Attribution problem of generative AI: a view from US copyright law

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I. Introduction

Generative Artificial Intelligence (AI) systems, a term that is used to describe AI systems, can generate content in response to a given prompt.[1] Users can request generative AI to create a certain type of output or to edit a text or a picture submitted by the user. The output can be in various formats including text, images, audio or code. Today, technology companies are rushing to invest in generative AI. Microsoft's investment of $10 billion in OpenAI, the developer of several popular generative AI products including ChatGPT, indicates the growing potential of this market.[2] Expectations are so high that a 4-week-old start-up company has just raised Europe's largest ever seed based on its potential to develop generative AI similar to ChatGPT.[3] McKinsey recently estimated generative AI to add the equivalent of

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Abstract

- Three significant lawsuits concerning generative Artificial Intelligence (AI) were filed in the USA, starting the first wave of lawsuits against AI: (i) coders filed claims for the alleged use of their codes by OpenAI's CoPilot, (ii) visual artists filed claims against companies using Stable Diffusion and (iii) Getty Images filed claims against Stability AI, which uses Stable Diffusion. Following the lead of these lawsuits, copyright owners of literary works filed four other lawsuits against OpenAI, Meta and Alphabet (Google)'s large language models. All of these lawsuits are pending at the time of writing.
- Among other things, plaintiffs filed claims challenging generative AI's lack of attribution to copyright owners of in-copyright works in its training data. As US copyright law does not protect moral rights strongly, a federal rule granting a right of attribution to all copyright owners does not exist. Yet, there are some provisions providing quasi-protection. Section 1202 of the Digital Millennium Copyright Act (DMCA) is one of them and protects copyright owners against removal/modification of the Copyright Management Information in connection with their works.
- This article lays down the limitations of moral rights protection in the USA and demonstrates the difficulties faced by the plaintiffs of the pending lawsuits. The limitations of Section 1202 DMCA are explained to demonstrate its difference from a classic moral right of attribution. The outcomes of these lawsuits will be significant in building case law on generative AI for the first time in the USA. This article evaluates the benefits and disadvantages of courts' possible acceptance of plaintiffs' claims regarding attribution.

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1 Helen Toner 'What Are Generative AI, Large Language Models, and Foundation Models?' (12 May 2023) Center for Security and Emerging Technology. Available at https://cset.georgetown.edu/article/what-are-generative-ai-large-language-models-and-foundation-models/ (accessed 27 June 2023).

2 Dina Bass 'Microsoft Invests $10 Billion in ChatGPT Maker OpenAI' (23 January 2023) Bloomberg. Available at https://www.bloomberg.com/news/articles/2023-01-23/microsoft-makes-multibillion-dollar-investment-in-openai#xj4y7vzkg (accessed 27 June 2023).

3 Tim Bradshaw and L Abboud 'Four-Week-Old AI Start-Up Raises Record €105mn in European Push' (13 June 2023) Financial Times. Available at https://www.ft.com/content/cf939ea4-d96c-4908-896a-48a74381f251 (accessed 27 June 2023).

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$2.6 trillion to $4.4 trillion annually to the global economy.[4] These figures demonstrate that generative AI or its derivatives will stay in our lives for a significant period of time.

Generative AI uses machine learning, which makes it a member of a subset of AI systems. Machine learning 'provid[es] systems the ability to automatically learn and improve on the basis of data or experience, without being explicitly programmed'.[5] In other words, AI systems that use machine learning can learn from the patterns in their training data and can derive rules from these patterns without an explicit command from anyone.[6] Other AI systems that use machine learning are trained to do specific tasks like image recognition, language translation or autonomous driving. All this said, generative AI is not bound by a predefined task and can create new content (ie outputs) by exhibiting creativity.

While generative AI is not bound by predefined tasks, it still needs to respond to the prompts given by users. The user of generative AI can exercise control over the outputs generated by generative AI in different ways. For example, the user can give training data to generative AI and ask it to solely work on that data. When the user asks generative AI to polish the language of a drafted email, generative AI will be limited to work on the text of that email, which is a limitation on the output. Alternatively, the user can give some parameters to generative AI to follow. For example, the user can ask generative AI to summarize a specific event in the style of a 5-year old. Such a prompt will also give the user some control over output.

The training data of generative AI usually contain vast amounts of information and are used as input to train generative AI models. For example, ChatGPT is a type of generative AI that is called a large language model (LLM), which processes and generates text.[7] It is trained on undisclosed sources of data that are claimed to be publicly available online and is continued to be trained on users' conversations with ChatGPT.[8] Viewed from a copyright law perspective, the training data may consist of in-copyright works as well as works that are in the public domain. As the outputs generated by generative AI are based on this dataset, they may contain similarities to or identical copies of the in-copyright works in the training data. As reproduction of in-copyright works is a potential infringement of the right of reproduction of the copyright owner, such use of in-copyright works in the training data continues to spark legal discussions all around the world.[9] Some countries, including Japan and the European Union Member States, adopted copyright exceptions for certain use of in-copyright works in the training data.[10] In the USA, the lawfulness of using in-copyright works in the training data has not been addressed by Congress or courts yet.

However, this ambiguity may change soon. Three important lawsuits were filed against generative AI before US courts in late 2022 and the beginning of 2023. The first one was filed in November 2022 by several computer software coders against companies behind CoPilot, a generative AI allegedly trained on codes that were publicly available on GitHub. The second lawsuit was filed in January 2023 by several artists against the alleged use of their works for training another generative AI called Stable Diffusion. These two lawsuits were filed as class actions. Finally, the third lawsuit was filed in February 2023 by Getty Images, a company providing editorial images to its clients, against the alleged use of their photos for training Stable Diffusion. In all three lawsuits, claims were based on a range of legal domains, including copyright, contract law, trade mark law and unfair competition law.

Following this first wave of lawsuits against generative AI, four new lawsuits were filed in the summer of 2023. These lawsuits are all class actions filed by authors of literary works. Two of them are against OpenAI concerning the alleged use of authors' works to train the Generative Pre-trained Transformer (GPT) models; one of them is against Meta concerning the alleged use of authors' works to train Large Language Model Meta AI (LLaMA) models

4 Michael Chui *et al.* 'The Economic Potential of Generative AI: The Next Productivity Frontier' (June 2023) McKinsey Digital. Available at https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#/ (accessed 27 June 2023).

5 15 U.S. Code § 9401.

6 Anthony Man-Cho So 'Technical Elements of Machine Learning for Intellectual Property Law' in J Lee *et al.* (eds) *Artificial Intelligence and Intellectual Property* (OUP Oxford 2021) 11.

7 Alec Radford *et al.* 'Language Models Are Unsupervised Multitask Learners'. Available at https://cdn.openai.com/better-language-models/language_models_are_unsupervised_multitask_learners.pdf (accessed 18 August 2023).

8 Natalie from OpenAI 'What Is ChatGPT, Commonly Asked Questions About ChatGPT'. Available at https://help.openai.com/en/articles/6783457-what-is-chatgpt (accessed 27 June 2023).

9 Robert Mahari *et al.* 'Generative AI Is a Minefield for Copyright Law' (15 June 2023) The Conversation. Available at https://theconversation.com/generative-ai-is-a-minefield-for-copyright-law-207473 (accessed 27 June 2023). Pamela Samuelson, 'Text and data mining of in-copyright works: is it legal?' (2021) 64 *Communications of the ACM* 20. Jan Bernd Nordemann and Jonathan Pukas, 'Copyright exceptions for AI training data—will there be an international level playing field?' (2022) 17 *JIPLP* 973. Eleonora Rosati, 'Copyright as an obstacle or an enabler? A European perspective on text and data mining and its role in the development of AI creativity' (2019) 27 *Asia Pacific Law Review* 198. Few scholars discuss the interplay between generative AI and moral rights. Rita Matulionyte, 'Can AI infringe moral rights of authors and should we do anything about it? An Australian perspective' (2023) 15 *Law, Innovation and Technology* 124.

10 Council Directive (EC) 2019/790 of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC [2019] Art. 3 & 4; art 30–4(ii) of the Copyright Act of Japan.

and the last one is against Google concerning the alleged use of authors' works to train Bard models. Generative AI models referenced in all these lawsuits are LLMs. Despite minor changes in factual allegations, these four recent lawsuits (the second wave of lawsuits) contain very similar legal arguments and generally echo the claims raised in the first wave of lawsuits.

Regardless of the difference in the types of works concerned in these lawsuits, similar claims were filed under copyright law. This article examines a subset of copyright claims raised in all of these lawsuits focusing on the lack of attribution by generative AI to the authors and copyright owners of the works used in the training data. The right of attribution is a type of moral right under copyright and gives authors of the works the right to be attributed authorship of their works.[11] Attribution can be done in different forms, including citing the name of the author or giving a link to the source of the original work. Like other types of moral rights, the right of attribution is weakly protected under the US copyright law as that legal system has historically seen copyright more like a patrimony right and less like a part of the artist's personality.[12]

As the result of an amendment to the US Copyright Act in 1998, the newly inserted Section 1202 introduced the right to copyright owners to file a claim when the Copyright Management Information (CMI) that is conveyed with the work is removed or altered by third parties. This quasi-moral right protection opened the way for legal claims on attribution. Notably, this right was granted to copyright owners instead of authors of works, which differentiated it from a traditional right of attribution. Section 1202 was mentioned in all of the pending lawsuits' complaints. This article examines the claims in the pending lawsuits against generative AI in the USA and questions if authors/rights owners have a legal claim for the right of attribution under the US copyright law.

II. The attribution problem of generative AI

A. What attribution means for generative AI

Generative AI is on the rise, and companies are now integrating AI systems into their working models.[13] Meanwhile, individual human users utilize these AI systems for various purposes, including academic or non-academic research, preparing assignments and understanding complex problems. For instance, lawyers use these AI systems to do research on legal questions and draft briefs.[14] As the generative AI models are trained on materials that are available in their input/training data, they produce an output statistically responding to the question submitted in the prompt based on the input. Some outputs can even contain parts of works that are in the training data. However, generative AI does not provide attribution for the works that are used to create a certain output.

For example, if a lawyer asks ChatGPT 'Why are liability rules better than property rules?', ChatGPT responds with a list of advantages that liability rules are claimed to have over property rules.[15] One of these advantages is reduced transaction costs. In fact, this argument was raised and explained by Guido Calabresi and A. Douglas Melamed in their phenomenal Harvard Law Review paper in 1972 that is publicly available online.[16] Anyone and everyone who writes on this topic cites this paper. However, in responding to the user's questions, ChatGPT gives attribution to neither the authors' nor the paper's title.

Attribution to works in the training data has been discussed among the tech community and solutions are being explored by research groups. Google announced that it would launch Sparrow in January 2023, spreading the word that it would be able to provide citations.[17] Giving attribution to works that are used to create a certain output requires additional extensive work by the AI systems as it is not easy to determine which specific works are

11 3 Nimmer on Copyright § 8D.03 (2023).

12 John Henry Merryman, 'The refrigerator of Bernard Buffet' (1976) 27 *Hastings LJ* 1023, 1037.

13 Anthony Tellez 'These Major Companies—From Snap to Salesforce—Are All Using ChatGPT' (3 March 2023) Forbes. Available at https://www.forbes.com/sites/anthonytellez/2023/03/03/these-major-companies-from-snap-to-instacart—are-all-using-chatgpt/?sh=4c00f79a4132 (accessed 27 June 2023).

14 Nicole Black, 'The Case for ChatGPT: Why Lawyers Should Embrace AI' (21 February 2023) ABA Journal. Available at https://www.abajournal.com/columns/article/the-case-for-chatgpt-why-lawyers-should-embrace-ai (accessed 27 June 2023).

15 The relevant parts of the response generated by ChatGPT on 25 June 2023 are as follows: 'Liability rules and property rules are two different legal frameworks used to allocate rights and responsibilities in various situations. While both approaches have their advantages and disadvantages, liability rules are often considered more flexible and efficient compared to property rules in certain contexts. Here's an explanation of why liability rules are sometimes preferred:

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3. Reduced transaction costs: Property rules often require extensive negotiations, agreements, and potentially expensive legal proceedings to establish and enforce property rights. On the other hand, liability rules simplify the process by focusing on assessing damages and determining appropriate compensation. This reduction in transaction costs can lead to quicker and more efficient resolutions, particularly in cases where property rights are difficult to define or enforce.

…….'

16 Guido Calabresi and A. Douglas Melamed, 'Property rules, liability rules, and inalienability: one view of the cathedral' (1972) 85 *Harvard Law Review* 1089.

17 Billy Perrigo 'DeepMind's CEO Helped Take AI Mainstream. Now He's Urging Caution' (12 January 2023) Time Magazine. Available at https://time.com/6246119/demis-hassabis-deepmind-interview/ (accessed 27 June 2023).

used for a specific output.[18] For example, going back to the above-mentioned example on liability rules and property rules, the training dataset of ChatGPT may contain three different documents that have the relevant paper by Calabresi and Melamed. When a generative AI produces the output about 'transaction costs', the scientific studies show that it is challenging for the generative AI to determine which one of these three documents was the source of that output.

That said, attribution in the legal sense does not always require the detection of the specific document name that is used to create an output. It is sufficient to cite the names of the authors of this paper. Indeed, this kind of attribution can be done through a basic similarity check, which is already employed by plagiarism detection products like TurnitIn.[19] Generative AI is also capable of performing this kind of similarity check.[20] However, this kind of attribution will require AI companies to disclose their training data, that is something which they are wary of doing as it could trigger substantial legal risks (including this article's topic).

For these reasons, most of the generative AI products do not provide citations when they are asked to respond to a user's prompt. In fact, when users specifically ask for citations, they usually respond with fake citations.[21] Such was the case with a New York lawyer, Steven A. Schwartz, who submitted an AI-generated brief to the Federal District Court in New York.[22] The other side's lawyers could not locate the cases that were cited in the brief. When requested to provide additional information about the cited cases, the lawyer went back to the generative AI and submitted the generated output to the court. It was later discovered that the cited cases did not exist. They were made up by the AI system. Later during a sanction hearing, Schwartz confessed that he thought generative AI was able to search all databases and he did not think he had to check the accuracy of the cited cases.[23] The fact that a lawyer with 30 years of experience could be tricked by generative AI and was made believe that outputs were reliable should ring alarm bells for our community.

Following these developments, a federal judge in Northern Texas, Brantley Starr, issued an order asking all lawyers submitting documents to his court to sign a certificate stating that they did all necessary fact-checking for AI-generated outputs, if any.[24] One day after this order, the US Magistrate Judge Gabriel Fuentes in the Northern District of Illinois issued a similar order, which was later followed by an order by Judge Baylson of the District Court for the Eastern District of Pennsylvania.[25] Journals started to take similar precautions to avoid AI-generated submissions that may contain inaccurate information. Nature magazine announced that they would not allow the publication of any content in which generative AI has been used for the creation of visuals. The journal explained this move by stating: 'As researchers, editors and publishers, we all need to know the sources of data and images, so that these can be verified as accurate and true. Existing generative AI tools do not provide access to their sources so that such verification can happen.'[26] While visuals are banned completely, the use of AI-generated text that is either created or edited by AI is allowed if authors provide sources for all the text, including the part generated by AI.[27] This process should be done manually by authors.

As society is getting acquainted with the possible harms of generative AI, including fake citations in a legal brief, institutions have also started taking precautions against the unresponsible use of generative AI. Notably, these efforts are individual and will not have a wide effect on the millions of users of generative AI all around the world. While educating users might be an option, more responsibility taken by AI companies will yield more

18 Akyürek *et al.* lay down the problems with attribution by language models that have large training datasets and point to future work to be done. Ekin Akyürek *et al.* 'Towards Tracing Factual Knowledge in Language Models Back to the Training Data' (2022) *Findings of the Association for Computational Linguistics: EMNLP 2022* 2429. Several other scientific research studies followed this paper including Sung Min Park *et al.* 'TRAK: Attributing Model Behavior at Scale' (2023) arXiv preprint arXiv:2303.14186.

19 Despite common misconception, TurnitIn detects similarity rather than plagiarism. 'Does Turnitin Detect Plagiarism?' Available at https://www.turnitin.com/blog/does-turnitin-detect-plagiarism (accessed 17 August 2023).

20 It is stated on the Frequently Asked Questions page of Google's Bard that 'If Bard does directly quote at length from a webpage, it cites that page'. This is an example of how generative AI can actually cite its sources.

21 Chris Stokel-Walker and Richard Van Noorden, 'The promise and peril of generative AI' (2023) 614 *Nature* 214.

22 Benjamin Weiser and Nate Schweber, 'The ChatGPT Lawyer Explains Himself' (8 June 2023) The New York Times. Available at https://www.nytimes.com/2023/06/08/nyregion/lawyer-chatgpt-sanctions.html (accessed 27 June 2023).

23 Ibid.

24 Brantley Starr 'Mandatory Certification Regarding Generative Artificial Intelligence'. Available at https://www.txnd.uscourts.gov/judge/judge-brantley-starr (accessed 27 June 2023).

25 Gabriel A. Fuentes 'Standing Order For Civil Cases Before Magistrate Judge Fuentes'. Available at https://www.ilnd.uscourts.gov/_assets/_documents/_forms/_judges/Fuentes/Standing%20Order%20For%20Civil%20Cases%20Before%20Judge%20Fuentes%20rev%27d%205-31-23%20(002).pdf (accessed 10 August 2023); Michael M. Baylson 'Standing Order Re: Artificial Intelligence ("AI") in Cases Assigned to Judge Baylson'. Available at https://www.paed.uscourts.gov/documents/standord/Standing%20Order%20Re%20Artificial%20Intelligence%206.6.pdf (accessed 18 August 2023).

26 'Why *Nature* will not allow the use of generative AI in images and videos' (2023) 618 *Nature* 214.

27 *Nature* does not allow AI to be listed as an author of the article as accountability of AI cannot be established. 'Tools such as ChatGPT threaten transparent science; here are our ground rules for their use' (2023) 612 *Nature* 612.

effective results. Whether AI companies should work to ensure true attribution is a policy question that legislators should deal with. Meanwhile, existing law will guide rights owners on what they can ask from generative AI.

B. Copyright owners' call for attribution by generative AI

Another reason why attribution has become a focal point of legal discussions concerning generative AI is the creators' demand to be recognized for their role in the generation of the outputs. While AI companies have raced to launch new products, authors of in-copyright works have started feeling rage against the use of their works by these well-resourced companies for free. As stated, the wave of litigation against generative AI in the USA commenced in November 2022. The first lawsuit was a class action filed by a coder and a lawyer named Matthew Butterick against GitHub, Microsoft and OpenAI (GitHub lawsuit).[28] Plaintiffs placed allegations against the defendants' taking of their open-source codes that were made available on the GitHub platform and using them to train CoPilot and Codex, two generative AI developed by OpenAI.

The overall message conveyed through the complaint is that plaintiffs believed the open-source culture was betrayed by the defendants.[29] Coders made their codes available on the GitHub platform, hoping to foster innovation. They were made available under open-source licences, which required users to give attribution to authors and attach the copyright notice and licence agreement whenever they used the codes.[30] The system was built on a chain of users who would always carry the attribution to authors and a copy of the licence agreement with copied codes so that future users would comply with the same terms. According to the plaintiffs' allegations, the defendants trained Codex and CoPilot on publicly available codes, including codes on GitHub. CoPilot was promoted as a generative AI using Codex to generate code upon its users' prompts. CoPilot was made available on a subscription model. Still available online, CoPilot helps users find bugs in codes or generate codes for a specific function.[31] While doing so, it copies from the codes available in its training data, including codes on GitHub. Attribution to authors (ie coders) or a copy of the licence agreement that was attached to these codes is not provided to users of CoPilot. Users of CoPilot cannot know who wrote the codes that appeared in the output. Open-source culture is therefore betrayed. In the complaint, plaintiffs emphasized the in-copyright nature of codes and brought claims on the Digital Millennium Copyright Act (DMCA) grounds along with breach of contract and other state law claims.

A few months after the GitHub lawsuit, Butterick, acting on behalf of three artists, filed another class action against Stability AI, Midjourney and Deviantart.[32] This lawsuit concerned another AI software called Stable Diffusion, which was allegedly trained on images available online. As the plaintiffs' works were made available online on their own personal platforms, it was alleged that plaintiffs' in-copyright works were part of the training data. Stability AI, Midjourney and Deviantart all had generative AI (namely DreamStudio, Midjourney and DreamUp) that relied on Stable Diffusion. These products can generate images in response to users' textual prompts. After explaining the technical details of the diffusion method, plaintiffs alleged that the outputs generated by these AI systems were derivative works of their works. They claimed that 'It is, in short, a 21st century collage tool.'[33]

Less than a month after Butterick's lead, Getty Images filed a lawsuit against Stability AI (Getty Images lawsuit).[34] Getty Images had an easier job in claiming that their visuals were used to train Stable Diffusion as some of the outputs generated by Stable Diffusion contained the watermark of Getty Images. Unlike the earlier two lawsuits, Getty Images was not the creator of works but rather the copyright owner thereof. Getty Images photos are either taken by Getty Images employees or by third parties who subsequently assign their copyright to Getty Images.[35]

28 J. DOE 1 and J. DOE 2, individually and on behalf of all others similarly situated, Individual and Representative Plaintiffs *v* GitHub, Inc.; Microsoft Corporation; OpenAI, Inc.; OpenAI, L.P.; OpenAI GP, L.L.C.; OpenAI Startup Fund GP I, L.L.C.; OpenAI Startup Fund I, L.P.; OpenAI Startup Fund Management, LLC, 2022 WL 16743590. An amended complaint was filed on 8 June 2023.

29 Ibid para. 15.

30 The plaintiffs of the case alleged that their codes were made available under different free licences including the GNU's not Unix (GNU) General Public License (GPL), which is very popularly used in the software world. The GNU GPL allows users to freely run the unmodified code and the outputs generated from the code, share the code and outputs generated from the code and study these codes with others or by themselves. Importantly, users must pass on the same freedoms to other users when they use the code. All relevant licence agreements are attached as Appendix A to the complaint of the GitHub lawsuit and are Available at https://githubcopilotlitigation.com/pdf/06823/1-1-github_complaint_appendix_a.pdf (accessed 18 August 2023).

31 An explanatory video is Available at https://www.youtube.com/watch?v=4RfD5JiXt3A&t=56s (accessed 2 July 2023).

32 Sarah Andersen; Kelly Mckernan; Karla Ortiz; individual and representative plaintiffs *v* Stability AI Ltd; Stability AI, Inc., a Delaware corporation; Midjourney, Inc.; Deviantart, Inc. (13 January 2023).

33 Ibid para. 90.

34 Getty Images (USA), Inc. *v* Stability AI, Inc. (3 February 2023).

35 Ibid para. 3.

Getty Images was concerned about two major things: (i) the use of their works for free and without credit and (ii) the use of their watermarks in connection with 'bizarre' outputs generated by AI. All these three lawsuits are pending before US courts, and the stakeholders of the generative AI community are waiting for their outcomes. As Getty Images watermark is also registered as a trade mark, claims were raised under trade mark law as well. Nevertheless, the remaining claims were similar to those raised in the first two lawsuits.

Following these lawsuits, a few months of silence ensued. This silence was broken with the filing of four new lawsuits in the summer of 2023. The lawsuits of the second wave of lawsuits are all filed by authors who are registered copyright owners of literary works, and they target LLMs that are allegedly trained on the plaintiffs' works. The first and second lawsuits were filed against OpenAI concerning the training of the companies' GPT models.[36] The third lawsuit targeted Meta for the training of their product LLaMA.[37] And the last lawsuit targeted Alphabet Inc., the parent company of Google who owns another LLM called Bard.[38] All of these lawsuits contained copyright infringement claims, as plaintiffs alleged that the training process of LLMs resulted in the reproduction and modification of their in-copyright works.

III. Right of attribution under US copyright law

A. The utilitarian model's approach to moral rights protections

US copyright law is based on a utilitarian justification for copyright protection, as it is demonstrated by the Copyright Clause in the US Constitution.[39] The utilitarian model is concerned with maximizing public welfare. It gives significance to the maximum dissemination of works as well as incentivization of creation.[40] It can be contrasted to a personhood theory, the dominant theory in continental Europe (excluding Ireland), which gives importance to the continued bond between the artist and the work. It values the creation process and aims to give individuals control over their property.[41] In this vein, works are considered as realization of authors' personality, and protection of the bond between these embodiments and authors is important.[42] For this reason, moral rights are very important under the personhood theory because they aim to preserve the integrity of the work and ensure attribution to authors. The utilitarian model also values moral rights as they are also a mean to incentivize authors to create more.[43] In contrast, the US copyright law views IP rights more as a patrimony rights and does not give equal importance to the artist's bond with their work.[44]

Unsurprisingly, moral rights protection barely existed under the US Copyright Act until 1990 for any kind of work.[45] The USA ratified the Berne Convention for the Protection of Literary and Artistic Works (the Berne Convention) in 1988.[46] Article 6bis of the Berne Convention requires recognition of moral rights protection for authors.[47] These moral rights consist of two types of rights: (i) right of attribution and (ii) right to integrity of the work. US Congress discussed whether these provisions required any changes to the US Copyright Act.[48] After being advised by the Ad Hoc Working Groups on US Adherence to the Berne Convention, Congress decided to pass the Berne Convention Implementation Act of 1988, which did not introduce any amendments

36 Paul Tremblay; Mona Awad; and individual and representative plaintiffs *v* OpenAI, Inc.; OpenAI, L.P.; OpenAI OpCo, L.L.C.; OpenAI GP, L.L.C.; OpenAI Startup Fund GP I, L.L.C.; OpenAI Startup Fund I, L.P.; and OpenAI Startup Fund Management, LLC (28 June 2023). Sarah Silverman; Christopher Golden; Richard Kadrey; *v* OpenAI, Inc.; OpenAI, L.P.; OpenAI OpCo, L.L.C.; OpenAI GP, L.L.C.; OpenAI Startup Fund GP I, L.L.C.; OpenAI Startup Fund I, L.P.; and OpenAI Startup Fund Management, LLC (7 July 2023).

37 Richard Kadrey; Sarah Silverman; Christopher Golden; individual and representative plaintiffs *v* Meta Platforms, Inc. (7 July 2023).

38 J.L., C.B., K.S., P.M., N.G., R.F., J.D. and G.R., individually, and on behalf of all others similarly situated, *Plaintiffs v Alphabet Inc.*, Google Deepmind, and Google LLC (11 July 2023).

39 Art I Section 8 Clause 8 of the US Constitution: [The Congress shall have power] 'To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.'

40 William W. Fisher 'Theories of Intellectual Property' in Stephen Munzer (ed.) *New Essays in the Legal and Political Theory of Property* (Cambridge University Press, United States of America 2001) 168–199.

41 Margaret Jane Radin, 'Property and personhood' (1982) 34 *Stanford Law Review* 957.

42 Fisher (n 44).

43 Justin Hughes, 'The personality interest of artists and inventors in intellectual property' (1998) 16 *Cardozo Arts and Entertainment Law Journal* 81, 84.

44 Roberta Rosenthal Kwall *The Soul of Creativity: Forging a Moral Rights Law for the United States* (1st edition, Stanford University Press 2010) 25; Merryman (n 15).

45 The 1976 Act indeed contained one provision on the right to integrity of works under Section 115(a)(2) for reproduction in phone records of a musical composition. Alternatively, Section 106(2) could also be invoked to prohibit unauthorized modifications to works as that modified version might constitute an unauthorized derivative work. Roberta Rosenthal Kwall, 'Copyright and the moral right: is an American marriage possible?' (1985) 38 *Vanderbilt Law Review* 1, 38.

46 Berne Convention Implementation Act (BCIA) of 1988, 102 Stat. 2853.

47 This provision was not a part of the original text. Art 6bis was added in 1928 with what is called as Rome revision.

48 S. Rep. No. 352, 100th Cong., 2d Sess. 9–10 (1988), reprinted in 1988 U.S.C.C.A.N. 3706, 3714–15.

to the 1976 US Copyright Act on moral rights.[49] It was concluded that US copyright law was compatible with the Berne Convention with provisions relating to moral rights protection in other federal and state laws.[50]

One of these federal provisions is Section 43(a) of the Lanham Federal Trademark Act (Section 43(a)), which provides federal protection against 'false designation[s] of origin, false or misleading description[s] of fact, or false or misleading representation[s] of fact'.[51] The provision allows civil action to be filed against persons 'who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact'.[52] As the Copyright Act failed to provide strong moral rights protections, moral rights have long been protected under different doctrines that also include unfair competition.[53] Especially, Section 43(a) of the Lanham Act served as the principal legal ground for lawsuits on attribution for a long time.[54] The provision did not provide an affirmative right of attribution. It is only applicable in cases of misattribution.[55]

In 2003, the Supreme Court decided on a case concerning the applicability of Section 43(a) to a work that was once under copyright protection but subsequently entered the public domain.[56] The case concerned the use of parts of Twentieth Century Fox Film Corporation's (Fox) television series by Dastar Corporation (Dastar), which claimed to own the series. The said television series used to be under copyright protection and Fox was the copyright owner. However, by the time of Dastar's use, the copyright term had expired. Fox requested correction of attribution and filed a lawsuit against Dastar under Section 43(a). Justice Scalia, who delivered the Opinion for the Supreme Court, phrased the Supreme Court's understanding of 'origin of goods' in Section 43(a) as 'the producer of the tangible goods that are offered for sale, and not to the author of any idea, concept, or communication embodied in those goods'.[57] With 8-0 unanimity, the Supreme Court decided that Section 43(a) could not be applied to this case.[58] Following this differentiation, courts started denying allegations on Section 43(a) for works that do not exist in tangible copies.[59]

Courts have been divided on whether Section 43(a) of the Lanham Act can still be applied to some copyright-related lawsuits.[60] Some courts accepted the *Dastar* opinion as meaning that Section 43(a)'s scope cannot be extended to any copyright-related lawsuit.[61] On the other hand, some courts have accepted the effect of the *Dastar* opinion as being limited to the specific facts of that case (ie it can only be applied for misattribution cases of works that are in the public domain).[62] The ambiguity in the applicability of Section 43(a) has resulted in a weakening of moral rights protection in the USA and showed that the discussions during the drafting of the Berne Convention Implementation Act may no longer be valid. Significantly during the discussions preceding the ratification of the Berne Convention, Section 43(a) of the Lanham Act was showed as a lifejacket.

B. Section 106A of the Copyright Act: the Visual Artists Rights Act

Following the USA's ratification of the Berne Convention, the Congress enacted a new federal act called the Visual Artists Rights Act (VARA) in 1990 which was added to the 1976 Copyright Act as Section 106A.[63] Within its narrow scope, the VARA introduced the right of attribution and the right to prevent any intentional distortion, mutilation or other modification of the work that will be prejudicial to the author's reputation. Although the VARA contains an affirmative right of attribution under Section 106A(a)(1)(A),[64] it is rarely applicable due to its very narrow scope.

Notably, entitlements under the VARA only apply to authors of works of visual art.[65] The definition of works of

49 Ad Hoc Working Grp. On US Adherence to The Berne Convention, Final Report 2 (1986), *reprinted in* 'Chapter VI – Moral Rights' (1985) 10 Colum-VLA JL & Arts 547; BCIA of 1988 § 2(3), 102 Stat. 2853.

50 Ginsburg criticizes this approach by the USA. Jane C. Ginsburg, 'Have moral rights come of (Digital) age in the United States?' (2001) 19 *Cardozo Arts & Entertainment Journal* 9, 10.

51 Lanham (Trademark) Act, 15 U.S.C. § 1025(a).

52 Ibid.

53 Kwall (n 48) 18; Justin Hughes, 'American moral rights and fixing the Dastar 'Gap'' (2007) *Utah Law Review* 659, 668.

54 Gilliam *v* American Broadcasting Companies, Inc. 538 F.2d 14 (2d Cir. 1976).

55 Jane C Ginsburg, 'Moral Rights in the U.S. still in need of a Guardian Ad Litem' (2012) 30 *Cardozo Arts & Entertainment Law Journal* 73, 79.

56 539 U.S. 23 (2003).

57 539 U.S. 23, 37, 123 S. Ct. 2041, 2050, 156 L. Ed. 2d 18 (2003).

58 Justice Breyer had to recuse himself.

59 98 U.S.P.Q.2d (BNA) 1595 (E.D. Pa. 2011); 630 F. Supp. 2d 585 (M.D.N.C. 2008); 396 F. App'x 224, 232 (6th Cir. 2010).

60 Professor Hughes described this situation as 'the Dastar gap'. Hughes proposes several options to fill the Dastar gap: (1) Adding a description of the term 'origin' to the Lanham Act; or (2) adding a Section 106B to the Copyright Act for the rights of other authors to attribution. Hughes (n 58) 700.

61 Hughes (n 58) 692; Carroll *v* Kahn, No. 03-CV-0656, 2003 WL 22327299, at *6-7 (N.D.N.Y. 9 October 2003).

62 739 F. Supp. 2d 927 (E.D. Va. 2010).

63 17 U.S.C. § 106A.

64 '….the author of a work of visual art shall have the right to claim authorship of that work…'.

65 *Gorman* interprets the narrow scope of the VARA to be due to possible conflicts with the First Amendment. Robert A. Gorman, 'Copyright courts

visual art includes paintings, drawings, prints, sculptures and photographic images that exist in a single copy or in a limited edition of 200 copies or fewer that are signed and consecutively numbered by the author.[66] Notably, photographs are only covered if they are produced for exhibition purposes only.[67] Also significantly, works made for hire are excluded from the definition.

To be able to form a legal claim under Section 106A, authors should prove that their works fit the definition of works of visual art. First, they should be able to demonstrate that their work is a painting, drawing, print, sculpture or photographic images.[68] Authors of news articles, academic papers, blogs or coders will hence be excluded. Second, the authors will further need to demonstrate that their work exists 'in a single copy, in a limited edition of 200 copies or fewer that are signed and consecutively numbered by the author'.[69] This requirement is not easy to fulfil for works that exist online. Rarely, digital photographs that exist in 200 or fewer copies that are signed by the author may fall within this scope. Other than these exceptional examples, most digital works will be excluded from the scope of the VARA as they are not signed copies of works.

When attribution is brought as a legal claim by an author in a case concerning copyright, VARA might be the strongest legal ground for defending this claim. The provisions under Section 106A explicitly contain the right to ask for attribution. However, the narrow limitations on the subject matter of VARA protection do not allow authors to invoke VARA in all disputes. For this reason, as detailed below, VARA is left outside the scope of discussion on cases concerning generative AI.

C. Section 1202 of the DMCA

Following the enactment of the VARA, two other influential international copyright treaties were ratified by the USA: the World Intellectual Property Organization (WIPO) Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). Both treaties impose obligations on parties regarding the protection of rights management information. The WCT defines 'right management information' as 'information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public'.[70] A similar definition is included in the WPPT.[71]

To make US copyright law compatible with these two treaties, an amendment to the US Copyright Act was enacted in 1998 as part of the DMCA.[72] With this amendment, Section 1202, which ensured protection against unauthorized use or change of CMI, was added. CMI protections were intended to be equivalent to the rights management information protections under the WCT and WPPT.[73] The definition of CMI under Section 1202(c) of the Copyright Act contains a list of information that can be conveyed in connection with copies of a work.[74] The list includes 'the title and other information identifying the work', 'the name of, and other identifying information about, the author of a work' and 'the name of, and other identifying information about, the copyright owner of the work'.[75] Rights owners are free to decide on what to include in the CMI. Based on this definition, two important conclusions can be drawn: (i) attaching CMI to a copy of a work is optional and (ii) CMI does not have to include information about the author of the work. These two points are important in distinguishing CMI protections from traditional moral rights protections. In cases where CMI is attached to a copy of the work and CMI does include information about the author, Section 1202 will provide a quasi-moral rights protection regime as explained later. In the remaining cases, these provisions will not provide any protection against lack of attribution to the author.

Section 1202(a) prohibits the provision, distribution or importation for distribution of false CMI. This prohibition only applies if the infringer acts knowingly and with the intent to induce, enable, facilitate or conceal infringement. Section 1202(b) prohibits intentional removal or

and aesthetic judgments: abuse or necessity?' (2001) 25 *Columbia Journal of Law & the Arts* 1, 10.

66 17 U.S.C. § 101.

67 384 F. Supp. 2d 83.

68 Ibid.

69 Ibid.

70 Art 12(2) of the WCT.

71 Art 19(2) of the WPPT: 'information which identifies the performer, the performance of the performer, the producer of the phonogram, the phonogram, the owner of any right in the performance or phonogram, or information about the terms and conditions of use of the performance or phonogram, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a fixed performance or a phonogram or appears in connection with the 16 communication or making available of a fixed performance or a phonogram to the public.'

72 17 U.S.C. § 1202.

73 Ginsburg stated that the text of Section 1202 does not fulfil all obligations under the WCT as it does not protect the authors' right to claim authorship when CMI is not attached in the first place. Ginsburg (n 55) 12.

74 Shortly after Section 1202 was enacted, Courts discussed whether CMI is restricted to automated CMI. 3rd Circuit decided that the statutory language does not have such restriction and any type of information as listed under Section 1202(c) will constitute CMI as long as it is conveyed in connection with copies of the work. 650 F. 3d 295 (3d Cir. 2011).

75 17 U.S.C. § 1202(c).

alteration of CMI without the authority of the copyright owner or the law. Section 1202(b) also prohibits the distribution or importation for distribution of altered or removed CMI, knowing that it has been removed or altered without the authority of the copyright owner. In cases where CMI includes the author's name, removal or alteration of such name may be a breach of Section 1202. Therefore, the right of attribution can be exercised by invoking the relevant part of Section 1202.

The scope of Section 1202 is not limited to any specific kind of work. This difference from the VARA was accepted as a promising development under US copyright.[76] However, certain other aspects of Section 1202 limit this provision's scope. First, Section 1202 only protects against certain acts and falls short of providing an affirmative right of attribution. Subparagraphs (a) and (b) protect the copyright owner's right to ask to remove false CMI under Section 1202(a) and the right to claim remedies where existing CMI is altered or removed under Section 1202(b). In other words, Section 1202 does not grant the right to affirmatively ask for attribution to rights owners if the author's name was not attached as a CMI in the first place.[77]

Second, there is a double intent requirement for both Sections 1202(a) and 1202 (b). These provisions require the acts to be done knowingly and with the 'intent to induce, enable, facilitate, or conceal infringement'.[78] The Ninth Circuit previously held that the plaintiff must 'make an affirmative showing, such as demonstrating a past "pattern of conduct" or "modus operandi", that the defendant was aware or had reasonable grounds to be aware of the probable future impact of its actions' and plausibly allege that 'future infringement is likely, albeit not certain, to occur as a result of the removal or alteration of CMI'.[79] Undoubtedly, establishing that the defendant knew that future infringement was likely is not an easy task.

Third, Section 1202 is essentially a protection for copyright owners instead of authors of works. CMI's definition under Section 1202(c) includes only information that the copyright owner chooses to provide. This preference of copyright owners over authors creates a difference in cases where the copyright owner is a different person than the author of a work. For instance, in the case of works made for hire, creators are not copyright owners as they are either employees or contractors of the rights holder.[80] As a result, it is not clear if an author who is not a current copyright owner can bring an action under Section 1203 when the author's name in the CMI is altered by a third party.[81]

IV. Review of existing legal grounds for attribution in the face of generative AI

A. Limitations of the VARA and DMCA

It should be underlined at the outset that, in the first three lawsuits filed against generative AI in the USA, Section 43(a) was invoked, while none of the four cases of the second wave of lawsuits invoked Section 43(a). Regardless of the ambiguity caused by the *Dastar* opinion, plaintiffs of the first wave of lawsuits hoped that courts might interpret the *Dastar* opinion in their favour. In their motion to dismiss, the defendants of the GitHub lawsuit used Justice Scalia's emphasis on tangibility as a ground for dismissing plaintiffs' claim and stated that Section 43(a) is not applicable to codes because they are intangible. As plaintiffs did not contest this in their opposition, the court decided the claims under the Lanham Act were abandoned by the plaintiff.[82] The tangibility requirement from the *Dastar* opinion will be a major obstacle in using Section 43(a) against generative AI.

That said, as discussed earlier, the VARA also fails to protect works against being used in the training data. The VARA's scope of subject matter is very limited, and it is intended to be applicable to works that exist in unique copies. The first hurdle to be faced by rights owners in invoking the VARA is the limitation on the types of works that are protected under the VARA. Literary works like blog posts, academic articles or news pieces are not protected as they are not included in the definition of 'works of visual art'. The second hurdle is the requirement that acceptable types of works exist in single or fewer than 200 copies with each copy being signed by the artist. Generative AI is trained on digital copies of in-copyright works, and these copies generally exist in multiple copies and do not bear the signature of the author. Therefore, the applicability of the VARA to cases where generative AI is involved will be very limited. In parallel to this review, the VARA is not mentioned in any of the three lawsuits filed against generative AI in the USA.

Despite its own limitations, Section 1202 is a better alternative for protecting the rights of attribution of authors of training data. Section 1202 was a positive development in the US copyright law in that it introduced

76 Ginsburg (n 55) 9.
77 Ginsburg (n 55) 12.
78 17 U.S.C. § 1202(a)-(b).
79 899 F.3d 666, 674 (9th Cir. 2018).
80 17 U.S.C. § 201.
81 Ginsburg (n 60) 74; Hughes (n 58) 674.
82 Doe 1 *v* GitHub, Inc., No. 22-CV-06823-JST, 2023 WL 3449131, at *14 (N.D. Cal. 11 May 2023).

a quasi-moral rights protection regime.[83] The recent lawsuits against generative AI proved that the CMI protections are one of the few legal grounds that authors can rely on for claims on attribution. In the GitHub lawsuit, Stability AI lawsuit filed by three independent artists and the second wave of lawsuits, claims were filed only under Section 1202(b). In all cases, works were claimed to be accessible on digital platforms with CMI including authors' names attached to them. When the generative AI was trained on these works, it was claimed that the codes and images were used and their CMI was removed. Especially, the complaints of the second wave of lawsuits stress the factual allegation that CMI was removed when the works were reproduced for the training process. In the end, the outputs did not contain any CMI mentioning the authors of works in the training data.

The Getty Images lawsuit should be distinguished from the other lawsuits because the plaintiff, Getty Images, is not the author of the works. As highlighted previously, DMCA protections allow copyright owners to demand attribution. In addition to this difference from the other lawsuits, in the Getty Images lawsuit, plaintiffs also raised a claim under Section 1202(a). Getty Images has a watermark with the writing 'Getty Images' on their photos that are made available online. It was mentioned in the complaint that Stability AI, which was trained on these photos with watermarks, was producing outputs with a modified version of Getty Images' watermark on them. For this reason, the plaintiff claimed that infringement under Section 1202(a), which concerns providing or distributing works with false CMI, took place.[84]

The courts' approach to the arguments listed in these lawsuits is yet to be seen. Still, challenges to be faced by the plaintiffs can be estimated considering existing case law on Section 1202. First, it should be noted that courts have adopted a narrow interpretation of what constitutes CMI. Courts have emphasized that the alleged false/altered/removed CMI must be 'conveyed in connection with' the work. A US federal court decided that CMI on a different webpage does not fulfil this requirement.[85] Another court decided that a copyright notice that is not on or next to the image does not constitute an actionable CMI under Section 1202(c).[86] Other courts have emphasized that CMI does not have to be on the work itself[87] or be a part of the metadata attached to the work.[88] Therefore, the position of the copyright notice on pages where training data were located will determine whether plaintiffs attached CMI to the works in the first place. Additionally, a copyright notice on the output page of a generative AI will determine whether Section 1202(a) was breached where a work is presented to the user as part of an output and that page contains a text claiming ownership by the generative AI.

Another important challenge faced by the plaintiffs is the requirement to establish double intent by the defendant for both Sections 1202(a) and 1202(b). As discussed earlier, especially the second prong of the intention requirement is hard to prove. Can it be assumed that defendants had the knowledge that future infringement is likely when generative AI removes an existing CMI? In a case concerning cropping out of copyright notice on photos by the Associated Press who distributed the photos to its subscribers, it was held that this kind of behaviour fulfils the second intent requirement under Section 1202(b).[89] It is possible that courts may also view the generative AI's distribution of outputs with removed CMI as an act showing defendants' knowledge that it would induce future infringement. If the courts decide so, we can start seeing precautions by generative AI to its users to not use the outputs directly for any purpose.

Lastly, courts have held that 'no DMCA violation exists where the works are not identical'.[90] In other words, as Section 1202 is a part of the DMCA, including a modified version of a work will not give rise to a Section 1202 violation.[91] As most generative AI outputs are modified versions of training data, they can claim that DMCA provisions will not apply to these outputs. This can curtail the rights owner's ability to invoke Section 1202.[92]

B. The insufficiency of 'other protection measures' against generative AI

In 2015, the Congress Subcommittee on Courts, Intellectual Property and the Internet of the House Judiciary

83 Ginsburg (n 55) 11.

84 As an outlier of the second wave of lawsuits, plaintiffs in the lawsuit against Meta's LLaMA also raised a claim under Section 1202(a) in addition to Section 1202(b). Plaintiffs alleged that Meta violates Section 1202(a) by claiming that it has sole copyright of the LLaMA models, which are claimed to be reproductions and derivatives of plaintiffs' works. Meta Complaint (n 40) at 51.

85 Pers. Keepsakes, Inc. *v* Personalizationmall.com, Inc., No. 11 C 5177, 2012 WL 414803, at *7 (N.D.Ill. 8 February 2012).

86 Watson *v* Kappa Map Grp., LLC, No. 1:14–CV–100–TWT, 2015 WL 3932425, at *2 (N.D.Ga. 25 June 2015).

87 Agence France Presse *v* Morel, 769 F.Supp.2d 295, 305 (S.D.N.Y. 2011).

88 Gregory MANGO *v* BUZZFEED, Inc., (S.D.N.Y. 2019).

89 McClatchey 82 U.S.P.Q at 1196.

90 Kirk Kara Corp. *v* W. Stone & Metal Corp., No. CV 20-1931-DMG, 2020 WL 5991503, at *6 (C.D. Cal. 14 August 2020).

91 Walter N. O'NEAL, III, *v* SIDESHOW, Inc., *et al.* CV 21-7735 DSF (PLAx) US District Court, C.D. California (2022).

92 Notably, plaintiffs of the second wave of lawsuits emphasized that CMI was removed when creating their works' identical reproductions during the training process.

Committee requested a review of US moral rights protection in light of the current status of the laws from the US Copyright Office (the Copyright Office) on the evaluation of current moral rights protections.[93] The Copyright Office published its findings and recommendations to the Congress as a report in 2019.[94]

With this report, the Copyright Office decided not to recommend Congress to create a new federal moral right that could be a part of the US Copyright Act.[95] The main reason for this conclusion was the adequacy of existing legal rules and complementary industry practices that were believed to ensure a sufficient level of moral rights protection in the USA. Although a new federal moral rights protection clause was not recommended by the Copyright Office, other minor changes were recommended instead.[96]

To reach the conclusion of their report, the Copyright Office listed two important tools as available for moral rights protection of rights holders: (i) contractual relationships[97] and (ii) industry norms.[98] The Copyright Office recognized the role of established contractual relationships and industry norms that require giving attribution to authors.[99] The Copyright Office also highlighted that some social and professional norms including rules on plagiarism also serve the purpose of ensuring attribution to authors of various works. Reviewed under the current developments in industry, neither of these two protections seem to be adequate vis-à-vis generative AI.

First, the Copyright Office referred to contracts between rights owners and users of works. These contracts can be concluded through party negotiation or industry negotiation. For example, in the case of literary works, writers can individually get into contractual agreements with publishing companies or digital platforms. More generally, organizations like guilds or associations can enter into contracts with other parties after negotiating on behalf of the writer. As the Copyright Office stated, these negotiations will be based on the bargaining power of the parties. If writers or organizations representing writers have the stronger bargaining power, they will have the chance to oblige attribution even though there is no statutory requirement.

In the case of authors whose works are scraped to be included in the input data of generative AI, a contractual relationship may exist between authors and users of works. Creative Commons (CC) licences are examples of contracts that are frequently used by authors. By downloading or copying the work, users become parties to these CC licences. Authors make their works available online by choosing a CC licence where authors can release some of their economic rights and disseminate their work without any economic boundaries.[100] Significantly, CC licences almost always require attribution.[101] Despite not being interested in monetizing their works, authors seek recognition.[102] CC licences usually require the use of works with the identical CC licence to ensure that future users also provide attribution. Failure to provide attribution by users who copy works from these sites might lead to a legal action based on the breach of contractual terms and copyright law. Privity exists between authors and users.

For instance, plaintiffs in the GitHub lawsuit submitted a claim on breach of contract. Codes were made available under an open-source licence on GitHub and users of the codes were asked to provide attribution to author; copyright notice and the identical licence terms whenever the codes were re-used. Plaintiffs claimed that defendants breached the contract by using these codes through CoPilot and failing to give attribution; provide copyright notice or the licence terms to users of CoPilot.

Although the GitHub lawsuit is a good example of how copyleft licences are prevalently used on digital platforms, contractual relationships may not be adequate to provide safeguards against authors for attribution by generative AI. Privity does not always exist between users and authors. Notably, not all content on the Internet is shared under such licence terms. Content that is shared on a platform by a third party without authorization by the author may be scraped by the generative AI as well. In that case, privity will be lacking between the author and the AI system. If contractual relationships are the only ground for authors to ask for attribution, AI companies can claim that the content was scraped from other web pages. It may not be straightforward for authors to claim

93 Register's Perspective Hearing at 49 (statement of Rep. John Conyers, Jr, Ranking Member, H. Comm. on the Judiciary).

94 U.S. Copyright Office, 'Authors, Attribution, and Integrity: Examining Moral Rights in the United States' (2019).

95 Ibid 114.

96 It was recommended (i) to expand the scope of Section 43(a) of the Lanham Act as its scope was limited by the Dastar opinion; (ii) to provide clarity on the definition of 'works of visual art' and 'works with recognized stature'; (iii) to amend waiver provisions under the VARA and (4) to enhance protection under Section 1202 by relaxing the intention requirement. These recommendations have not been reflected in statutory law yet.

97 U.S. Copyright Office (n 99) 127.

98 Ibid 138.

99 Ibid 129.

100 Mira T. Sundara Rajan, 'Creative Commons: America's Moral Rights?' (2011) 21 *Fordham Intellectual Property, Media & Entertainment Law Journal* 905, 922.

101 For this reason, Rajan calls these licences 'moral rights licenses'. Rajan (n 105) 926.

102 Rajan phrases the situation as 'Reputation is the currency of the Creative Commons system'. Rajan (n 105) 962.

that the content was taken directly from their website subject to their licence terms. Contractual protection is not as strong as copyright protection as establishing privity may be very complex in especially the generative AI context where very huge volumes of data are scraped from the Internet.

Going back to the Copyright Office's report, the second backup was industry norms such as plagiarism as another means of protection against lack of attribution.[103] Plagiarism is not repressed under a statutory law in the USA. Yet, non-legal rules including university academic honesty policies serve the same purpose as a legal instrument to deter wrongful conduct. In fact, plagiarism can even be a more powerful tool than copyright as it does not require expensive and time-consuming litigation to be proven. When someone takes someone else's work or part thereof and uses it in their own work without giving attribution to the writer, they may face serious sanctions depending on the place and objective of such use. Using this work in an academic environment will cause academic sanctions like probation and even expulsion. However, using this work in a professional setting may cause a material damage to reputation.

When generative AI plagiarizes, the consequences will differ. What kind of sanctions can an AI system or the company owning an AI system face because of plagiarism? The answer is unclear. AI systems cannot be expelled from schools, or their reputation does not rely on how much originality they have in their outputs so their reputation cannot be tarnished.[104] As a result, it is submitted plagiarism is not a strong tool that authors can use against generative AI.

V. Conclusion

Individuals of many professions are using generative AI frequently.[105] Thousands of outputs are generated every day and in-copyright works are being used as parts of these outputs and during their training process. Whether these outputs constitute a reproduction or a derivative work under copyright law remains an open question. Another open question is whether such uses can be protected under the fair use doctrine.[106] Despite legislative actions being taken in some jurisdictions regarding the use of in-copyright works for text-and-data mining (TDM) activities, US Congress has not implemented any federal rules concerning TDM. No judicial precedent concerning copyright law implications of generative AI set by the US courts is available as yet. This however set to change soon.

The recent lawsuits filed against generative AI in the USA will lead to the first case law to develop on the legal implications of using in-copyright works in training data. While the majority of plaintiffs in the lawsuits (excluding the GitHub lawsuit) raised arguments for infringement of both economic and moral rights under copyright, claims for lack of attribution were especially noteworthy as they were all made under Section 1202 of the DMCA. Even if the use of in-copyright works by generative AI is accepted as fair use, this will not result in the outright rejection of the Section 1202 claims as the DMCA is outside the scope of the defense. However, acceptance of fair use might lead to courts' scepticism towards the intention requirement under Section 1202. For this reason, acceptance of a fair use argument might also mean the rejection of the Section 1202 claims. If courts decide that fair use is not acceptable and that Section 1202 was breached by defendants, such a decision will force generative AI companies to search for ways to ensure attribution, at least for works that have CMI attached in connection with them.

Overall, these lawsuits demonstrate that authors and rights owners are inter alia looking for recognition when generative AI uses their work to generate outputs. The right of attribution finds its roots in the personhood theory under copyright law, which gives importance to self-autonomy and self-development. US copyright law's utilitarian model does not leave a broad room for moral rights protections. Indeed, VARA and DMCA provisions ensure a low level of protection. The VARA seems to be inapplicable to almost all cases of generative AI as works in training data do not qualify as works of visual art under the VARA protection. DMCA provisions, notably Section 1202, are the only safeguards available to authors. Yet, these provisions contain serious restrictions that make it challenging for plaintiffs to argue successfully for an infringement thereof.

103 U.S. Copyright Office (n 99) 138.

104 Students' use of outputs created by generative AI to write papers or exams may result in disciplinary action just like plagiarism. Harvard Law School prohibited the use of LLMs, including ChatGPT, unless expressly authorized by the instructor of courses. Harvard Law School 'Statement on Use of AI Large Language Models'. Available at https://hls.harvard.edu/statement-on-use-of-ai-large-language-models/ (accessed 2 July 2023).

105 There is a significant resistance to the use of generative AI in some industries including the film industry. The Writers Guild of America representing 11 500 screenwriters went on strike in May 2023. One of the demands of the screenwriters was to not use generative AI as a tool to replace them. In July 2023, the Screen Actors Guild-American Federation of Television and Radio Artists also went on strike. Actors objected to the allegedly planned way of using AI to create and use their digital likenesses. Angela Watercutter 'The Hollywood Actors Strike Will Revolutionize the AI Fight'. Available at https://www.wired.com/story/hollywood-sag-strike-artificial-intelligence/ (accessed 18 August 2023).

106 Benjamin L.W. Sobel, 'Artificial Intelligence's fair use crisis' (2017) 41 *Columbia Journal of Law & the Arts* 45.