship requirement, purely AI-generated content without significant human intervention is likely not eligible for copyright protection in India. However, if a human has a substantial role in creating or directing the AI (e.g., through prompts, editing, or curation), the resulting work may be protectable, with the human considered the author. This interpretation aligns with the Act's focus on human creativity, but it remains untested in court.
- **Ownership:** Section 17 of the Act states that the author of a work is the first owner of the copyright, unless there is an agreement to the contrary. In the context of AI, the person who commissions or controls the AI and provides creative input would likely be considered the author, though this is not explicitly codified.
- **Policy and Guidance:** As of March 8, 2025, the Indian government has not provided specific guidance on AI-generated content. The Ministry of Electronics and Information Technology's National Strategy for AI (2018)¹³ focuses on AI development but does not address copyright issues. There are no recent legislative proposals directly tackling this, leaving the issue to judicial interpretation.

The crucial point here is that the Act does not explicitly contemplate AI-generated works. The core question becomes: Does AI-generated content meet the standard of “originality” required by Indian law? Indian courts have generally interpreted “originality” to mean that the work originates from the author and demonstrates a minimal level of creativity and human judgment.¹⁴ This is where the legal ambiguity surrounding AI arises.

2.4 International Perspectives on Copyright and AI

India is not alone in grappling with these issues. Legal systems worldwide are struggling to

¹³ NITI Aayog, ‘National Strategy for Artificial Intelligence’ (2018) <<https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>> accessed 2 March 2025.

¹⁴ *Eastern Book Company v DB Modak* (2008) 1 SCC 1 – the Supreme Court addressed the originality requirement for copyright protection in the context of headnotes and edited judicial decisions. The court held that a work is original if it is not copied from another source and is the product of the author’s independent skill, labour, and judgment. While acknowledging the “sweat of the brow” doctrine, the court emphasized that a minimal degree of creativity is necessary, beyond mere mechanical effort.; *Bharat Law House v Wadhwa & Co.* [1988] 2 SCC 1 – Supreme Court examined the copyrightability of law reports, including headnotes and compilations. It ruled that such works are entitled to copyright protection if they reflect the author’s judgment and skill in their selection and arrangement, even when based on pre-existing materials.; *R.G. Anand v Delux Films* [1978] 4 SCC 118 – court held that copyright protection extends only to the original expression of ideas, which must reflect the author’s personal contribution and independent creation, rather than the ideas themselves.

adapt.

I. United States:

The US copyright system is rooted in the Copyright Act of 1976¹⁵, which stipulates that copyright protection is available for “original works of authorship fixed in any tangible medium of expression.” The concept of “authorship” has traditionally been interpreted to require human creation, a principle reinforced by judicial and administrative decisions.

- **Human Authorship Requirement:** The US Copyright Office has consistently maintained that only works created by humans can be copyrighted. This was reaffirmed in their March 2023 guidance, which states that works containing AI-generated material are not protectable unless there is a sufficient human creative contribution.¹⁶
- **Key Case Law:**
 - *Burrow-Giles Lithographic Co. v. Sarony*¹⁷: This Supreme Court decision established that photographs are protectable as the author's original intellectual conception, setting a precedent for human authorship.
 - *Thaler v. Perlmutter*¹⁸: In this case, the US District Court for the District of Columbia dismissed Stephen Thaler's attempt to register a copyright for a work created by his AI system, DABUS, ruling that only human-authored works are eligible for protection.
- **AI-Generated Works:** Works generated entirely by AI without human input are not eligible for copyright protection. However, if a human has contributed creatively—such as by selecting, arranging, or editing AI outputs—that human contribution might be protectable. For instance, if a human artist uses AI to generate images but makes significant creative choices in the process, the resulting work could be copyrighted, with the human as the author. The US Copyright Office's January 2025 report,

¹⁵ United States Copyright Act 1976, 17 U.S.C.

¹⁶ US Copyright Office, ‘Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence’ (2023) 88 *Federal Register* 16189 <<https://www.federalregister.gov/documents/2023/03/16/2023-05321/copyright-registration-guidance-works-containing-material-generated-by-artificial-intelligence>> accessed 25 February 2025.

¹⁷ [1884] 111 US 53.

¹⁸ [2022] 1:21-cv-01527 (D DC).

“Copyright and Artificial Intelligence, Part 2: Copyrightability,” confirms that human creativity remains central, with protection possible when human-authored content is incorporated, significantly modified, or creatively arranged.¹⁹

- **Ownership:** Under US law, the initial owner of the copyright is the author, defined as the human creator. In cases involving AI, the human who directs or controls the AI's output, providing creative input, is likely considered the author. This aligns with the Office's guidance, which emphasizes human involvement.
- **Training Data and Fair Use:** A significant area of contention is the use of copyrighted material to train AI models. Some argue this falls under fair use, while others, including rightsholders, see it as potential infringement. This issue is not yet resolved, with cases like *Getty Images (US) Inc v Stability AI Inc*²⁰ highlighting disputes over AI training data, though not directly addressing copyrightability of outputs. As of April 2024, several lawsuits, such as those by artists against AI platforms, claim infringement, with no definitive answer yet.²¹

II. United Kingdom:

The UK's copyright law is governed by the Copyright, Designs and Patents Act 1988 (CDPA). Section 9(3)²² of this Act defines the author of a computer-generated work as “the person by whom the arrangements necessary for the creation of the work are undertaken.” This provision allows for the protection of works generated by computers, including those created by AI, provided that there is no human author of the work. The 2024 consultation proposes a TDM exception with a rights reservation system, aiming to clarify the use of copyrighted cinematic material in AI training while enhancing transparency a move that could impact studios licensing scripts or performances.²³

¹⁹ US Copyright Office, ‘Copyright and Artificial Intelligence, Part 2: Copyrightability’ (January 2025) <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> accessed 1 March 2025.

²⁰ [2023] 1:23-cv-00135 (D Del).

²¹ Matt Blaszczyk, Geoffrey McGovern, Karlyn D. Stanley, ‘AI and Copyright Law’ *RAND Corporation* (20 November 2024) <<https://www.rand.org/pubs/perspectives/PEA3243-1.html>> accessed 1 March 2025.

²² Copyright, Designs and Patents Act 1988, s 9(3).

²³ UK Intellectual Property Office, ‘Copyright and Artificial Intelligence’ (17 December 2024) <<https://www.gov.uk/government/consultations/copyright-and-artificial-intelligence/copyright-and-artificial-intelligence>> accessed 2 March 2025.

- **Computer-Generated Works:** AI-generated works without significant human input can be considered computer-generated works, and the person who arranged for their creation is deemed the author. This is distinct from the US, EU, and India, where purely AI-generated works are generally not protectable without human creative input.
- **Originality Requirement:** For the work to be protected, it must be original, meaning it must be the author's own intellectual creation. The question is whether the person who made the arrangements has provided sufficient creative input to meet this standard. The UK's Intellectual Property Office (IPO) guidance from 2019²⁴ and 2022 suggests that the person who sets the AI to generate the work might be considered the author, provided their arrangements constitute an intellectual creation.
- **Key Case Law:** There is no direct case law on AI-generated works, but cases like *Antiquesportfolio.com Ltd v Rodney Fitch & Co Ltd*²⁵ discuss the originality requirement for computer-generated works, suggesting that the human arranger must exercise creative judgment.
- **Ownership:** The person who made the arrangements necessary for the creation of the work is the author and first owner of the copyright, assuming the work meets the originality requirement.
- **Training Data:** The UK has implemented TDM exceptions similar to the EU, allowing the use of copyrighted material for certain purposes, which is relevant for AI training, under section 29A of the 1988 Act. This is governed by the Copyright and Related Rights Regulations 2019, which came into force on 6 April 2019, aligning with the EU's DSM Directive during the transition period post-Brexit.

III. European Union:

The EU's copyright framework is governed by directives like Directive 2001/29/EC (InfoSoc

²⁴ Copyright and Related Rights (Marrakesh Treaty etc.) (Amendment) Regulations 2019, SI 2019/605 <<https://www.legislation.gov.uk/uksi/2019/605/contents>> accessed 2 March 2025.

²⁵ [2001] FSR 23.

Directive)²⁶ and Directive 2019/790/EU (DSM Directive)²⁷, with protection granted to “original works” that are the “author’s own intellectual creation,” as established by the Court of Justice of the European Union (CJEU) in cases like *Cofemel-Sociedade de Vestuário SA v G-Star Raw CV*²⁸. This standard requires a human author to exercise creative choices, reflecting personal intellectual effort.

- **Human Authorship Requirement:** Works generated autonomously by AI—without significant human input—do not clearly meet this threshold, as the CJEU has not ruled on a case directly involving AI-generated content. Consequently, purely AI-generated works are unlikely to qualify for copyright protection under current EU law, though this remains untested in court. Where human involvement is significant (e.g., through prompts, editing, or curation), the resulting AI-assisted output may be protected if it demonstrates the human author’s creative contribution.
- **Key Legislation:** The EU Artificial Intelligence Act²⁹, adopted on 13 March 2024 and published on 12 July 2024, addresses AI governance but does not directly resolve the copyright status of AI-generated works. Instead, it focuses on regulating AI development, particularly the use of copyrighted material in training generative AI models. Article 53 requires providers of general-purpose AI models to comply with EU copyright law and provide a “sufficiently detailed summary” of the content used to train their models, aiming to enable rightsholders to enforce their rights under the DSM Directive’s text and data mining (TDM) exceptions (Articles 3 and 4).³⁰

²⁶ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10 <<https://eur-lex.europa.eu/eli/dir/2001/29/oj/eng>> Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10 <https://eur-lex.europa.eu/eli/dir/2001/29/oj/eng> accessed 1 March 2025.

²⁷ Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market [2019] OJ L130/92 <<https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng>> accessed 1 March 2025.

²⁸ [2019] ECLI:EU:C:2019:721.

²⁹ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending certain Union legislative acts (Artificial Intelligence Act) [2024] OJ L1689 <<https://eur-lex.europa.eu/eli/reg/2024/1689/oj/eng>> accessed 2 March 2025.

³⁰ European Commission, ‘Artificial Intelligence and Copyright: Use of Generative AI Tools to Develop New Content’ (16 July 2024) <https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/artificial-intelligence-and-copyright-use-generative-ai-tools-develop-new-content-2024-07-16-0_en> accessed 2 March 2025.

- **TDM Exceptions:** The DSM Directive allows TDM, including for AI training, under two exceptions:
 - Article 3 permits TDM by research organizations for scientific purposes, with no opt-out for rightsholders.
 - Article 4 allows TDM by anyone for any purpose, provided the material is lawfully accessed and rightsholders have not expressly reserved their rights (e.g., via machine-readable opt-outs). This has been contentious, with critics arguing it inadequately protects creators whose works are scraped for AI training.
- **Ownership of AI-Generated Content:** EU law does not explicitly recognize AI as an author. Copyright likely vests in the human contributor (e.g., the prompter or editor) if their input meets the originality threshold. Purely AI-generated works are generally considered unprotected, though this is not codified and awaits judicial clarification.

2.5 Comparative Analysis

The following table highlights key differences and similarities across the US, EU, UK, and India:

Aspect	United States	European Union	United Kingdom	India
Legal Basis	Copyright Act of 1976, human authorship required	Directives 2001/29/EC, 2019/790/EU, human originality	Copyright, Designs and Patents Act 1988, section 9(3) for computer-generated works	Indian Copyright Act, 1957, human originality
Key Cases/Legislations	<i>Thaler v. Perlmutter</i> (2022), <i>Burrow-Giles</i> (1884); March	<i>Cofemel</i> ³¹ ; AI Act (Regulation (EU) 2024/1689)	Section 9(3), IPO guidance on AI and IP (2019, 2022); <i>Antiquesportfolio.com Ltd</i> ³²	<i>Eastern Book Company</i> (2008), Section 2(d)(vi)

³¹ [2019] ECLI:EU:C: 2019:721.

³² [2001] FSR 23.

	2023 Guidance			
AI-Generated Works	Not protectable without human input	Likely not protectable without human input, AI Act regulates training	Can be protectable as computer-generated works if the arranger's input constitutes an intellectual creation	Likely not protectable without human input, computer-generated works author is prompt-giver
Ownership	Human who provides creative input is author	Human contributor likely author, unclear for pure AI	Person who made the arrangements necessary for the creation of the work is the author	Human who directs AI likely author, unclear for pure AI
Training Data	Debated, potential fair use or infringement	TDM exceptions (Articles 3, 4 DSM Directive), debated	TDM exception under section 29A of the 1988 Act, similar to EU	Not addressed, potential for future debate
Recent Developments	March 2023 guidance from Copyright Office	AI Act (2024), ongoing debates on DSM Directive	Ongoing debates, no specific case law on AI-generated works	No specific guidance, policy discussions ongoing

3. Generative AI in Film Production

3.1 Synthetic Actors: Technology and Application

Synthetic actors, sometimes called “digital humans” or “virtual actors,” are built using a combination of techniques:

- **Motion Capture:** Recording a real actor’s movements and mapping them onto a digital model.

- **Performance Capture:** Going beyond movement to capture facial expressions and subtle performance nuances.
- **Deepfakes:** Using deep learning to superimpose one person's face onto another's body, creating a convincing but fabricated performance.
- **Generative Adversarial Networks (GANs):** Used to generate realistic images and videos, often refining the results of motion and performance capture.

This technology allows filmmakers to do things that were previously impossible: de-age actors, bring back deceased performers, create entirely fictional characters, and even mitigate risks by avoiding dangerous stunts or costly reshoots. We have seen this in action with the digital recreation of Peter Cushing in *Rogue One: A Star Wars Story*³³ and the young Mark Hamill in *The Mandalorian*.³⁴

3.2 AI-Generated Scripts and Storytelling

AI-powered scriptwriting tools can:

- **Generate Dialogue:** Create dialogue based on character profiles and plot outlines.
- **Develop Story Ideas:** Suggest plot points, character arcs, and narrative structures.
- **Analyze Existing Scripts:** Identify patterns and trends in successful films to inform new scripts.
- **Adapt Scripts:** Tailor scripts to specific audiences or cultural contexts.

These tools typically use large language models (LLMs) trained on massive datasets of scripts and literature. While AI-generated scripts can be surprisingly coherent, they often lack the depth and emotional resonance of human writing. The short film *Sunspring* was written entirely

³³ Khomami N, 'Rogue One's resurrection of Peter Cushing is a digital milestone – but is it ethical?' *The Guardian* (London, 16 January 2017) <<https://www.theguardian.com/film/2017/jan/16/rogue-one-vfx-jon-knoll-peter-cushing-ethics-of-digital-resurrections>> accessed 27 February 2025.

³⁴ Respeecher, 'Respeecher Synthesized Younger Luke Skywalker's Voice for Disney's The Mandalorian' (Case Study) <<https://www.respeecher.com/case-studies/respeecher-synthesized-younger-luke-skywalkers-voice-disneys-mandalorian>> accessed 25 February 2025.

by an AI,³⁵ and while it's an interesting experiment, it highlights both the potential and the limitations. In *Zone Out*, AI played a role in story development.³⁶

3.3 AI in Pre-Production, Production, and Post-Production

AI's influence extends beyond actors and scripts³⁷

- **Pre-Production:** AI can help with casting, location scouting, and budget planning.
- **Production:** AI-powered cameras can track actors and automatically adjust focus.
- **Post-Production:** AI can automate tasks like visual effects, color grading, and sound editing.

4. Copyright Challenges in the Age of AI

4.1 Defining Authorship and Ownership: The Indian Context

This is the crux of the matter. The Indian Copyright Act, as we have discussed, assumes a human author.³⁸ With AI-generated content, who fits that role? We have several possibilities:

- **The Programmer:** The person who created the AI algorithm.
- **The User:** The person who provides the prompts or parameters that guide the AI.
- **The AI Itself:** Could the AI be considered an autonomous creative agent?
- **No One:** The work falls into the public domain because it lacks a human author.

Indian courts have not directly ruled on this yet. However, based on existing jurisprudence, it is likely they will favour a human-centric approach. They will probably require some

³⁵ Patrick S Allen, 'Scientist of the Holy Ghost: *Sunspring* and Reading Nonsense' (2020) 60(4) *Journal of Cinema and Media Studies* <<https://quod.lib.umich.edu/cgi/t/text/idx/jcms/18261332.0060.501/--scientist-of-the-holy-ghost-sunspring-and-reading-nonsense?rgn=main;view=fulltext>> accessed 25 February 2025.

³⁶ Angela Watercutter, 'AI Filmmaker Tries to Make a Movie—and Succeeds, Sort Of' *Wired* (15 October 2021) <<https://www.wired.com/story/ai-filmmaker-zone-out/>> accessed 25 February 2025.

³⁷ Siranush Andriasyan, 'How Artificial Intelligence is Used in the Film Industry' (SmartClick) <<https://smartclick.ai/articles/how-artificial-intelligence-is-used-in-the-film-industry/>> accessed 25 February 2025.

³⁸ Indian Copyright Act 1957, s 17.

significant degree of human involvement and creative control for copyright to exist. The programmer or the user who provides substantial creative input might be considered the author, depending on the specific circumstances. It remains to be seen whether Indian courts would recognize the AI itself as an author.

4.2 Originality, Creativity, and Infringement

“Originality” is the cornerstone of copyright. In India, it does not mean the work has to be completely novel, but it must originate from the author and not be a mere copy.³⁹ It needs to involve some minimal creativity and the exercise of skill and judgment.

AI-generated content throws up several tricky questions about originality:

- **Training Data:** If an AI is trained on a dataset that includes copyrighted works, can its output be considered truly “original”? This is a huge issue, as most generative AI models rely on massive datasets.
- **Human Input:** How much human input is needed to make an AI-generated work “original”? Is simply typing a prompt into an AI enough, or does the user need to exert more substantial creative control?
- **Infringement:** Can an AI-generated work infringe on an existing copyright? If an AI generates a script or a synthetic actor’s performance that is very similar to a copyrighted work, could that be considered infringement?

These questions are inherently complex, and courts will likely need to craft new legal frameworks to assess originality and infringement in the context of AI-generated works. The fair dealing provisions under Section 52 of the Indian Copyright Act⁴⁰, which permit limited use of copyrighted material without authorization, may also play a pivotal role in resolving such disputes. For example, in the ongoing litigation against OpenAI initiated by Indian publishers, the central contention revolves around whether the use of copyrighted works to train AI models constitutes infringement. OpenAI, on the other hand, may rely on fair dealing exceptions, such as use for research or private study, to defend its practices. The Delhi High

³⁹ *Eastern Book Company v DB Modak*, (2008) 1 SCC 1.

⁴⁰ Indian Copyright Act 1957, s 52.

Court, which is scheduled to hear the case in March 2025⁴¹, faces the challenging task of balancing the rights of copyright holders with the broader public interest in fostering AI innovation. This case could establish a landmark precedent, shaping how fair dealing exceptions are interpreted in the context of AI and machine learning, and potentially influencing the future trajectory of copyright law in the digital age.

4.3 Moral Rights and Synthetic Performances

Moral rights, protected under Section 57 of the Indian Copyright Act, give authors the right to claim authorship and to prevent distortions of their work. These rights are particularly relevant when we talk about synthetic actors.

- **Deceased Actors:** Can the moral rights of a deceased actor be violated by creating a synthetic performance? This raises ethical and legal questions, especially if the synthetic performance portrays the actor in a way that might be considered disrespectful.
- **Exercising Moral Rights:** Who has the authority to exercise the moral rights of a deceased actor? The Act says these rights can be exercised by the author's legal representatives, but how this applies to synthetic performances is unclear.

4.4 The “Work Made for Hire” Doctrine and AI

Under Indian copyright law, in some cases, the employer is considered the first owner of the copyright in a work created by an employee during their employment. This is the “work made for hire” doctrine (Section 17).⁴²

- **AI as “Employee”?** If a film studio uses an AI to generate a script or a synthetic actor's performance, could the studio claim ownership under this doctrine? This hinges on whether the AI could be considered an “employee” or whether the human user's contribution is enough to establish an employer-employee relationship. The current law does not provide a clear answer.

⁴¹ Aklovy Panwar and Vatsalya Vishal, ‘Hearing in Copyright Case Against OpenAI Brought by Indian Publishers Set for March’ *TechPolicy.press* (14 February 2025) <<https://www.techpolicy.press/hearing-in-copyright-case-against-openai-brought-by-indian-publishers-set-for-march/>> accessed 27 February 2025.

⁴² Indian Copyright Act 1957, s 17.

5. Case Studies and Legal Precedents

5.1 International Cases

- ***Thaler v Comptroller-General of Patents Designs and Trademarks*⁴³**: This UK case involved an attempt to patent an invention with an AI named DABUS as the inventor. The court ruled that only a human can be an inventor. While this was a patent case, the reasoning about human inventorship is relevant to copyright.
- ***Naruto v Slater*⁴⁴**: This US case involved a copyright claim over a selfie taken by a monkey. The court ruled that the monkey could not hold copyright, reinforcing the principle that copyright is for human authors.
- ***Feist Publications, Inc., v. Rural Telephone Service Co.*⁴⁵**: This US Supreme Court case established that copyright requires a “modicum of creativity.” This standard, while from the US, provides a useful framework for thinking about the originality of AI-generated works.
- ***Getty Images (US), Inc. v. Stability AI, Inc.*⁴⁶**: This ongoing US case, concerning the unauthorized use of copyrighted images to train AI, will likely have a major impact on the legality of AI training practices globally.

5.2 Hypothetical Scenarios in the Indian Context

- **Scenario 1**: A Bollywood studio uses an AI system to generate a script for a new film. The AI is trained on a dataset of existing Bollywood scripts, and the studio provides only minimal prompts to the AI. Who owns the copyright to the script?
- **Scenario 2**: A filmmaker uses deepfake technology to create a synthetic performance of a deceased Indian actor. The actor’s family objects, claiming that the performance violates the actor’s moral rights. Can the family successfully sue for copyright infringement or violation of moral rights?

⁴³ *Thaler v Comptroller-General of Patents Designs and Trademarks* [2021] EWCA Civ 1374.

⁴⁴ *Naruto v Slater* 888 F 3d 418 (9th Cir 2018).

⁴⁵ *Feist Publications Inc v Rural Telephone Service Co* 499 US 340 (1991).

⁴⁶ *Getty Images (US) Inc v Stability AI Inc* 1:23-cv-00135 (D Del 2023).

- **Scenario 3:** An independent filmmaker creates a film using an AI-generated script. The generated script is very similar to an existing, older film script. Does that count as copyright infringement.

5.3 Analysis of *Roadrunner: A Film About Anthony Bourdain* and Similar Cases

The *Roadrunner* documentary used AI to make Anthony Bourdain's voice say things he had written but never spoken aloud.⁴⁷ This sparked a debate about the ethics of using AI to recreate deceased individuals, even if the underlying words were theirs. While there wasn't a legal challenge, it highlights the concerns about moral rights and potential misrepresentation. Similar cases, involving digital resurrections of actors for new films, are likely to face legal challenges in the future, particularly concerning the right of publicity and unfair competition.

5.4 The 2023 Hollywood Strikes and their Implications

The 2023 Writers Guild of America (WGA) and Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) strikes were heavily influenced by fears about AI's role in film and TV.⁴⁸ The agreements reached between the unions and the studios include provisions that:

- **Limit AI's Use in Writing:** Studios cannot use AI to write or rewrite material that would traditionally be done by a writer.
- **Require Consent and Compensation for Digital Replicas:** Studios must get an actor's consent before creating or using their digital replica, and they must compensate the actor for its use.

These agreements are a significant step towards setting industry norms for the ethical and legal use of AI. They provide a framework for protecting human creators while acknowledging AI's potential. However, they are contractual agreements, not laws, and their long-term impact on copyright law remains to be seen.

⁴⁷ Julia Jacobs, 'A.I. Re-Created Anthony Bourdain's Voice in a New Documentary. Should It Have?' *The New York Times* (New York, 16 July 2021) <<https://www.nytimes.com/2021/07/16/movies/anthony-bourdain-ai-voice.html>> accessed 27 February 2025.

⁴⁸ Antonio Pequeño IV, 'SAG-AFTRA Reaches Tentative Deal with Studios to End Strike' *Forbes* (8 November 2023) <<https://www.forbes.com/sites/antoniopequenoi/2023/11/08/sag-aftra-reaches-tentative-deal-with-studios-to-end-strike/>> accessed 27 February 2025.

6. Ethical and Economic Implications

6.1 Ethical Considerations

- **Devaluation of Human Creativity:** The rise of AI in creative fields raises the question: What is the value of human skill and artistry if AI can generate comparable outputs?
- **Appropriation of Identity:** Creating synthetic actors based on real people, especially deceased individuals, raises concerns about identity appropriation and potential misuse. Unauthorized use of someone's likeness could damage their reputation or violate their privacy.
- **Transparency:** Audiences deserve to know if they're watching a human performance or an AI-generated one. Lack of transparency could erode trust in the film industry.

6.2 Economic Impact

- **Job Displacement:** AI could lead to job losses for writers, actors, and other creative professionals. This is a particularly serious concern with synthetic actors, who could potentially replace background actors or even lead actors in some cases.
- **Revenue Sharing:** How do we fairly distribute revenue from AI-generated works? Should the programmers, users, studios, or the owners of the training data share in the profits? The lack of clear legal rules creates uncertainty and potential for disputes.
- **Market Disruption:** Widespread AI adoption could significantly disrupt the film industry's economic model, potentially favouring large studios with the resources to invest in AI over smaller independent filmmakers.

7. Policy and Regulatory Implications

7.1 Legislative Proposals

Several policy ideas have been suggested to address AI's challenges:

- **Clarifying Authorship:** Copyright law could be amended to define when AI-generated works are eligible for protection and who the author is (e.g., the programmer, user, or

a combination). A “sui generis” right – a new type of intellectual property specifically for AI-generated works could also be considered.

- **Expanding Moral Rights:** Laws could extend moral rights to protect individuals’ likenesses from unauthorized use in synthetic performances, even after death.
- **Defining Fair Use of Copyrighted material for AI.** Legislation that permits and regulates AI use of copyrighted content.

7.2 Registration and Disclosure: Fostering Transparency and Accountability

Given the potential for confusion and misuse surrounding AI-generated content, establishing mechanisms for registration and disclosure is crucial. These mechanisms would serve several important purposes:

- **Clarifying Ownership:** A registration system, whether voluntary or mandatory, could provide a clear record of who claims ownership of an AI-generated work. This would be particularly helpful in situations where multiple parties (e.g., the programmer, the user, the owner of the training data) might have a potential claim. The registration process could require applicants to specify the nature and extent of human contribution, helping to distinguish between works that are primarily AI-generated and those that involve substantial human creativity.
- **Facilitating Licensing:** A registry would make it easier for others to identify and contact the copyright holder of an AI-generated work, facilitating licensing and permission requests. This is particularly important in the context of commercial filmmaking, where rights clearance is essential.
- **Promoting Transparency:** Mandatory disclosure requirements would ensure that audiences are aware when AI has played a significant role in creating a film. This transparency is vital for maintaining trust and preventing deception. For example, films could be required to include a credit indicating the use of synthetic actors or AI-generated scripts. This is analogous to existing requirements for disclosing visual effects or product placement.
- **Enabling Enforcement** Creating a system for registering AI will help in enforcement

of copyright and the new provision made for the AI generated content.

The specifics of a registration system would need careful consideration. It could be modelled on existing copyright registration systems, but with modifications to address the unique aspects of AI-generated works. For example, the registration process might require:

- **Disclosure of the AI tools used:** Specifying the name and version of the AI software used to generate the content.
- **Description of the human input:** Detailing the nature and extent of human contribution, such as prompts provided, parameters set, and editing performed.
- **Information about the training data:** Providing general information about the type of data used to train the AI model, without necessarily disclosing the specific copyrighted works included in the dataset. This would strike a balance between transparency and protecting the confidentiality of training data.

Disclosure requirements could be implemented through legislation or industry self-regulation. The key is to ensure that audiences are adequately informed about the use of AI without imposing overly burdensome requirements on filmmakers. A balanced approach is needed, one that promotes transparency without stifling creativity or creating unnecessary administrative hurdles. Finding the right balance will be an ongoing process of refinement, requiring input from filmmakers, legal experts, and technology developers. This system will ensure the legality and avoid any legal battle that could arise due to use of Generative AI.

7.3 International Harmonization

The film industry is global, so international cooperation is essential to create consistent legal standards for AI-generated content. Harmonizing copyright laws and regulations would reduce legal uncertainty and encourage cross-border collaboration. This could involve treaties, agreements, or the development of model laws that different countries could adopt.

8. Future Trends and Recommendations

8.1 Technological Forecasting

Generative AI is not standing still. We can anticipate:

- **Even More Realistic Synthetic Actors:** The line between real and synthetic will become increasingly blurred, making it almost impossible to distinguish between a human actor and a digital creation.
- **More Sophisticated AI Scriptwriting:** AI will become capable of generating more complex, nuanced, and emotionally resonant narratives, potentially even collaborating with human writers.
- **Pervasive AI Integration:** AI will be used in almost every aspect of filmmaking, from pre-visualization and casting to distribution and marketing.

8.2 Legal and Regulatory Strategies: Specific Amendments to the Indian Copyright Act

The Indian Copyright Act 1957 needs targeted amendments to address the unique challenges of generative AI. Here are some specific recommendations:

- **Amend Section 2(d)⁴⁹ (Definition of “Author”):** The definition of “author” should be expanded to encompass AI-generated works. One approach, inspired by the UK model, would be to define the author of a computer-generated work as “the person by whom the arrangements necessary for the creation of the work are undertaken.” This would likely cover the programmer or the user who provides significant creative direction. It’s crucial to avoid granting authorship to the AI itself, as this would create significant legal and philosophical complications.
- **Amend Section 13⁵⁰ (Works in Which Copyright Subsists):** Explicitly clarify whether or not, and under what conditions, copyright subsists in purely AI-generated works (those with minimal human input). This could involve setting a threshold for human creative contribution.
- **Amend Section 17⁵¹ (“First Owner of Copyright”):** The “work made for hire” doctrine needs clarification in the context of AI. The law should explicitly state whether an AI system can be considered an “employee” for copyright purposes. It’s more likely

⁴⁹ Indian Copyright Act 1957, s 2(d).

⁵⁰ Indian Copyright Act 1957, s 13.

⁵¹ Indian Copyright Act 1957, s 17.

that the law would treat the *user* of the AI as the relevant party in a “work made for hire” situation, provided they meet the existing criteria for an employment relationship.

- **Amend Section 57⁵² (Moral Rights):** Strengthen the protection of moral rights, especially concerning the use of a person’s likeness in synthetic performances. This should include extending moral rights posthumously to protect against unauthorized digital recreations of deceased individuals. The duration and scope of these posthumous rights would need careful consideration.
- **Consider New Provisions Specific to AI-Generated Works:** A new chapter or section within the Copyright Act dedicated to AI-generated works could address:
 - **A Registration System:** A voluntary or mandatory registration system for AI-generated works could provide clarity of ownership and facilitate licensing.
 - **Disclosure Requirements:** Filmmakers could be required to disclose when AI has been used to create significant elements of a film, such as synthetic actors or AI-generated scripts. This would promote transparency for audiences.
 - **Rules for Fair Use of Copyrighted Material in AI Training:** The law should address the use of copyrighted material in training AI models. This could involve creating a specific exception for AI training, like existing fair dealing exceptions, but with appropriate safeguards to protect the rights of copyright holders. This is a complex area, and the law will need to balance the interests of AI developers with the interests of creators whose works are used for training.

8.3 Industry Best Practices

Legal reforms alone are not enough. The film industry should also adopt best practices:

- **Develop Ethical Guidelines:** Industry organizations (like film producer associations and actor unions) should create ethical guidelines that address transparency, consent, and the avoidance of harmful stereotypes in AI-generated content. These guidelines

⁵² Indian Copyright Act 1957, s 57.

should cover issues like the use of deceased actors' likenesses and the potential for AI to perpetuate biases.

- **Invest in Training and Skill Development:** As AI becomes more integrated into filmmaking, it is crucial to invest in training programs to help film professionals adapt. This will ensure that human creativity remains central, even as AI tools become more powerful.
- **Draft Clear Collaborative Contracts:** Studios and technology developers should create contracts that explicitly outline the roles, rights, and revenue-sharing arrangements for AI-generated content. This will help prevent disputes and ensure fair compensation for all parties involved.

9. Conclusion

Generative AI is transforming the cinematic landscape, offering incredible creative possibilities while simultaneously posing significant legal and ethical challenges. The Indian Copyright Act, like many copyright laws worldwide, is playing catch-up. It was designed for a world where “authors” were unambiguously human.

Urgent legislative reform is needed to clarify the legal status of AI-generated works. This reform must strike a delicate balance: protecting the rights of human creators, incentivizing innovation, and avoiding overly restrictive regulations that could stifle the development of beneficial AI technologies. We need to define authorship in a way that recognizes the human contribution to AI-generated works, while also acknowledging the role of the AI itself. We need to strengthen moral rights to protect individuals from the misuse of their likenesses, and we need to address the complex issue of using copyrighted material to train AI models.

Beyond legal changes, the film industry must embrace ethical best practices and transparency. Collaboration between filmmakers, technologists, legal experts, and policymakers is essential to navigate this new terrain. The goal is to harness the power of AI to *enhance*, not *replace*, human artistry in the cinematic universe, ensuring a future where technology and human creativity can flourish together. We must ensure the law evolves to reflect the realities of this new creative landscape, upholding the fundamental principles of copyright while embracing the potential of AI.