

COPYRIGHT IN THE GENERATIVE AI ERA: REIMAGINING CREATIVITY AND FAIRNESS

This article examines the need for copyright reform in response to the transformative impact of generative AI. It identifies key legal challenges, including the absence of clear criteria for authorship, and the infringement risks associated with both inputs (training of large language models) and outputs (AI-generated content). The authors contend that two overarching themes will drive the development of copyright law: creativity and fairness. Through a comparative analysis of how three jurisdictions – US, China and Singapore – have addressed these challenges, the article offers practical and forward-looking insights for navigating the complex copyright landscape of the generative AI era.

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I. Introduction

1 Artificial intelligence (“AI”) is a transformative technology with the potential to fundamentally reshape society. Policymakers and industry leaders increasingly anticipate that generative AI will profoundly impact sectors such as publishing, journalism, the arts and entertainment. The release of ChatGPT by OpenAI in November 2022 brought generative AI into the global public awareness, and the application has been dominating news headlines since, with OpenAI

1 The author’s research focuses on generative AI, deepfakes, and agentic AI across the legal systems of China, Singapore, and the US, examining how different legal traditions respond to the normative and structural challenges posed by emerging technologies. The author would like to thank Associate Professors Jason Grant Allen, Han-Wei Liu, and Bing Tian Dai for their helpful comments on earlier drafts of this article.

facing a litany of lawsuits.² The platform attracted over 100 million users within two months of its launch, setting a record for the fastest adoption of any digital service in history.³ Google today promotes Gemini, which can generate text, video, images and code, and is planning to make it available to young children.⁴ In June 2025, Midjourney, widely considered to be the leading AI image generator with over 20 million users, launched a new AI model V1 that can generate videos, adding to existing offerings such as Open AI's Sora and Google's Veo 3.⁵ In China, DeepSeek has emerged as one of the leading large language models ("LLMs"), reflecting the country's rapid progress in generative AI development.⁶ These developments illustrate the growing capacity of generative AI systems to compete in domains traditionally regarded as the exclusive province of human creators.

2 However, the rapid adoption of generative AI has introduced unprecedented challenges to copyright law, particularly as AI-generated works become increasingly prevalent in creative industries. Copyright law has historically been designed to incentivise the creation of original works by granting creators a limited set of exclusive rights.⁷ At the core of this framework lies the principle of human authorship.⁸ The United States Copyright Office ("USCO") has provided early guidance on this issue with a report released in January 2025 titled, *Copyright*

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- 2 OpenAI, "Introducing ChatGPT" (30 November 2022) <<https://openai.com/blog/chatgpt>> (accessed 26 June 2025). For an update of the lawsuits, see Joe Panettieri, "Generative AI Lawsuits Timeline: Legal Cases vs. OpenAI, Microsoft, Anthropic, Nvidia, Perplexity, Intel and More", *Sustainable Tech Partner* <<https://sustainabletechpartner.com/topics/ai/generative-ai-lawsuit-timeline/>> (accessed 30 August 2025).
 - 3 NapSaga, "Chat GPT: Achieving 100 Million Users in Just 2 Month – A Deep Analysis", *Medium* (2 May 2023) <<https://ai.plainenglish.io/chat-gpt-achieving-100-million-users-in-just-2-month-a-deep-analysis-a453e6f85acf>> (accessed 30 August 2025).
 - 4 Google, "Introducing Gemini: Our Largest and Most Capable AI Model", *Google Blog* (6 December 2023) <<https://blog.google/technology/ai/google-gemini-ai/>> (accessed 25 November 2025); Ange Lavoipierre, "Google AI Chatbot, Gemini, to be Available to Aussie Kids under 13 Within Months", *ABC News* (8 May 2025) <<https://www.abc.net.au/news/google-gemini-ai-launch-australian-kids/105267302>> (accessed 25 November 2025).
 - 5 Midjourney, "Introducing Our V1 Video Model", *Midjourney Updates* (18 June 2025) <<https://updates.midjourney.com/introducing-our-v1-video-model/>> (accessed 25 November 2025).
 - 6 DeepSeek AI, Official Website <<https://www.deepseek.com>> (accessed 30 August 2025).
 - 7 Shyamkrishna Balganes, "Foreseeability and Copyright Incentives" (2009) 122 *Harvard Law Review* 1569.
 - 8 See, eg, Hafiz Gaffar & Saleh Albarashdi, "Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape" (2025) 15 *Asian Journal of International Law* 23 at 24.

and Artificial Intelligence – Part 2: Copyrightability⁹ (“USCO Gen AI Copyrightability Report”). The US has emerged as a central forum for copyright disputes involving generative AI, including class actions brought by authors, artists, and media organisations. At the time of writing, there are at least three dozen lawsuits filed in the US since the start of 2023 against companies such as OpenAI and Stability AI for using copyright-protected works in the training of various AI systems,¹⁰ but there has been no judicial ruling on the merits as yet. High-profile lawsuits such as *Getty Images (US) Inc v Stability AI Inc*,¹¹ *Authors Guild v OpenAI Inc*,¹² *The New York Times Co v Microsoft Corp*,¹³ *Andersen v Stability AI Ltd*,¹⁴ and most recently the first lawsuit by major Hollywood studios over AI-generated images, *Disney Enterprises Inc v Midjourney Inc*¹⁵ (“*Disney v Midjourney*”), are indicative of the growing concerns over the unauthorised use of copyrighted materials for generative AI training purposes. On 6 May 2025, after a lengthy public consultation process, the USCO released a “pre-publication version” of the report titled, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (“USCO Gen AI Training Report”).¹⁶ Shortly thereafter, the Trump administration controversially dismissed Shira Perlmutter, the

9 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> (accessed 30 August 2025).

10 See, eg, *Raw Story Media Inc v OpenAI Inc* No 1:24-cv-01514 (22 August 2024, SDNY) (US); *Zhang v Google LLC* No 3:24-cv-02531 (24 April 2024, ND Cal) (US); *Nazemian v Nvidia Corp* No 3:24-cv-01454 (8 March 2024, ND Cal) (US); *Tremblay v OpenAI* No 3:23-cv-03223 (16 February 2024, ND Cal) (US); *Getty Images (US) Inc v Stability AI Inc* No 1:23-cv-00135 (3 February 2023, D Del) (US); and *Silverman v OpenAI Inc* No 3:23-cv-03416 (7 July 2023, ND Cal) (US).

11 No 1:23-cv-00135 (3 February 2023, D Del) (US).

12 No 1:23-cv-08292 (19 September 2023, SDNY) (US).

13 No 1:23-cv-11195 (27 December 2023, SDNY) (US).

14 No 3:23-cv-00201 WHO (13 January 2023, ND Cal) (US). This is the first lawsuit filed against a corporation in the US for the use of an artist’s works for generative AI training. The district court has found the claims against Stability AI to be plausible but has asked the plaintiffs to clarify their claims against DeviantArt and Midjourney. See *Andersen v Stability AI Ltd* 744 F Supp 3d 956 (ND Cal, 2024).

15 No 2:25-cv-05275 (11 June 2025, CD Cal) (US). See also Brooks Barnes, “Disney and Universal Sue A.I. Firm for Copyright Infringement”, *The New York Times* (11 June 2025) <<https://www.nytimes.com/2025/06/11/business/media/disney-universal-midjourney-ai.html>> (accessed 30 August 2025).

16 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

Register of Copyrights.¹⁷ Importantly, the USCO Gen AI Training Report concludes:¹⁸

While the use of copyrighted works to power current generative AI systems may be unprecedented in scope and scale, the existing legal framework can address it as in prior technological revolutions. ... Various uses of copyrighted works in AI training are likely to be transformative. ... But making commercial use of vast troves of copyrighted works to produce expressive content that competes with them in existing markets, especially where this is accomplished through illegal access, goes beyond established fair use boundaries.

3 As intellectual property scholar Mark Lemley has observed, generative AI will fundamentally transform our understanding of creativity and copyright law.¹⁹ By blurring the lines between human creation and machine creation, generative AI exposes the limitations of copyright regimes designed in a pre-generative AI era. For instance, an open-ended fair use provision may, as USCO Gen AI Training Report suggests, be able to adequately balance competing interests in each use scenario. However, most jurisdictions around the world do not have such a fair use regime and rely instead on enumerated exceptions, described as fair dealing in many common law systems or as narrowly-defined statutory limitations in civil law systems, which often provide less flexibility for such new technological uses.

4 This article adopts a comparative approach, focusing on the US, China, and Singapore, three jurisdictions that reflect distinct legal traditions, regulatory models, and roles in the global AI landscape. The US remains the centre of copyright jurisprudence and the home of many leading AI companies. China, rooted in a civil law tradition, has emerged as a regulatory front-runner in AI governance with one of the world's largest digital market. Singapore represents a hybrid common law system with a proactive and forward-looking regulatory framework in the Asia-Pacific region. These jurisdictions are selected not only for their legal and economic significance, but also for the diversity they offer in institutional design and normative orientation. Their varied responses provide a valuable spectrum of perspectives to inform broader directions for copyright reform in the generative AI era.

17 Katherine Tully-McManus, "Trump Fires Top US Copyright Official", *Politico* (10 May 2025) <<https://www.politico.com/news/2025/05/10/trump-u-s-copyright-official-00340306>> (accessed 25 November 2025).

18 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 107 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

19 Mark A Lemley, "How Generative AI Turns Copyright Upside Down" (2024) 25 *Columbia Science & Technology Law Review* 190.

5 A thorough discussion of the kaleidoscope of the complex issues that generative AI presents to copyright law is simply not possible here. In this article, the authors contend that two overarching themes will drive the development of copyright law: creativity and fairness. While much of the current debate remains concentrated in Western jurisdictions, this paper introduces a comparative perspective by examining legal developments in China and Singapore. By incorporating Asian legal experiences, the article aims to enrich the global discourse on generative AI and copyright, and to contribute toward a more inclusive and pluralistic foundation for future international harmonisation. Thus, the authors aim to do the following:

- (a) provide an overview of what generative AI presently does and how it implicates copyright concerns (Part II);
- (b) discuss how existing laws in the US, China and Singapore are responding to these challenges (Part III);
- (c) suggest what reforms may be possible going forward (Part IV); and
- (d) offer some concluding remarks (Part V).

II. Understanding generative artificial intelligence

A. *What is generative artificial intelligence*

6 The origins of AI can be traced back to the mid-20th century, a period marked by foundational developments that have profoundly shaped the field. One of the most influential early milestones was the publication of Alan Turing’s seminal paper, “Computing Machinery and Intelligence” in 1950.²⁰ Turing posed the iconic question: “Can machines think?” and introduced the concept that later became known as the “Turing Test” to evaluate a machine’s ability to exhibit intelligent behaviour indistinguishable from that of a human. Turing’s works laid the theoretical groundwork for the development of AI and is still referenced in debates about the capabilities and limitations of machine intelligence.²¹

7 The term “artificial intelligence” was officially coined in 1956 by computer scientist John McCarthy, who is widely regarded as one of the founders of the field. McCarthy later defined AI as “the science and engineering of making intelligent machines, especially

20 Alan M Turing, “Computing Machinery and Intelligence” (1950) 59 *Mind* 433.

21 See, eg, Simon Chesterman, *We, the Robots? Regulating Artificial Intelligence and the Limits of the Law* (Cambridge University Press, 2021) at pp 114–116, 133 and 141.

intelligent computer programs”.²² However, there remains no universally agreed-upon definition of AI. Broadly, AI is understood as a branch of computer science concerned with creating systems capable of performing tasks that traditionally require human intelligence. For instance, the World Intellectual Property Organization (“WIPO”) defines AI as “a discipline of computer science that is aimed at developing machines and systems that can carry out tasks considered to require human intelligence, with limited or no human intervention”.²³

8 Generative AI refers to AI systems capable of producing new content, such as text, images, audio, videos, code and other outputs, in response to user prompts or inputs. These models operate by identifying and encoding patterns and relationships within vast datasets, enabling them to interpret natural language inputs and generate contextually relevant outputs. The operational framework of generative AI typically involves three key phases: (a) training – during which a foundational model is developed by analysing vast datasets which are likely to comprise digitisation of copyright-protected works; (b) tuning – where the foundational model is customised for specific applications or domains; and (c) generation, evaluation, and retuning – in which outputs are produced, assessed and continuously refined to enhance quality and accuracy.²⁴

9 Traditional AI systems are primarily designed for classification, recognition, and prediction, performing tasks such as sorting emails, identifying objects in images, or forecasting user behaviour. In contrast, generative AI applications (“GAIAs”) today create new content by learning from large datasets and producing outputs in response to human prompts. This shift marks a transition from decision-support tools to *content-producing* agents, blurring the distinction between machine-generated and human-made works, and thus raising profound questions regarding authorship. Key architectural advancements underpinning the development of generative AI include Variational Autoencoders (“VAEs”), Generative Adversarial Networks (“GANs”)

22 John McCarthy, “What Is Artificial Intelligence?” (Formal Reasoning Group, Stanford University, revised 12 November 2007) <<https://www-formal.stanford.edu/jmc/whatisai.pdf>> (accessed 22 July 2025).

23 World Intellectual Property Organization, *Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence* (WIPO/IP/AI/2/GE/20/1 Rev, 21 May 2020) <https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_ai_2_ge_20/wipo_ip_ai_2_ge_20_1_rev.pdf> (accessed 31 July 2025).

24 IBM, “What Is Generative AI?” (22 March 2024) <<https://www.ibm.com/topics/generative-ai>> (accessed 2 October 2025). See also Katherine Lee, A Feder Cooper & James Grimmelmann, “Talkin’ Bout AI Generation: Copyright and the Generative-AI Supply Chain” (2024) 72 *Journal of the Copyright Society* 251.

and Diffusion Models, each of which has driven significant progress in generative AI. Another groundbreaking development is transformer architecture, which has revolutionised natural language processing and text generation.²⁵ Transformer-based models, such as Generative Pre-trained Transformer (“GPT”), use self-attention mechanisms to analyse relationships within a sequence of text, enabling them to generate coherent and contextually appropriate outputs.

B. *How does generative artificial intelligence implicate copyright concerns*

10 While technological advancements in generative AI offer significant promise, they also present complex legal challenges. Artists, writers, and other creators have increasingly voiced concerns regarding the unauthorised use of their copyrighted works in the training of generative AI systems, often conducted without attribution or compensation.

(1) Copyrightability of AI-generated output – the creativity paradigm

11 Human authorship remains the *sine qua non* of copyright protection, and its application to AI-generated works raises some of the most pressing legal questions of the digital age. In this context, “authorship” refers to the individual, group, or entity responsible for the creation of an original work. Authorship confers initial exclusive economic rights and, in many jurisdictions, moral rights. Moral rights protect the personal and reputational connection between the creator and the work, safeguarding the integrity of the author’s identity and contribution. Furthermore, the identification of an author is critical to determining the duration of copyright protection, which typically extends 70 years beyond the author’s death. Accordingly, human authorship remains a cornerstone of copyright law, with direct implications for the protection, management, and commercial exploitation of creative works.

12 The economic utilitarian justification for copyright does not explicitly mandate human authorship. However, it does suggest that the delicate balance of various goals would be upset if copyright were conferred on works autonomously generated by AI. It is widely accepted that the primary purpose of copyright as a limited monopoly is to promote the public good by protecting authors and other rights holders from uses of their works that unfairly appropriate the commercial value of their work, and to incentivise the production of more works for the

25 Ashish Vaswani *et al*, “Attention Is All You Need” (1 August 2023) <<http://arxiv.org/abs/1706.03762>> (accessed 18 May 2025).

public benefit.²⁶ Granting copyright protection to only AI-assisted works incentivises to the extent necessary to encourage creativity, without disproportionately preventing reasonable access to works by the public.²⁷

13 One of the most pressing challenges posed by generative AI is determining whether AI-generated outputs may be deemed to be human-authored and hence are eligible for copyright protection. Most of these works of art generated by computers rely heavily on the underlying algorithm and creative input of the programmers; the computers can be regarded as akin to paintbrushes or chisels – they are tools used in the creation of the artworks.²⁸ Jane Ginsburg and Luke Ali Budiardjo referred to the “amanuensis” – who acts as an agent by faithfully carrying out the subordinate task assigned by the principal – as distinct from the author in copyright law, and therefore to whom the attribution of authorship should not be accorded.²⁹ Ginsburg also contends that the “core concept” of authorship in copyright law is the “creativity in conceiving the work and controlling its execution”.³⁰ AI learning, no matter how sophisticated and advanced, only simulates and mimics human mental processes, even though it may surpass them. This universal paradigm of human creativity is borne out in many different jurisdictions around the world, and is most prominently observed in judgments on authorship and copyright subsistence in compilation works.³¹

26 See, eg, *Sony Corp of America v Universal City Studios Inc* 464 US 417 at 429 (1984) and *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [74].

27 See, eg, Singapore Parl Debates; Vol 78, Sitting No 7, Col 1070 [16 November 2004] (Professor S Jayakumar, Minister for Law). Incentivising only to the extent necessary is consistent with legislative intention for Singapore’s copyright regime to preserve “the unimpeded exchange of information and ideas to create an environment which is conducive to the development of creative works”.

28 Andres Guadamuz, “Artificial Intelligence and Copyright”, *WIPO Magazine* (1 October 2017) <<https://www.wipo.int/en/web/wipo-magazine/articles/artificial-intelligence-and-copyright-40141>> (accessed 10 October 2025).

29 Jane C Ginsburg & Luke Ali Budiardjo, “Authors and Machines” (2019) 34 *Berkeley Technology Law Journal* 343 at 355. See also at 360: “Attribution of authorship effectively follows general rules of agency: ‘the physical acts of the agent are attributed wholly to the author’ under whose control and direction the amanuensis acts.” [references omitted]

30 Jane Ginsburg, “The Concept of Authorship in Comparative Copyright Law” (2003) 52 *DePaul Law Review* 1063 at 1067 and 1072.

31 See, eg, *Feist Publications Inc v Rural Telephone Service Co Inc* 499 US 340 at 345 (1991); *IceTV Pty Ltd v Nine Network Australia Pty Ltd* (2009) 239 CLR 458 at [22], [24]–[26], [33] and [95]–[99]; *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [24] and [28]; David Tan, “Copyright in Compilations: Embarking on a Renewed Quest for the Human Author and the Creative Spark” (2013) 18 *Media & Arts Law Review* 151.

14 The Court of Justice of the European Union (“CJEU”) in *Cofemel-Sociedade de Vestuário SA v G-Star Raw CV*³² emphatically held that: “the fact remains that the circumstance that a design may generate an aesthetic effect does not, in itself, make it possible to determine whether that design constitutes an intellectual creation reflecting the freedom of choice and personality of its author”.³³ Specifically, “it is both necessary and sufficient that the subject matter reflects the personality of its author, as an expression of his free and creative choices”.³⁴ To acquire copyright in a work, European courts today require that the author must be able to express his or her creative abilities in the production of the work by making free and creative choices.³⁵ This requirement of human creativity in authorship is inextricably intertwined with originality. Jyh-An Lee notes that originality “reflects the author’s creativity in the copyright work”.³⁶ Similarly, Anna Shtefan has compellingly argued that creativity is “a process of personal expression” and “it includes both self-knowledge and cognition and re-thinking of the world”,³⁷ similar to the CJEU’s conception of intellectual creation in European copyright jurisprudence.

(2) *Infringement – fairness and balancing interests*

15 The challenges that generative AI technologies present for copyright infringement analysis arise in two key areas: (a) the input data used to train AI models; and (b) the output content they generate. On the input side, generative AI models rely on vast datasets, many of which include copyrighted materials. The use of such materials without authorisation may constitute copyright infringement.³⁸ In order for

32 Judgment of 12 September 2019, *Cofemel-Sociedade de Vestuário SA v G-Star Raw CV*, Case C-683/17, EU:C:2019:721.

33 Judgment of 12 September 2019, *Cofemel-Sociedade de Vestuário SA v G-Star Raw CV*, Case C-683/17, EU:C:2019:721 at [54].

34 Judgment of 12 September 2019, *Cofemel-Sociedade de Vestuário SA v G-Star Raw CV*, Case C-683/17, EU:C:2019:721 at [30].

35 *Eva-Maria Painer v Standard Verlags GmbH* Case C-145/10, [2011] ECR I-12533 at [87]–[89] and [94].

36 Jyh-An Lee, “Computer-Generated Works Under the CDPA 1988” in *Artificial Intelligence & Intellectual Property* (Jyh-An Lee, Reto Hilty & Kung-Chung Liu eds) (Oxford University Press, 2021) at pp 171 and 184.

37 Anna Shtefan, “Creativity and Artificial Intelligence: A View From the Perspective of Copyright” (2021) 16 *Journal of Intellectual Property Law & Practice* 720 at 721. See also Wee Liang Tan & David Tan, “AI, Author, Amanuensis” (2022) 6 *Journal of Intellectual Property Studies* 1 at 13 (agreeing with Shtefan that “the rejection of creativity as the basis of copyright would be unacceptable”).

38 David Tan, “Generative AI and Copyright: Part 1– Copyright Infringement” [2023] SAL Prac 24.

ChatGPT to respond to the questions or commands posed by human individuals, it needs to have access to millions or even billions of literary works – many of which are protected by copyright – in order to produce fully fleshed-out answers and results. Often referred to as the input of data for machine learning or machine training, an AI system must be “fed” the relevant works in order for it to function effectively. OpenAI had previously revealed that in its earlier AI models, eg, GPT-1, it had accessed BookCorpus which had a collection of over 7,000 unique unpublished books. In 2020, while training GPT-3, the datasets came from two internet-based books *corpora* amounting up to 357,000 titles.³⁹ However, the training datasets for GPT-4 was not revealed. To date, most of the companies behind these impressive GAIAs have not disclosed the datasets they use for machine training, although some ongoing lawsuits have alleged that these GAIAs have used the LAION 400-M or LAION-5B datasets.⁴⁰

16 Under Chinese law, the unauthorised use of copyrighted works is deemed *prima facie* infringement. Article 7 of the Interim Measures for the Management of Generative Artificial Intelligence Services⁴¹ explicitly requires that training data must be sourced from legitimate origins that “do not infringe on the intellectual property rights of others.”⁴² Although AI models typically do not replicate exact copies of the training materials, the process still involves making at least a temporary copy of protected works in order to digitise them for computational analysis. The Singapore Copyright Act 2021⁴³ defines a “copy” of an authorial work is a reproduction of the work in any material form (s 41(1)) and deems reproduction to have occurred if the work “is converted into ... a digital or other electronic machine-readable form” (s 41(2)(f)). Furthermore, making a copy of a work that is temporary or is incidental to some other use of the work is still treated as making a copy of the work (s 50(1)). Section 146 stipulates that copyright is infringed if a person, who is neither the copyright owner nor a licensee, does in Singapore, or authorises the doing in Singapore of, any act comprised in the copyright.

39 *Tremblay v OpenAI* No 3:23-cv-03223 at [28]–[35] (28 June 2023, ND Cal) (US).

40 See, eg, *Getty Images (US) Inc v Stability AI Ltd* [2023] EWHC 3090 (Ch); *Robert Kneschke v Large Scale Artificial Intelligence Open Network*, Case No GRUR-RS 2024, 25458 (Hamburg District Court, 27 September 2024); and *Andersen v Stability AI Ltd* No 3:23-cv-00201 WHO (13 January 2023, ND Cal) (US).

41 Interim Measures for the Management of Generative Artificial Intelligence Services (effective 15 August 2023) (China) <<https://www.chinalawtranslate.com/generative-ai-interim/>> (accessed 12 July 2025).

42 Interim Measures for the Management of Generative Artificial Intelligence Services (effective 15 August 2023) (China) Art 7 <<https://www.chinalawtranslate.com/generative-ai-interim/>> (accessed 12 July 2025).

43 2020 Rev Ed (S'pore).

17 Presently, when inputting the works for machine learning, an algorithm will typically scrape the internet for content from various websites, invariably accessing such content without permission and in violation of express prohibitions against such conduct contained in the terms of use of these websites. It is unlikely that all works used in GAIA training are open-access works or works in the public domain. Generally, in the first stage of the data mining process (even if the AI system is not directly “fed” the relevant input), web robots may infringe the reproduction rights of the owners in the original literary, dramatic, musical or artistic works if such works are copied. Copying was established in the US decision of *Authors Guild v Google Inc*,⁴⁴ where books were digitised in order to make them searchable, although this was consequently held to be fair use.⁴⁵ For instance, web robots that copy an artistic work, such as a painting to gather information about the painting (eg, the number of brush strokes or the colour gradient) for further analysis may be infringing the reproduction rights in the painting. Thus, whether the input for machine learning is consciously done by a human programmer or automated by web robots, an unauthorised reproduction of text and image may have been made in the machine training process, potentially infringing copyright.

18 On the output side, GAIAAs may produce content based on human prompts that closely resembles existing copyrighted works. The key legal challenge lies in determining whether such outputs constitute direct reproduction, unauthorised derivative works, or independent creations. Copyright infringement occurs when a work is “substantially similar” to a protected work. The test focuses on the copying of expression rather than ideas or facts. However, the similarities may not result from deliberate copying, but from patterns learned from overlapping training data or similar user prompts. With training datasets often opaque, tracing these similarities to specific sources is difficult. Courts must consider multiple factors, including the degree of similarity, the originality of the output, and whether protectable elements of the original work have been appropriated.

19 Moreover, the similarities may be a result of copying of unprotectable style rather than protectable expression. Copyright does not protect the *style* of an artist, no matter how distinctive – this includes a painting-style (like Picasso’s distinctive cubist style or Warhol’s silkscreen treatments of photographs), writing style or singing style. The artistic style of an author in copyright law is generally considered an “idea” in the well-established idea-expression dichotomy which has

44 804 F 3d 202 at 207 (2nd Cir, 2015).

45 *Authors Guild v Google Inc* 804 F 3d 202 at 207 (2nd Cir, 2015).

been developed through case law in the US. Such an approach has been adopted by the Singapore Court of Appeal,⁴⁶ and likewise recognised in China through judicial interpretation and practice. However, copyright law does protect original expression within those styles. For example, if an AI system is trained extensively on the works of a particular artist, the resulting outputs may emulate the artist's distinctive style – rather than its specific expression – to such a degree that raises legal concerns. A recent example is the controversial imitation of the animation artist Hayao Miyazaki's Studio Ghibli house style by OpenAI's new image generator powered by GPT-4o, which sparked a global trend where anyone can "Ghibli-fy" their own photographs or any image that they desire.⁴⁷ In such cases, the line between lawful inspiration and infringing derivation becomes increasingly blurred.

20 Although the training data used for GAIAs is typically kept confidential, more and more writers and visual artists are noticing similarities between their work and the output from these systems. It is virtually impossible to prove that a particular work has been used as a training *input* for a GAIA unless the *output* exhibits substantial similarity to the original work. In the *Andersen v Stability AI Ltd*⁴⁸ claim in California, the motions to dismiss filed by the defendants in April 2023 all indicated, *inter alia*, that the plaintiffs failed to identify a single actual output image that allegedly infringed any of the copyrighted works. On the contrary, when Getty Images filed a lawsuit against Stability AI in the US in February 2023 for copying over 12 million photographs from its collection, there was evidence of output images that contained Getty Images' watermark. Nonetheless, this only indicates that a particular work was used for AI training, and does not provide sufficient evidentiary support for a claim of wholesale copying of millions of works.

21 It ultimately comes down to an issue of fairness. Copyright holders argue that AI developers should obtain licenses, disclose training sources, and fairly compensate rights holders. They contend that unlicensed use undermines the economic value of their copyrighted works and weakens creators' control over their intellectual property. Conversely, AI developers warn that strict enforcement could hamper innovation by limiting training data to public domain or licensed content, exacerbating bias and reducing model quality. They further caution against "innovation arbitrage", where firms relocate to jurisdictions with

46 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [15].

47 See, eg, Dani Di Placido, "The AI-Generated Studio Ghibli Trend, Explained", *Forbes* (27 March 2025) <<https://www.forbes.com/sites/danidiplacido/2025/03/27/the-ai-generated-studio-ghibli-trend-explained/>> (accessed 15 August 2025).

48 No 3:23-cv-00201 WHO (13 January 2023, ND Cal) (US).

more permissive copyright regimes.⁴⁹ Developers also argue that obtaining licenses from every copyright holder is practically unworkable given the scale of data required and AI training only involves non-expressive, functional uses, such as statistical analysis of patterns, and does not result in memorisation or reproduction of original content. Some scholars have advanced normative frameworks to support developers' positions. For instance, Mark Lemley and Bryan Casey propose the concept of "fair learning", comparing machine training to human learning and asserting its fundamentally transformative nature.⁵⁰ Similarly, Andrew Torrance and Bill Tomlinson advocate for "fair training", emphasising the non-consumptive and analytical nature of AI training.⁵¹ These theories liken AI training to a human individual reading a novel for inspiration – a practice permitted under copyright law. These tensions are further amplified when AI-generated outputs acquire substantial commercial value, potentially displacing or competing with human-created works. This has prompted a growing wave of litigation, some of which will be analysed below.

III. Present laws – United States, China and Singapore

A. Authorship

(1) United States

22 It is largely settled that the AI *per se* cannot be the author of a work – copyright jurisprudence universally recognises only human authorship. In the US, the District of Columbia Circuit Court of Appeals ruled in March 2025 that the Copyright Act of 1976⁵² "requires all eligible work to be authored in the first instance by a human being".⁵³

23 The fundamental issue today is when, and to what extent, an AI-generated output may be attributed to a human author, such that copyright subsistence inheres in a particular work. In this regard, the GAIA is used as an assistive tool to aid the human individual in the creation of works. The human text commands – or prompts – will be quintessential to such a determination.⁵⁴ The practice of crafting prompts

49 Pamela Samuelson, "Generative AI Meets Copyright" (2023) 381 *Science* 158.

50 Mark A Lemley & Bryan Casey, "Fair Learning" (2021) 99 *Texas Law Review* 743.

51 Andrew W Torrance & Bill Tomlinson, "Training Is Everything: Artificial Intelligence, Copyright, and 'Fair Training'" (2023) 128 *Dickinson Law Review* 233.

52 Copyrights 17 USC (US) (1976).

53 *Thaler v Perlmutter* 130 F 4th 1039 at 1041 (DC Cir, 2025).

54 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at pp 5–7 and 12–22 <<https://www.copyright.gov/ai/Copyright->
(cont'd on the next page)

that are optimised to elicit a desired outcome from a generative AI application is widely known as “prompt engineering”. The USCO Gen AI Copyrightability Report correctly states that “inputting simple prompts is insufficient to make a user the author of the AI-generated output” and that prompts can be no more than “unprotectible ideas or instructions”.⁵⁵ However, there is disagreement as to whether more detailed prompts provided sufficient human control over generative AI application in the creation process.⁵⁶

24 When considering Jason Allen’s *Théâtre D’opéra Spatial*, the USCO concluded that the Midjourney image, which remains in substantial form in the final work, was not the product of human authorship.⁵⁷ The Copyright Review Board rejected Allen’s submission that he provided “creative input” when he “entered a series of prompts, adjusted the scene, selected portions to focus on, and dictated the tone of the image”. The Board found that although Allen describes “input[ting] numerous revisions and text prompts at least 624 times” before producing the Midjourney image, the steps in that process were ultimately dependent on how the Midjourney system processed Allen’s prompts. As Midjourney does not treat text prompts as direct instructions, users may need to attempt hundreds of iterations before landing upon an image they find satisfactory; ultimately, the “traditional elements of authorship” are determined and executed by the technology – not the human user”.⁵⁸

25 In another determination regarding an application to register the artwork *Suryast*, the image was generated by “RAGHAV Artificial Intelligence Painting App” (“RAGHAV”), which had been trained on Vincent van Gogh’s *The Starry Night* – with an instruction to apply the style of *The Starry Night* to the uploaded photograph. The Board found that the resulting image did not “contain sufficient human authorship necessary to sustain a claim to copyright” because the applicant “exerted

and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf> (accessed 30 August 2025).

55 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at p 13 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> (accessed 30 August 2025).

56 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at pp 14–15 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> (accessed 30 August 2025).

57 Letter from US Copyright Office Review Board to Tamara Pester, Esquire of Tamara S Pester, LLC (counsel for Jason Allen) (5 September 2023) (*Théâtre D’opéra Spatial* (SR # 1-11743923581)).

58 Letter from US Copyright Office Review Board to Tamara Pester, Esquire of Tamara S Pester, LLC (counsel for Jason Allen) (5 September 2023) (*Théâtre D’opéra Spatial* (SR # 1-11743923581)).

insufficient creative control over RAGHAV's" generation of the output.⁵⁹ In contrast, the USCO registered *Rose Enigma*, an AI-generated work by Stable Diffusion, where the author applicant Kristina Kashtanova had first created a hand-drawn illustration and used it as an input, which it submitted together with an extensive chart detailing the entire creation process; the Examining Division was satisfied that the applicant sufficiently controlled the production of the image.⁶⁰

26 Generally, where a human inputs his or her own copyrightable work and that work is perceptible in the output, the individual will be the author of at least that portion of the output. A human may also "modify material originally generated by AI technology to such a degree that the modifications meet the standard for copyright protection".⁶¹ In January 2025, USCO registered a visual work by Kent Keirsej, *A Single Piece of American Cheese*, consisting entirely of AI-generated components created using the "image retouching" or "inpainting" technology (selectively regenerating parts of an image while preserving the rest) of Invoke AI.⁶² Importantly, Invoke provided substantial evidence of human control, including a time-lapse video of the creation of the image and an explanation of how Keirsej had been involved in the creation process.

(2) *People's Republic of China*

27 Chinese copyright law, consistent with international practice, recognises only natural persons, and in limited circumstances, legal persons, as authors. Article 11 of the Copyright Law of the People's Republic of China ("CCL") provides that a *natural* person who creates a work is presumed to be its author, while a legal or unincorporated entity may be deemed the author where the work is produced under its direction, reflects its intent, and the entity assumes corresponding responsibility.⁶³ The statute defines "works" as intellectual achievements in literature, art and science that have originality and are capable of being reproduced in

59 US Copyright Office Review Board, *Decision Affirming Refusal of Registration of Suryast* (11 December 2023).

60 US Copyright Office Registration, *Rose Enigma*, No VAU001528922 (21 March 2023). See also Jane Ginsburg, "Humanist Copyright" (2025) 6 *Journal of Free Speech Law* 91 at 145.

61 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at p 24 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> (accessed 30 August 2025).

62 US Copyright Office Registration, *A Single Piece of American Cheese*, No VAU001543942 (5 August 2024).

63 See Art 11 of Copyright Law of the People's Republic of China (effective 1 June 2021); and its English translation: Copyright Law of the People's Republic of China, *China Law Translate* <[https://www.chinalawtranslate.com/en/Copyright-Law-of-the-PRC-\(2021-Version\)/](https://www.chinalawtranslate.com/en/Copyright-Law-of-the-PRC-(2021-Version)/)> (accessed 30 July 2025).

a tangible form.⁶⁴ Although the law does not explicitly address generative AI, Chinese courts have consistently held that copyright protection arises only when a human creator can be identified as the source of the expressive content. Recent court decisions suggest an increasing judicial openness to recognising human authorship in AI-generated works, provided that the user contributes sufficient creative input to the generative process.

28 A series of court decisions illustrate how this emerging approach is being applied in practice. In *Tencent v Yingxun Tech*,⁶⁵ the Shenzhen Nanshan District People’s Court upheld copyright protection for an AI-generated article, reasoning that Tencent’s team had exercised substantive creative decisions in configuring the AI system “Dreamwriter”. The court emphasised the Tencent team’s role in selecting and arranging data inputs, determining the article template and linguistic style, and establishing the triggering conditions for the system’s output. Subsequent decisions have extended this reasoning to AI-generated images. In *Li v Liu*⁶⁶ (“*Spring Breeze*”), the Beijing Internet Court recognised copyright in an image generated using Stable Diffusion, on the basis that the plaintiff had invested original intellectual effort through prompt selection, parameter tuning, and iterative refinement. Just like what the successful registrants had done in the US for *Rose Enigma* and *A Single Piece of American Cheese*, the plaintiff in *Spring Breeze* had also submitted a video recording of the creation process, which she offered as evidence in support of her authorship.

29 Similarly, in *Lin Chen v Hangzhou Gaosi Membrane Tech*⁶⁷ the Changshu People’s Court affirmed copyright protection for an image generated *via* Midjourney, emphasising the plaintiff’s creative contribution through prompt design and post-editing. In contrast, in *Feng v Dongshan Cultural Communication Co Ltd*⁶⁸ (“*Butterfly Chairs*”), the Zhangjiagang Court in Jiangsu denied protection, citing the plaintiff’s failure to provide sufficient evidence of creative input. The plaintiff herself

64 See Art 3 of Copyright Law of the People’s Republic of China (effective 1 June 2021); see also Art 2 of the Implementing Regulations of the Copyright Law of the People’s Republic of China (revised 2013) <https://english.www.gov.cn/archive/laws_regulations/2014/08/23/content_281474983043861.htm> (accessed 23 July 2025).

65 (2019) Yue 0305 Min Chu No 14010 (24 December 2019, Shenzhen Nanshan District People’s Court) <<https://www.chinajusticeobserver.com/law/x/2019-yue-0305-min-chu-14010>> (accessed 23 July 2025).

66 (2023) Jing 0491 Min Chu No 11279 (27 November 2023, Beijing Internet Court) <<https://english.bjinternetcourt.gov.cn/pdf/BeijingInternetCourtCivilJudgment112792023.pdf>> (accessed 23 July 2025).

67 (2024) Su 0581 Min Chu No 6697 (18 October 2024, Changshu People’s Court).

68 (2025) Su 0582 Min Chu No 9015 (19 March 2025, Zhangjiagang People’s Court); (2025) Su 05 Min Zhong No 4840 (17 April 2025, Suzhou Intermediate People’s Court) (dismissing the appeal).

acknowledged that it was impossible to direct Midjourney to reproduce the exact same AI-generated images that she claimed authorship over, even using identical prompts, due to the inherent randomness of Midjourney's generative process. The decision reaffirmed the evidentiary threshold required to establish authorship in AI-generated works. Furthermore, the court reasoned:⁶⁹

Since users of text-to-image AI software cannot determine the final expression of an image through a single-round input of simple prompts and parameters, a court can determine whether images generated from text constitute original intellectual achievements by relying on original records of the creation process and assessing whether users exercised aesthetic choices and made personalised judgments. Users should provide original records of the creation process to prove that they made adjustments, selections, and refinements to the image initially generated by adding prompts and modifying parameters, which means they made personalised choices and substantial contributions to the image's expression elements, such as layout, proportion, perspective, composition elements, colour and lines.

30 In the absence of legislative reform, Chinese courts have developed a functional judicial approach that distinguishes between the mere instrumental use of AI and genuine human authorship. Under this approach, copyright protection is recognised only when the user's creative input exceeds a minimal threshold and contributes materially to the final expressive output.⁷⁰ While this reasoning seeks to balance innovation with legal protection, some scholars caution that an overly permissive approach to recognising human authorship in AI-generated works may undermine the originality threshold and risk flooding creative markets with low-effort content.⁷¹

69 *Feng v Dongshan Cultural Communication Co Ltd* (2025) Su 0582 Min Chu No 9015 (19 March 2025, Zhangjiagang People's Court) (trans Xiao Wang) in "Distinguishing Copyrightable from Non-Copyrightable AI-Generated Content" (2025) 74 *GRUR International* 772 at 777 <<https://academic.oup.com/grurint/article-pdf/74/8/772/63923452/ikaf085.pdf>> (accessed 10 October 2025). See also Seagull Song, "Chinese Court Found AI-Generated Pictures Not Copyrightable – Convergence with the U.S. Standard?", *King & Wood Mallesons* (11 September 2025) <<https://www.kwm.com/cn/en/insights/latest-thinking/chinese-court-found-ai-generated-pictures-not-copyrightable-convergence-with-the-us-standard.html>> (accessed 10 October 2025).

70 See Yong Wan & Hongxuyang Lu, "Copyright Protection for AI-Generated Outputs: The Experience from China" (2021) 42 *Computer Law & Security Review* 105581.

71 See, eg, Tianxiang He, "AI Originality Revisited: Can We Prompt Copyright Over AI-Generated Pictures?" (2024) 73 *GRUR International* 299.

(3) *Singapore*

31 The Commonwealth common law jurisdictions have consistently premised their copyright regimes on requiring human authorship. In *Asia Pacific Publishing Pte Ltd v Pioneers & Leaders (Publishers) Pte Ltd*⁷² (“APP”), the Court of Appeal cited the UK Copyright Act 1911⁷³ and Copyright, Designs and Patents Act 1988⁷⁴ as examples of copyright legislation implying human authorship, since they afforded copyright protection to authors for their *lifetime* plus 50 years. In 2017, the Court of Appeal in *Global Yellow Pages Ltd v Promedia Directories Pte Ltd*⁷⁵ (“*Global Yellow Pages*”) affirmed its earlier comment in APP regarding the “natural persons” requirement,⁷⁶ where the same court held that for copyright to subsist in any literary work, the authorial creation must causally connect with the “engagement of the human intellect.”⁷⁷ The court then proceeded to define human intellect as “the application of intellectual effort ... or the exercise of mental labour”, which a non-human author is deemed to be unable to provide.⁷⁸

32 Furthermore, in Singapore’s current Copyright Act 2021, a suite of statutory provisions when read together indicate that only a human individual may be an “author”: (a) the duration provisions (s 114) – where duration is pegged to the death of a person (*ie*, 70 years after death unless in the case of anonymous/pseudonymous works); (b) the “qualified individual” provision (s 77) – where copyright in an *authorial* work subsists only if the author is a qualified individual;⁷⁹ (c) the connecting factors provisions (ss 109, 110) that articulate the conditions for copyright to subsist in unpublished and published *authorial* works; and (d) the moral rights provisions (ss 370, 386, 387) – which refer to rights being personal in nature, and devolution of rights on death.

72 [2011] 4 SLR 381.

73 (c 46) (UK).

74 (c 48) (UK).

75 [2017] 2 SLR 185.

76 *Asia Pacific Publishing Pte Ltd v Pioneers & Leaders (Publishers) Pte Ltd* [2011] 4 SLR 381 at [82].

77 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [24].

78 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [24].

79 According to this provision, an individual is a “qualified individual” only if “he or she” is: (a) a Singapore Citizen; or (b) a Singapore resident; or (c) an individual who, if he or she had been alive on 1 November 1957, would have qualified for Singapore citizenship under the repealed Singapore Citizenship Ordinance 1957 (Ord 35 of 1957) (S’pore).

(4) *Summary*

33 While some may view the USCO's denial of copyright registration for works such as *Théâtre D'opéra Spatial* and *SURYAST*, and the Beijing Internet Court's decision to grant copyright protection for *Spring Breeze* as being divergent, they in fact have more similarities than differences. Both jurisdictions cohere – especially with more recent Chinese decisions requiring substantial human contribution in the production of works using GAIAs – around the view that significant human contribution and control directed to the AI-assisted creation process is required for copyright subsistence. In particular, the March 2025 decision of the Chinese Zhangjiagang Court in *Butterfly Chairs* is aligned with the approach as outlined in the USCO Gen AI Copyrightability Report, where the plaintiff's AI-generated pictures on Midjourney lacked enough original authorship to be copyrightable as she could not provide adequate documentation to prove that she had made aesthetic choices and personal judgment during the generative process. These administrative determinations and judicial decisions provide the impetus for an articulation of a set of international standards that can better guide creators and decision makers around the world as to what constitutes “significant” human contribution that will attract copyright protection for works created with the assistance of GAIAs. This will be explored in Part IV.

B. *Infringement – exceptions and limitations*

34 Open-ended fair use, categorical fair dealing provisions as well as other statutory exceptions and limitations, all temper the exclusive rights of copyright owners to foster further creative expression by permitting secondary uses of copyrighted works, providing the primary mechanism to *fairly* balance copyright protection with the broader public interest of fostering creative expression.⁸⁰ A number of jurisdictions also provide definitional statutory exceptions that do not require a balancing of factors, *ie*, the use of copyrighted works is permitted for specific purposes so long as particular conditions are satisfied; the text and data mining (“TDM”) exception – called the computational data analysis (“CDA”) exception in Singapore – is one such example. Today, the breathtaking pace of technological developments has perhaps left copyright law struggling to keep up, as traditional understandings of various copyright doctrines and legislative mechanisms are generally unable to match this speed.

80 See, *eg*, *Campbell v Acuff-Rose Music, Inc* 510 US 569 at 579 (1994).

(1) *United States*

35 Pierre Leval, then a judge of a New York District Court, published an influential article in 1990 that considered whether imprecision – the absence of a clear standard – in the fair use doctrine was a strength or a weakness.⁸¹ Leval advocated instilling a coherent and useful set of principles in the fair use doctrine, such that “the use must be of a character that serves the copyright objective of stimulating productive thought and public instruction without excessively diminishing the incentives for creativity.”⁸² Today, the open-ended fair use provision⁸³ operates as a general exception that courts apply on a case-by-case basis. Section 107 of the US Copyright Act 1976 permits use of copyrighted works “for purposes such as criticism, comment, news reporting, teaching, scholarship, or research,” with consideration of a non-exhaustive list of four factors:⁸⁴

- (a) the purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
- (b) the nature of the copyrighted work;
- (c) the amount and substantiality of the portion used in relation to the whole; and
- (d) the effect of the use upon the potential market for or value of the copyrighted works.

36 There is presently a wealth of scholarship on training data and fair use.⁸⁵ It was pointed out by Matthew Sag that US courts “have agreed that copying without permission is fair use, and thus noninfringing, in the context of software reverse engineering, plagiarism detection software, and the digitization of millions of library books to enable meta-analysis and indexing.”⁸⁶

81 Pierre N Leval, “Toward a Fair Use Standard” (1990) 103 *Harvard Law Review* 1105.

82 Pierre N Leval, “Toward a Fair Use Standard” (1990) 103 *Harvard Law Review* 1105 at 1110.

83 Copyright Act 17 USC (US) §107 (1976).

84 Copyright Act 17 USC (US) §107 (1976).

85 See, eg, Andrew W Torrance & Bill Tomlinson, “Training is Everything: Artificial Intelligence, Copyright and ‘Fair Training’” (2023) 128 *Dickinson Law Review* 233; Matthew Sag, “Copyright Safety for Generative AI” (2023) 61 *Houston Law Review* 295; Mark A Lemley & Bran Casey, “Fair Learning” (2021) 99 *Texas Law Review* 743; and Benjamin L W Sobel, “Artificial Intelligence’s Fair Use Crisis” (2017) 41 *Columbia Journal of Law & the Arts* 45.

86 Matthew Sag, “Copyright Safety for Generative AI” (2023) 61 *Houston Law Review* 295 at 304.

37 In considering fair use as applied to generative AI systems, two fair use factors that are likely to carry the greatest weight in the analysis are: (a) what is the purpose/character of the use, namely whether the use by generative AI is “transformative”, *ie*, whether it changes the purpose or the nature of the original work in some way; and (b) what is the impact of the generative AI’s use on the market, *ie*, whether it threatens the livelihood of the original creator by competing with their works or the licensing market for their works. Increasingly, US scholars are arguing that such a use amounts to “fair training” and is therefore fair use.⁸⁷

38 The USCO Gen AI Training Report is less sanguine. In the section of the report that discusses fair use, it was noted that many commenters argued that “the use of copyrighted works to create new expressive works that compete with or serve as substitutes for the originals cannot be considered fair”.⁸⁸ Nonetheless, fair use is a context-specific inquiry. Data collection, data curation and analysis, model training or fine-tuning is rarely the ultimate purpose; these are usually just steps in the process of delivering a GAIA that can respond effectively to human prompts to generate works. Thus, fair use must be “evaluated in the context of the overall use”.⁸⁹ Furthermore, the principle of fairness undergirds any fair use analysis: “although transformativeness often leads to a finding of fair use, not every transformative use is a fair one”.⁹⁰ The report did state that “training a generative AI foundation model on a large and diverse dataset will often be transformative”⁹¹ but cautioned that “*how* transformative or justified a use is will depend on the functionality of the

87 See, *eg*, Andrew W Torrance & Bill Tomlinson, “Training is Everything: Artificial Intelligence, Copyright and ‘Fair Training’” (2023) 128 *Dickinson Law Review* 233 at 245 and 253–254.

88 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 33 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

89 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 37 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

90 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 39 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025) (referring to *Fox News Network LLC v TVEyes Inc* 883 F 3d 169 at 177 (2nd Cir, 2018)).

91 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 45 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

model and how it is deployed” [emphasis in original].⁹² It emphasised that the use of copyrighted works to train AI models is *not* inherently transformative especially when the resulting model or GAIA is used to generate expressive content or potentially reproduce copyrighted expression.⁹³ In the fairness analysis, the financial relationships between multiple actors, as well as whether the use itself furthers commercial purposes, are relevant;⁹⁴ the knowing use of a dataset that consists of pirated or illegally accessed works could also weigh against fair use,⁹⁵ particularly if entire works have been curated into a training dataset.⁹⁶

39 In respect of the fair use analysis in relation to GAIAs, *Authors Guild v HathiTrust*⁹⁷ is instructive – the issue was whether the digitisation of copyrighted works by 13 universities and other organisations in creating the HathiTrust Digital Library (“HDL”) without authorisation may constitute fair use. The Second Circuit found that the first factor weighed in favour of fair use as HDL’s enabling of full-text search “serves a new and different function from the original” and is socially beneficial.⁹⁸ Additionally, the dealing was found to carry a “non-profit educational” purpose as the HDL was a project started by educational and non-profit institutions targeted at providing greater access to works without any “purely commercial” motive.⁹⁹ The Ninth Circuit’s decision in *Kelly v Arriba Soft Corp*¹⁰⁰ is also useful in understanding how the evaluation of the third factor could be applied to generative AI uses. There, it was held that the use of entire copyrighted works was *necessary*

92 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 46 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

93 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at pp 47–48 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

94 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 50 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

95 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 52 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

96 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 55 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

97 755 F 3d 87 at 92 (2nd Cir, 2014).

98 *Authors Guild v HathiTrust* 755 F 3d 87 at 97 (2nd Cir, 2014).

99 *Authors Guild v HathiTrust* 755 F 3d 87 at 90–91 (2nd Cir, 2014).

100 336 F 3d 811 (9th Cir 2003).

in situations involving search engines since copying only a part of the copyrighted work would create practical difficulties for users, thereby reducing the usefulness of the search engine. Where a GAIA can output expression based on its training dataset, it is relevant in the fair use analysis whether, like Google Books, the GAIA developer has put in place adequate safeguards to ensure that copyrighted material is not exposed to the public as a result of the human text prompts.¹⁰¹ The USCO Gen AI Training Report also states that:¹⁰²

... the use of entire copyrighted works is less clearly justified in the context of AI training than it was for Google Books or a thumbnail image search. Those services made information available about the content of the works copied, making the extent of the copying definitionally necessary for full-text search to work. Generative AI, by contrast, is not limited to providing information about the works in the training dataset.

40 In the latest US Supreme Court's decision on fair use, the majority observed that "whether the purpose and character of a use weighs in favour of fair use is, instead, an objective inquiry into what use was made, *ie*, what the user does with the original work".¹⁰³ In that case, the use was Andy Warhol Foundation's commercial licensing of Warhol's Orange Prince (which was based on Lynn Goldsmith's original photograph) to appear on the cover of Condé Nast's special commemorative edition. The purpose of that use was to illustrate a magazine about Prince with a portrait of Prince, and an infringing work that portrays Prince somewhat differently from Goldsmith's photograph (yet has no critical bearing on her photograph) was insufficient for the first factor to favour Andy Warhol Foundation, given the specific context of the use. The majority emphasised:¹⁰⁴

To hold otherwise would potentially authorize a range of commercial copying of photographs, to be used for purposes that are substantially the same as those of the originals. As long as the user somehow portrays the subject of the

101 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at pp 59–60 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

102 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 57 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

103 *Andy Warhol Foundation for the Visual Arts Inc v Goldsmith* 598 US 508 at 545 (2023).

104 *Andy Warhol Foundation for the Visual Arts Inc v Goldsmith* 598 US 508 at 546 (2023). See also *Keck v Mix Creative Learning Center LLC* 116 F 4th 448 at 455 (5th Cir, 2024) ("Both the original and the adaptation that the Foundation licensed to Condé Nast were 'portraits of Prince used in magazines to illustrate stories about Prince'").

photograph differently, he could make modest alterations to the original, sell it to an outlet to accompany a story about the subject, and claim transformative use. ...

41 These observations are especially pertinent for images produced by GAIAs such as DALL·E, Stable Diffusion or Midjourney. If a user was looking for an image for illustrative purposes for a magazine, book, annual report or marketing brochure, and provides specific text prompts to a generative AI system to produce such an image – as opposed to licensing one directly from the original author – then the first factor is unlikely to weigh in favour of fair use.

42 The application of the fourth factor is also closely linked to the finding of the first factor. The US Supreme Court in *Campbell v Acuff-Rose Music Inc*¹⁰⁵ (“*Campbell*”) had emphasised the close linkage between the first and fourth factors, in that the more the copying is done to achieve a purpose that differs from the purpose of the original, the less likely it is that the copy will serve as a satisfactory substitute for the original.¹⁰⁶ The Second Circuit noted that even if the *purpose* of the copying was for a transformative purpose, such copying might nonetheless harm the value of the copyrighted original if done in a manner that resulted in widespread revelation of sufficiently significant portions of the original as to make available a significantly competing substitute.¹⁰⁷ Although one could argue that data mining could limit the rights owners’ expansion into a potential market (eg, a lost opportunity to license the works¹⁰⁸) since markets are dynamic and change over time to meet new demands, the US Circuit Courts have universally dismissed this argument where only a small portion of the original works was revealed to the public.¹⁰⁹ In generative AI scenarios, such as in the ongoing *Disney v Midjourney* dispute, where a significant portion of an original work is reproduced in an output in response to a user’s text prompt, then one may more confidently discern a substitutive impact.¹¹⁰

43 ChatGPT, Stable Diffusion, Midjourney, Gemini and many other comparable GAIAs are not search engines. A number of them are

105 510 US 569 (1994).

106 *Campbell v Acuff-Rose Music Inc* 510 US 569 at 591 (1994).

107 *Authors Guild v Google Inc* 804 F 3d 202 at 223 (2nd Cir, 2015).

108 *Authors Guild Inc v HathiTrust* 755 F 3d 87 at 99 (2nd Cir, 2014) (this was an argument the plaintiffs raised).

109 See, eg, *Authors Guild v Google Inc* 804 F 3d 202 at 223 (2nd Cir, 2015).

110 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at pp 62–71 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

the offerings of highly successful commercial enterprises, with Stability AI valued at over US\$1bn, and some charging a user fee for their services. As Sag observes: “If LLMs just took expressive works and conveyed *that same expression* to a new audience with no additional commentary or criticism, or no distinct informational purpose, that would be a very poor candidate for fair use.”¹¹¹ Ultimately, the first and fourth factors of fair use are expected to have the most significant weight in the fairness analysis.¹¹²

44 These sentiments are borne out in two closely watched US Californian district court decisions handed down in June 2025: *Bartz v Anthropic PBC*¹¹³ (“*Bartz*”) and *Kadrey v Meta Platforms Inc*¹¹⁴ (“*Kadrey*”). In *Bartz*, the defendant Anthropic wanted to create a general research central library of all the books in the world, and to train Claude, its generative AI system. Anthropic converted its purchased library copies from print to digital, and used them for training its LLM; but it had also downloaded for free millions of copyrighted books in digital form from pirate internet sites. It was a salient fact that filtering software was in place to ensure that no infringing copy of an author’s work would be provided to users by the Claude service; thus, the plaintiffs did not contend that any of the output was infringing, unlike the claim in *Disney v Midjourney*. The fair use ruling in favour of Anthropic at summary judgment stage was limited to: (a) training of the LLMs (the purpose and character of using copyrighted works to train Claude and its precursors to generate new text was “exceedingly” and “quintessentially transformative”¹¹⁵); and (b) the print-to-digital format change of the purchased books for the purpose of building a central library. The court rejected Anthropic’s argument that “the use of the [pirated] copies for a central library can be excused as fair use merely because some will eventually be used to train LLMs”;¹¹⁶ a trial was ordered on the pirated copies used to create Anthropic’s central library and the resulting damages. Citing the Supreme Court’s decision in *Warhol*, Judge William Alsup commented: “Our analysis must attend to different uses of different copies, and even to different uses of *the same* copies.”¹¹⁷ [emphasis in original]. Furthermore, the court cautioned that

111 Matthew Sag, “Copyright Safety for Generative AI” (2023) 61 *Houston Law Review* 295 at 312–313.

112 US Copyright Office, *Copyright and Artificial Intelligence – Part 3: Generative AI Training* (6 May 2025) at p 74 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>> (accessed 30 August 2025).

113 No 3:24-cv-05417 WHA (23 June 2025, ND Cal) (US).

114 No 3:23-cv-03417 VC (25 June 2025, ND Cal) (US).

115 *Bartz v Anthropic PBC* No 3:24-cv-05417 WHA at pp 9 and 13 (23 June 2025, ND Cal) (US).

116 *Bartz v Anthropic PBC* No 3:24-cv-05417 WHA at p 18 (23 June 2025, ND Cal) (US).

117 *Bartz v Anthropic PBC* No 3:24-cv-05417 WHA at p 23 (23 June 2025, ND Cal) (citing *Andy Warhol Foundation for the Visual Arts Inc v Goldsmith* 598 US 508 (cont’d on the next page))

“Anthropic is not entitled to an order blessing all copying ‘that Anthropic has ever made after obtaining the data,’” [references omitted].¹¹⁸

45 In *Kadrey*, 13 fiction writers sued Meta for downloading their books from online shadow libraries and using them to train Meta’s generative AI model Llama. Summary judgment was granted to Meta solely on the basis that the plaintiffs failed to present any evidence of market dilution that a jury could use to find in their favour on the issue. Judge Vince Chhabria made it clear that his ruling “does not stand for the proposition that Meta’s use of copyrighted materials to train its language models is lawful.”¹¹⁹ Although acknowledging that Meta’s use of the plaintiffs’ books was “highly transformative” as such use had a “further purpose” and “different character” than the books,¹²⁰ the commercial nature of Meta’s use and the potential bad faith in downloading copyrighted material from shadow libraries may skew the first factor in the plaintiffs’ favour.¹²¹ The warning that the unauthorised use of copyrighted works is not necessarily fair use rings loud and clear in the judgment. According to Judge Chhabria, in addition to direct market harm under factor four of the fair use analysis, indirect substitution in the form of substantially similar infringing outputs competing with the originals *and* market dilution due to the rapid AI generation of countless non-infringing works that compete with the originals are also relevant forms of market impact that a court should consider.¹²² The court’s concluding remarks will no doubt provide rich fodder for scholarly commentaries and regulatory deliberations:¹²³

... No matter how transformative LLM training may be, it’s hard to imagine that it can be fair use to use copyrighted books to develop a tool to make billions or trillions of dollars while enabling the creation of a potentially endless stream

at 533 (2023)).

- 118 *Bartz v Anthropic PBC* No 3:24-cv-05417 WHA at p 31 (23 June 2025, ND Cal) (US). The parties eventually settled. Anthropic agreed to pay US\$1.5bn to book authors and publishers with each getting about US\$3,000. It is the largest settlement in the history of US copyright cases. See further Cade Metz, “Anthropic Agrees to Pay \$1.5 Billion to Settle Lawsuit with Book Authors”, *The New York Times* (5 September 2025) <<https://www.nytimes.com/2025/09/05/technology/anthropic-settlement-copyright-ai.html>> (accessed 12 October 2025).
- 119 *Kadrey v Meta Platforms Inc* No 3:23-cv-03417 VC at p 5 (25 June 2025, ND Cal) (US).
- 120 *Kadrey v Meta Platforms Inc* No 3:23-cv-03417 VC at p 16 (25 June 2025, ND Cal) (US).
- 121 *Kadrey v Meta Platforms Inc* No 3:23-cv-03417 VC at pp 18–21 (25 June 2025, ND Cal) (US).
- 122 *Kadrey v Meta Platforms Inc* No 3:23-cv-03417 VC at pp 26–36 (25 June 2025, ND Cal) (US).
- 123 *Kadrey v Meta Platforms Inc* No 3:23-cv-03417 VC at p 39 (25 June 2025, ND Cal) (US).

of competing works that could significantly harm the market for those books. And some cases might present even stronger arguments against fair use. ...

(2) *People's Republic of China*

46 The CCL adopts a closed-list approach to permissible uses of copyrighted works, similar to that of the UK and Australia.¹²⁴ Article 24 of the CCL sets out 12 enumerated exceptions under which a published work may be used without authorisation or remuneration, provided that the author's name and the title of the work are properly attributed, and that such use does not interfere with the normal exploitation of the work or unreasonably prejudice the legitimate interests of the rights holder.¹²⁵ These statutory exceptions include, for example, personal use for individual study, research, or appreciation; appropriate quotation for purposes such as commentary, illustration, or explanation; news reporting; and educational or research uses.¹²⁶ However, Art 24(13) introduces a catch-all clause covering "other circumstances provided by laws and administrative regulations".¹²⁷ This provision functions as a legislative reservation clause, permitting future exceptions to be created through legislative or regulatory instruments, but so far no statutory or regulatory measure has expressly addressed TDM or the use of copyrighted materials in AI training. Nonetheless, Art 24(13) preserves the possibility of such developments through formal state channels.

47 Although the CCL does not contain an explicit exception for AI training or TDM, recent judicial developments suggest an emerging tendency toward a fairness-based rationale in cases involving generative AI. For example, in a landmark decision affirmed by the Hangzhou Intermediate People's Court in early 2025, the Hangzhou Internet Court found a generative AI platform liable for contributory copyright infringement for facilitating the creation of user-generated images resembling the Ultraman character without authorisation.¹²⁸ In assessing liability, the Hangzhou Internet Court demonstrated a bifurcated approach: it adopted a relatively permissive stance toward input-side conduct, particularly the ingestion of copyrighted material during training, while

124 Tianxiang He, "The Copyright Limitations of the 2020 Copyright Law of China: A Satisfactory Compromise?" (2022) 69 *Journal of the Copyright Society* 107.

125 Copyright Law of the People's Republic of China (effective 1 June 2021) Art 24.

126 Copyright Law of the People's Republic of China (effective 1 June 2021) Arts 24(1)–24(6).

127 Copyright Law of the People's Republic of China (effective 1 June 2021) Art 24(13).

128 See Aaron Wininger, "Hangzhou Internet Court: Generative AI Output Infringes Copyright", *China IP Law Update* (10 February 2025) <<https://www.chinaiplawupdate.com/2025/02/hangzhou-internet-court-generative-ai-output-infringes-copyright/>> (accessed 28 July 2025).

signalling heightened scrutiny of potentially infringing outputs. The court acknowledged the potential legitimacy of using copyrighted materials for AI training based on a general principle of fairness, despite the absence of an express statutory exception under Art 24.¹²⁹ It further recognised that generative AI development requires the ingestion of large volumes of data, including copyrighted works. Critically, it emphasised that the training phase is primarily aimed at analysing and learning from prior works, enabling the creation of new, transformative content rather than reproducing existing protected expressions. The court framed such training use as non-expressive and technically transformative. It reasoned that training process does not result in direct public dissemination of the original works, nor does it typically reproduce them in full. Instead, copyrighted material is temporarily stored for structural analysis. As long as the process does not aim to replicate protected content, interfere with the normal market of the original works, or cause unreasonable harm to the rights holder, the court held that such use may be considered “fair”. The reasoning is similar to the US district court judgments in *Bartz* and *Kadrey*: the use of works for training is highly transformative and likely to be fair use *but* the generation of outputs that may be substitutive or dilutive of the original works may ultimately not be fair use.

48 The Hangzhou decision leaves open important questions regarding its scope. The case involved individual users and non-commercial activity on a creative platform, and the court explicitly emphasised that there was no evidence of intentional plagiarism or market substitution. It remains uncertain whether the same reasoning would extend to the context of commercial-scale model training, including by firms such as OpenAI, Meta and Stability AI, particularly where vast amounts of copyrighted material are stored and reused, and where the outputs may affect the commercial potential of the original works.

49 This turn toward fairness-based reasoning did not emerge in isolation. In 2011, the Supreme People’s Court of China issued a Judicial Opinion on intellectual property adjudication that instructed judges to consider four factors derived from US fair use doctrine when assessing copyright exceptions.¹³⁰ The constitutionality of such a judicial practice

129 See Claus Zhang, “Using Copyrighted Content to Train Generative AI Can Be Deemed Fair Following Ultraman Infringement Dispute”, *IAM-Media* (30 April 2025) <<https://www.iam-media.com/article/using-copyrighted-content-train-generative-ai-can-be-deemed-fair-following-ultraman-infringement-dispute>> (accessed 28 July 2025).

130 Judicial Committee of the Supreme People’s Court, Opinion of the Supreme People’s Court on Several Issues Concerning the Giving of Full Play to the Judicial Function of Intellectual Property Rights, Promoting the Great Development and Prosperity of
(*cont’d on the next page*)

is questionable. However, the Supreme People's Court's Judicial Opinion carries substantial authority and continues to shape the reasoning of courts across China. This Opinion has laid the doctrinal foundation for subsequent judicial engagement with fair use-like reasoning in disputes involving TDM and AI training,¹³¹ but scholars emphasise that this borrowing functioned only as interpretive guidance within a closed statutory framework and did not establish an open-ended doctrine of fair use in China.¹³²

50 During the WIPO-sponsored roundtable "Copyright Challenges in the Digital Age," held in Beijing in March 2025, senior representatives from China's copyright sector signalled potential revisions to the Implementing Regulations of the Copyright Law¹³³ and the Collective Management Regulations,¹³⁴ in an effort to address AI-related challenges and better protect rights holders' interests.¹³⁵ In 2025, the Supreme People's Court also included AI-related legal protections in its annual work agenda for the first time.¹³⁶ Judicial interpretations issued by the Supreme People's Court may provide doctrinal guidance on AI-related disputes, while the National Copyright Administration of China is expected to introduce regulatory guidelines or propose statutory revisions. If a new TDM exception, comparable to Singapore's approach, were introduced

Socialist Culture and Promoting the Independent and Coordinated Development of Economy, Fafa [2011] No 18 (16 December 2011).

- 131 Jerry Jie Hua, "Copyright Exceptions for Text and Data Mining in China: Inspiration from Transformative Use" (2022) 69 *Journal of the Copyright Society* 123 at 134–135.
- 132 See, eg, Tianxiang He, "The Copyright Limitations of the 2020 Copyright Law of China: A Satisfactory Compromise?" (2022) 69 *Journal of the Copyright Society* 107; and Jerry Jie Hua, "Copyright Exceptions for Text and Data Mining in China: Inspiration From Transformative Use" (2022) 69 *Journal of the Copyright Society* 123.
- 133 Implementing Regulations of the Copyright Law of the People's Republic of China (revised 2013).
- 134 Regulations on Copyright Collective Administration (effective 1 March 2005) (China).
- 135 World Intellectual Property Organization China Office, "WIPO China: Copyright Challenges in the Digital Age," *WIPO China* (18 March 2025) <<https://www.wipo.int/en/web/office-china/w/news/2025/wipo-china-copyright-challenges-in-the-digital-age>> (accessed 3 August 2025).
- 136 Meredith Chen, "China's Supreme Court Puts AI Protections on Its 2025 Agenda," *South China Morning Post* (12 March 2025) <<https://www.scmp.com/news/china/politics/article/3301639/chinas-supreme-court-puts-ai-protections-its-2025-agenda>> (accessed 2 August 2025).

through revised regulations, it could be interpreted as falling within the scope of Art 24(13).¹³⁷

(3) *Singapore*

(a) Fair use

51 The open-ended fair use provision was explicitly adopted in Singapore in s 191 of the Copyright Act 2021 which enumerates a non-exclusive list of four factors to be weighed to determine whether an unauthorised use is fair, and hence a permitted use.¹³⁸ It seems from the announcements by the Government that by renaming the open-ended fair dealing provision as “fair use”,¹³⁹ Singapore’s copyright law is poised to be more future ready and able to better tackle how the copyright balance should be struck between authors/owners and the users/public.

52 The Court of Appeal in *Global Yellow Pages* concluded that the defendant’s scanning and photocopying of the Business Listings was fair dealing, and the court also provided significant guidance on the application of the fair dealing provision under s 35(2) of the Copyright Act.¹⁴⁰ Sundaresh Menon CJ hinted at the willingness of the local courts to take greater cognisance of US and Australian decisions in this area:¹⁴¹

... Accordingly, although there are very few reported local cases that consider in detail the scope of and relationship between the factors in s 35(2), both American and Anglo-Australian jurisprudence will be helpful in shaping our law on fair dealing. ...

53 In respect of the first factor, the purpose and character of the dealing, it favoured fair dealing where “the defendant added to, recontextualised or transformed the parts taken”¹⁴² or where the new work was “transformative”, that is, whether it “supersede[s] the objects” of the original creation, or “adds something new, with a further purpose or different character”.¹⁴³ It appears that the Court of Appeal is edging towards the view of the US Supreme Court in *Campbell* when Menon CJ

137 Matthew Sag & Peter K Yu, “The Globalization of Copyright Exceptions for AI Training” (2025) 74 *Emory Law Journal* 1163 at 1194.

138 Copyright Act 2021 (2020 Rev Ed) (S’pore) ss 190–191 (replacing the previous open-ended fair dealing in s 35(2) of the Copyright Act (Cap 63, 2006 Rev Ed)).

139 Ministry of Law & Intellectual Property Office of Singapore, *Singapore Copyright Review Report* (17 January 2019) at para 2.6.8 and Conclusion 6(b).

140 Cap 63, 2006 Rev Ed (S’pore).

141 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [76].

142 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [79].

143 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [79] (referring to *Campbell v Acuff-Rose Music Inc* 510 US 569 at 579 (1994)).

remarked that “we do not go as far as those cases which suggest that a commercial nature or purpose of the dealing will presumptively be regarded as unfair” and “the commerciality of the dealing is but one of the factors to be considered and it will not necessarily be fatal to a finding of fair dealing”.¹⁴⁴ In fact, the court considered the application of the transformative use doctrine in *Campbell* (where the commerciality of the rap song “Pretty Woman” was trumped by the transformative value of the parody) and in *Authors Guild v Google Inc*¹⁴⁵ (where Google’s making of digital copies of books for the purpose of enabling a search for identification of books containing a term of interest to the searcher involved a highly transformative purpose).

54 With respect to the first factor of fair use, the US statute requires courts to examine the “purpose and character of the use”, but neither “purpose” nor “character” is defined in the statute. Section 191 of the Copyright Act 2021 contains similar words, with the first factor being stated as “the purpose and character of the use, including whether the use is of a commercial nature or is for non-profit educational purposes”. While there has been no local case law applying s 191, it is highly likely that courts in Singapore will look to how the US courts consider a number of relevant elements like what kind of transformation is present in the secondary work, the track record of the author of the secondary work, the extent of commentary or criticism present in the secondary work, the significance of the secondary use to research or study, as well as its public benefit.

55 Program developers and the organisations that invest significant resources in generative AI will have the benefit of access to two generous but distinct provisions in the Copyright Act 2021 as a defence to their unauthorised uses of copyright-protected works. However, the judicial interpretation of fair use in Singapore continues to be influenced by landmark decisions. As one scholar explains:¹⁴⁶

[T]he fair use provision in Singapore likely remains guided by paradigmatic cases where an open-universe search engine makes a digital copy for the purpose of enabling searches for books that contain a term of interest and involves a highly transformative purpose, and where copying from an original for the purpose of criticism, commentary, caricature, parody, or pastiche would be transformative.

144 *Global Yellow Pages Ltd v Promedia Directories Pte Ltd* [2017] 2 SLR 185 at [81].

145 *Authors Guild v Google Inc* 804 F 3d 202 (2nd Cir, 2015).

146 David Tan, “Generative AI and Copyright – Part 2: Computational Data Analysis Exception and Fair Use” [2023] SAL Prac 25 at para 23.

(b) Computational data analysis exception

56 It should be noted that a TDM exception known as the CDA exception has been enacted in the Copyright Act 2021. Generally, TDM is an umbrella term referring to “computational processes for applying structure to unstructured electronic texts and employing statistical methods to discover new information and reveal patterns in the processed data”.¹⁴⁷ It can refer to any process using computers that creates metadata derived from something that was not initially conceived of as data; it can be used to produce statistics and facts about copyrightable works, and to render copyrighted text, sounds, and images into uncopyrightable abstractions.¹⁴⁸

57 To succeed under the CDA exception, all five conditions under s 244 of the Copyright Act 2021 must be fulfilled. The user has to prove that:

- (a) the copy is made for the purpose of CDA;
- (b) the copy is not used for any other purpose (“purpose requirement”);
- (c) the user is not supplying the copy to any person other than for the purpose of verifying the results of the CDA carried out by the user;
- (d) the user has lawful access to the material (the first copy) from which the copy is made (“lawful access requirement”); and
- (e) the first copy is not an infringing copy.

The Act gives an example that “X does not have lawful access to the first copy if X accessed the first copy by circumventing paywalls” and that the use of images to train a computer program to recognise images, such as facial recognition software, is a permissible purpose. Furthermore, the Act states that “X does not have lawful access to the first copy if X accessed the first copy in breach of the terms of use of a database”.¹⁴⁹ Specifically for the purpose requirement, the making of a copy cannot be used for any other purpose except for identifying, extracting or analysing

147 Brief of Digital Humanities and Law Scholars as Amici Curiae in Support of Defendant-Appellees at p 5, *Authors Guild v Google Inc* 804 F 3d 202 (2nd Cir, 2015) (No 13-4829).

148 Matthew Sag, “Copyright Safety for Generative AI” (2023) 61 *Houston Law Review* 295 at 305–306.

149 Copyright Act 2021 (2020 Rev Ed) (S’pore) s 244(2)(d).

information/data *and* using that to improve the functioning of a program in relation to that type of information/data.¹⁵⁰

58 It is generally difficult to prove wholesale copying of millions of works as the various GAIAs do not disclose the training datasets, and one would have to proceed on a classic substantial similarity analysis in respect of *each* output text/image *vis-à-vis* the original work.¹⁵¹ Two salient issues are relevant: (a) whether the use of copyright-protected works for machine learning (“input”); and (b) whether the works created from natural language commands (“output”) are infringing copyright. To determine if there is liability, one needs to understand how the CDA exception and fair use provision in the Copyright Act 2021 may be relevant to the input and output scenarios. In Singapore, copyright law can provide a defence for such infringing uses if these uses fall under either the CDA exception¹⁵² or the fair use provision.¹⁵³ It should be noted that these permitted uses are independent of one another, and more than one exception may apply if the relevant conditions are met.¹⁵⁴ Lastly, any contract term is void to the extent that it purports, directly or indirectly, to exclude or restrict the CDA exception.¹⁵⁵

59 For machine learning purposes, the scraping of the Internet for text and images will often circumvent paywalls or violate the terms of use, hence failing the “lawful access” requirement under s 244(2)(d) of the Copyright Act 2021. Furthermore, the making of a copy, which will involve the conversion of authorial works into a machine-readable format or, in some GAIAs, data storage, is unlikely to be for the *sole* purpose of analysing the data to improve the functioning of the AI in relation to that data;¹⁵⁶ it will be for the purpose of generating new works based on that data, which, in the present authors’ view, is an impermissible purpose.

150 For an analysis of the CDA exception, see David Tan & Thomas Lee Chee Seng, “Copying Right in Copyright Law: Fair Use, Computational Data Analysis and the Personal Data Protection Act” (2021) 33 SAclJ 1032. For an analysis of other TDM exceptions, see Tatsuhiro Ueno, “The Flexible Copyright Exception for ‘Non-Enjoyment’ Purposes – Recent Amendment in Japan and its Implications” (2021) 70 *GRUR International* 145; and Martin Sentfleben, “Compliance of National TDM Rules with International Copyright Law: An Overrated Nonissue?” (2022) 53 *International Review Intellectual Property & Competition Law* 1477.

151 David Tan, “Generative AI and Copyright – Part 1: Copyright Infringement” [2023] SAL Prac 24.

152 Copyright Act 2021 (2020 Rev Ed) (S’pore) ss 243–244.

153 Copyright Act 2021 (2020 Rev Ed) (S’pore) ss 190–191.

154 Copyright Act 2021 (2020 Rev Ed) (S’pore) s 184.

155 Copyright Act 2021 (2020 Rev Ed) (S’pore) s 187(1)(c).

156 Copyright Act 2021 (2020 Rev Ed) (S’pore) s 244(2)(b).

(4) *Summary*

60 Compared to the issue of authorship, there is relatively less clarity on what different jurisdictions consider to be the appropriate way forward for fairly balancing the rights of authors and copyright owners to commercially benefit from the exploitation of their works and the public benefit brought about by the ability of GAIAs to assist in the creative process. For the many jurisdictions that do not or are highly unlikely to embrace an open-ended fair use approach, such as China, as well as most of the Commonwealth common law jurisdictions like England, Australia, Hong Kong and India, the inevitable development is the legislative introduction of a TDM exception. For countries such as the US and Singapore, the fair use exception is unfortunately not a panacea to the generative AI woes. The panoply of uses of copyrighted works by different AI companies for a kaleidoscope of GAIAs – whether as inputs at the training stage or the creation of outputs in response to user prompts, whether commercial or non-commercial or a hybrid – nonetheless demands a fact-specific case-by-case evaluation.

IV. Possible reforms

61 Building on the comparative analysis in Part III, this section proposes reforms to address the currently fragmented and largely reactive nature of legal responses to generative AI across the US, China, and Singapore: (a) under what conditions an AI-generated output reflects sufficient human contribution to justify copyright protection; and (b) to what extent may the use of copyrighted works in training generative models be exempted from liability under current or future exceptions and limitations? These proposals aim to enhance legal clarity, reduce regulatory asymmetries, and realign copyright law with the new realities of collaborative human-AI creativity.

A. *Authorship*

62 Judicial and legislative developments across major jurisdictions continue to reinforce a human-centric paradigm of creative authorship. For example, the USCO Gen AI Copyrightability Report reaffirms the longstanding principle that copyright does not extend to outputs generated solely by AI or to works lacking sufficient human control over expressive elements.¹⁵⁷ Ginsburg and Budiardjo contend that authorship requires two core elements: (a) conception – the envisioning

157 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at pp 11–27 <<https://www.copyright.gov/ai/Copyright-and->
(cont'd on the next page)

of the general ideas for a work and the formulation of a creative plan; and (b) execution – the process by which the author converts the plan into concrete form. This dynamic through which conception informs execution underlies all acts of authorship.¹⁵⁸ However, legal doctrines that treat authorship as inherently human and indivisible struggle to accommodate works arising from iterative, hybrid interactions between humans and GAIAs. While case-by-case adjudication may offer the most context-sensitive results, articulating a coherent set of evaluative criteria would better assist courts and copyright authorities in making principled and predictable determinations.

63 Courts and copyright offices in the jurisdictions surveyed in this article have yet to articulate clear and consistent criteria for establishing human authorship beyond the platitude that human control and creative input are required. Our central premise is that copyright protection should extend to outputs where the human user makes a substantive, identifiable, determinative and causally connected contribution to the final expression. Our proposed framework adopts a multi-factor model that evaluates the scope, quality, and timing of human input. This approach aims to provide a more balanced and functional standard for determining authorship in contexts where generative AI tools augment and assist, rather than displace, human creativity. The proposed framework identifies three factors for meaningfully assessing human contributions to AI-generated outputs, drawn from our analysis of the USCO determinations and the Chinese judicial decisions to date. These factors effectively capture both the qualitative depth and quantitative extent of user input throughout the creative process.

64 The first factor is the *expressive specificity of prompts*, which evaluates both the complexity of user instructions and their position on the idea-expression spectrum. Generic or minimal prompts lack the creative depth necessary to support a claim of authorship. In contrast, prompts that specify concrete aesthetic choices, narrative elements, or compositional structures more closely resemble conventional modes of authorial direction.¹⁵⁹ It also takes into account human users integrating original textual or visual materials – such as uploading their own writings, drawings, or photographs – with the iterative refinement of prompts. Judicial recognition of such contributions can be seen in the

Artificial-Intelligence-Part-2-Copyrightability-Report.pdf> (accessed 30 August 2025).

158 Jane C Ginsburg & Luke Ali Budiardjo, “Authors and Machines” (2019) 34 *Berkeley Technology Law Journal* 343 at 347.

159 See, eg, *Li v Liu* (2023) Jing 0491 Min Chu No 11279 (27 November 2023, Beijing Internet Court) <<https://english.bjinternetcourt.gov.cn/pdf/BeijingInternetCourtCivilJudgment112792023.pdf>> (accessed 23 July 2025).

Spring Breeze and in *A Single Piece of American Cheese*, where courts credited the role of detailed user input in shaping the final expression. By contrast, in *Butterfly Chairs*, human authorship was rejected as the text prompt provided to Midjourney – “Children’s chair with jelly texture, shape of cute pink butterfly, glass texture, light background” – resided in the realm of unprotectable ideas, and the plaintiff provided no further text prompts to refine the AI-generated output. Accordingly, individuals asserting authorship should document the creative process as evidence of the aesthetic choices and personal judgment exercised during the generative process.

65 The second factor concerns *variability management*, which evaluates the degree to which randomness is reduced by the human individual and outputs become predictable. Because GAIAs often produce variable results even when given identical prompts, the user’s efforts to manage this variability, such as by inputting negative prompts, fixing random seeds, fine-tuning model parameters, or applying constraints can reflect a level of intentional and repeatable control analogous to traditional creative authorship. *Butterfly Chairs*, in which authorship was denied, is instructive: the plaintiff acknowledged that it was impossible to regenerate the exact same AI-generated images, with the same basic prompt that she had originally entered, due to the inherent randomness of Midjourney’s generative process. Such parametric direction provides a conceptual bridge between established notions of authorship and the technical realities of contemporary generative tools, enabling a broader yet principled understanding of human contribution in technology-mediated creative processes. The first and second factors in tandem engender a deterministic outcome, *ie*, if all the steps are followed on the GAIA, the same output would be obtained by any user. This mitigates against the objection that identical prompts can generate multiple different outputs, which would otherwise suggest a lack of human control.¹⁶⁰

66 The third factor focuses on *post-generation editing*, examining the extent to which the user shapes and refines the output after its initial generation. Actions such as selecting from multiple outputs, modifying the content using digital editing tools, or integrating the result into a broader authored work such as a comic, storyboard, or multimedia composition may indicate a level of curatorial or editorial authorship. However, one may not claim copyright over the *entire* work; alternatively, one may obtain thin copyright protection over the resulting compilation

160 US Copyright Office, *Copyright and Artificial Intelligence – Part 2: Copyrightability* (17 January 2025) at p 20 <<https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf>> (accessed 30 August 2025).

work that comprises a selection and arrangement of copyrightable and non-copyrightable elements. For instance, in Kristina Kashtanova's *Zarya of the Dawn*, the USCO declined to recognise authorship in the AI-generated images themselves but acknowledged protectable authorship in the narrative arrangement and textual elements, illustrating how post-generation intervention can establish a legally recognisable contribution.¹⁶¹ However, this factor cannot be viewed in isolation from the other factors – for instance, as seen in Jason Allen's *Théâtre D'opéra Spatial*, the inability to identify and delineate the human contribution from the AI-generated elements resulted in the underlying image being denied copyright protection. The subsequent use of Adobe Photoshop for minor post-generation adjustments was not established as sufficient to satisfy the requisite degree of original *human* expression to render the work copyrightable. In a Singapore High Court decision, Hoo Sheau Peng J in *PropertyGuru Pte Ltd v 99 Pte Ltd* held:¹⁶²

[T]he copying, enlargement or resizing of an artistic work, such as a drawing, painting or photograph, does not make the resulting image a copyrighted work. There must be a material alteration or embellishment to the original work to confer originality (and hence copyright protection) on the resulting work.

67 No single factor is determinative, and some factors may carry greater weight depending on the factual context, and claimants need not satisfy all three factors in order to establish human authorship. This approach rewards demonstrable creative engagement while withholding protection from those whose involvement is limited to initiating automated processes. Where authorship is claimed, claimants should be expected to provide supporting evidence, such as prompt histories, configuration settings (eg, fixed seeds), version logs, or documented post-generation edits, as exemplified by the plaintiff in *Spring Breeze*. These forms of documentation, already integral to digital art and computational design workflows, offer practical and transparent means of assessing the degree of human input.

68 The proposed set of factors is consistent with the principle that authorship requires a human individual to exercise creative control over the production of a work. Judicial and administrative practice has already begun to evolve along similar lines, albeit intuitively. By situating such emerging intuitions within a structured framework, the proposed model

161 Letter from US Copyright Office to Van Lindberg, Taylor English Duma LLP (counsel for Kristina Kashtanova) at p 5 (21 February 2023) (*Zarya of the Dawn* (Registration # VAU001480196)).

162 *PropertyGuru Pte Ltd v 99 Pte Ltd* [2018] SGHC 52 at [102]. See also David Tan & Susanna H S Leong, "Intellectual Property Law" (2018) 19 SAL Ann Rev 586 at 593–594.

offers greater normative coherence and enhanced predictability. It avoids the limitations of binary approaches that either categorically exclude works assisted by AI tools or confer protection too readily. Instead, it accommodates the incremental and hybrid nature of creative labour in the machine-human creative process, recognising that authorship may arise progressively through a series of human-directed choices.

B. *Exceptions and limitations*

69 As generative AI systems increasingly rely on the large-scale ingestion of copyrighted materials for training, the comparative analysis by Matthew Sag and Peter Yu reveals a growing international consensus, with jurisdictions worldwide developing legal frameworks that seek to harmonise copyright law with the inevitable demands of AI training.¹⁶³ Central among these exceptions is the fair use doctrine, or fair dealing in certain common law jurisdictions, which has long served as a balancing mechanism between the rights of authors and the public interest in accessing and reusing copyrighted works.¹⁶⁴ In the US, and presumably Singapore, fair use is evolving into a flexible, open-ended standard, assessed on a case-by-case basis and capable of accommodating transformative and non-expressive uses, including those implicated in AI model training. However, this doctrinal flexibility is not replicated globally.

70 Jurisdictions such as China either lack comparably expansive doctrines or rely on narrowly enumerated exceptions under statutory law, offering limited legal certainty for developers engaging in large-scale uses of protected materials for AI training. Some jurisdictions have adopted or proposed statutory exceptions for TDM, which exempt certain forms of computational analysis from the requirement of obtaining prior authorisation from rights holders. Jurisdictions such as the European Union, the UK, Japan and Singapore have implemented various forms of TDM exceptions, though they differ in scope, permissible purposes, and applicability to commercial uses. In contrast, the US has not enacted a dedicated TDM exception, relying instead on the flexibility of the fair use doctrine to address such uses. In this respect, TDM provisions may serve

163 See Matthew Sag & Peter K Yu, “The Globalization of Copyright Exceptions for AI Training” (2025) 74 *Emory Law Journal* 1163. After surveying multiple countries with diverse legal traditions and local conditions regarding the use of copyrighted works for AI training without express authorisation from rights holders, the study concludes that such uses should be permitted in certain circumstances, but not universally.

164 See Taysir Awad, “Universalizing Copyright Fair Use: To Copy, or Not to Copy?” (2022) 30 *Journal of Intellectual Property Law* 1.

as an acceptable alternative to fair use in jurisdictions that are unable to enact the open-ended fair use provision.

71 On the other hand, overly permissive rules may undermine the economic interests of creators, especially when AI-generated outputs compete with or substitute for human-authored works. Concerns are particularly acute in fields such as the visual arts, where generative models can replicate the distinctive styles of living artists, thereby blurring the line between permissible inspiration and impermissible appropriation. Empirical research suggests that while broad exceptions may support innovation and promote public interest in data-rich environments, they may also unfairly disadvantage creators in contexts where high-quality training data is scarce.¹⁶⁵

72 To address these tensions, a principled framework for reforming copyright exceptions is necessary, one that enables the legitimate use of protected works for AI training while safeguarding authors' rights and preserving market incentives. In the absence of an open-ended fair use provision, we propose a three-part framework to draft a TDM exception. Firstly, a clear *purpose limitation* should be imposed to ensure that lawful copying is confined to non-expressive, analytical uses, particularly during the model training phase. Although the boundary between training and generation is not always clearly defined, uses involving access to or enjoyment of expressive content, or those that enable direct reproduction or targeted simulation of protected works, should be excluded from the scope of the exception. Secondly, a *transparency obligation* should require AI developers to disclose the general composition of training datasets, including their provenance, categorical scope, and methods of acquisition, while permitting the protection of proprietary or commercially sensitive information. Although full transparency may be difficult to mandate under current industry practices, even partial or aggregate-level disclosures could enhance regulatory oversight, support public trust, and enable normative evaluation by stakeholders. Thirdly, a dynamic, machine-readable *opt-out mechanism* should be established to allow rights holders to register specific works for exclusion from future AI training. This forward-looking mechanism could be administered by a neutral public registry or a collective management organisation, and would require legal recognition to be enforceable. To be effective, the mechanism should be supported by auditing tools and regulatory incentives that ensure compliance by model developers.

165 See S Alex Yang & Angela Huyue Zhang, "Generative AI and Copyright: A Dynamic Perspective" (4 February 2024) <<https://papers.ssrn.com/abstract=4716233>> (accessed 27 August 2025).

73 Additional procedural safeguards may also be necessary to ensure legal certainty and promote accountability. Firstly, a lawful access requirement similar to Singapore's CDA exception should limit eligibility for the exception to materials obtained through legitimate means, including licensed purchase, open access, the public domain, or other authorised sources. Secondly, AI developers should be subject to documentation and audit obligations, including the retention of records detailing data acquisition practices, dataset curation methods, and output filtering mechanisms. These requirements would facilitate retrospective review and support regulatory oversight and compliance monitoring. Thirdly, the exception should apply only to the training phase. Outputs that reproduce protected content, whether in whole or in part, should remain subject to conventional infringement analysis, so that the exception does not serve as a blanket defence for downstream uses, especially commercial ones such as when a GAIA charges a subscription fee for its premium offerings. Fourthly, unlike the Japanese approach, we urge legislatures to adopt a dual-tier approach, distinguishing between non-commercial and commercial applications. A broader exception may be justified for research, education, and other public-interest uses, while commercial uses should be subject to heightened requirements, including transparency obligations, opt-out compliance, and potentially collective licensing arrangements. Finally, developers should bear the burden of demonstrating that the use of any copyrighted material was functionally necessary to achieve specific model capabilities, thereby preventing the overbroad invocation of copyright exceptions. Given the transnational nature of AI development and deployment, achieving alignment among domestic copyright regimes through a principle of functional equivalence rather than formal uniformity may offer a more pragmatic path towards regulatory coherence. International bodies such as WIPO could play a co-ordinating role by promoting soft-law instruments, including interoperable opt-out standards, shared provenance registries, and model guidelines. Such tools would facilitate cross-border alignment while respecting national regulatory autonomy.

V. Conclusion

74 This article has examined the key legal challenges that generative AI poses to copyright law and proposed reforms aimed at fairly aligning the protection of human creativity with the realities of machine-assisted production. While copyright law remains central to the governance of GAIAs, it does not address the full spectrum of regulatory questions they raise. Other branches of intellectual property law, such as patent and trade mark law, as well as adjacent domains including contract, consumer protection, and competition law, may in certain contexts provide more appropriate tools for addressing issues such as attribution, accountability,

and economic impact. Equally important is the task of fostering public understanding of AI-generated outputs and their legal consequences. As David Vaver presciently observed more than two decades ago:¹⁶⁶

[F]or the intellectual property system to survive, it must gain and keep public respect. To be respected, it must be known. To be known, it must be understood. To be understood, it must be coherent and persuasive. ...

75 A copyright regime that remains intelligible, accessible, and normatively defensible is more likely to command legitimacy in an era of rapid technological change. Copyright law has always evolved in response to technological disruption, from the printing press and photography to broadcasting and the internet. Generative AI now presents lawmakers with a unique opportunity to reimagine copyright law, reshaping it into a framework that is not only relevant and adaptive, but also coherent and persuasive. The authors are in agreement with Daryl Lim, who urged that doctrines like fair use and originality must be “recalibrated to reflect the conceptual and curatorial labour behind AI-mediated creativity” in the design of “a creative economy that is pluralistic, participatory and just”.¹⁶⁷ The enforcement of copyright must strive to fairly balance the interests of past, present, and future creators and users. If carefully structured, the next generation of copyright law can ensure that such technologies complement, rather than supplant, human creativity. In doing so, it may not only preserve the integrity of the copyright system, but also reinforce its legitimacy for decades to come.

166 David Vaver, “Intellectual Property: The State of the Art” (2001) 32 *Victoria University of Wellington Law Review* 1 at 17–18.

167 Daryl Lim, “Banana Republic: Copyright Law and the Extractive Logic of Generative AI” (2025) 20 *Journal of Intellectual Property Law & Practice* 573 at 582.