UNITED STATES COPYRIGHT OFFICE

Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence

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RULES AND REGULATIONS

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ACTION: Statement of policy

SUMMARY: The Copyright Office issues this statement of policy to clarify its practices for examining and registering works that contain material generated by the use of artificial intelligence technology.

DATES: This statement of policy is effective March 16, 2023.

FOR FURTHER INFORMATION CONTACT: Rhea Efthimiadis, Assistant to the General Counsel, by email at *meft@copyright.gov* or telephone at 202–707– 8350.

SUPPLEMENTARY INFORMATION

I. Background

The Copyright Office (the "Office") is the Federal agency tasked with administering the copyright registration system, as well as advising Congress, other agencies, and the Federal judiciary on copyright and related matters.[1] Because the Office has overseen copyright registration since its origins in 1870, it has developed substantial experience and expertise regarding "the distinction between copyrightable and noncopyrightable works."[2] The Office is empowered by the Copyright Act to establish the application used by applicants seeking registration of their copyrighted works.[3] While the Act identifies certain minimum requirements, the Register may determine that additional information is necessary for the Office to evaluate the "existence, ownership, or duration of the copyright."[4] Because the Office receives roughly half a million applications for registration each year, it sees new trends in registration activity that may require modifying or expanding the information required to be disclosed on an application.

One such recent development is the use of sophisticated artificial intelligence ("AI") technologies capable of producing expressive material.[5] These technologies "train" on vast quantities of preexisting human-authored works and use inferences from that training to generate new content. Some systems operate in response to a user's textual instruction, called a "prompt."[6] The resulting output may be textual, visual, or audio, and is determined by the AI based on its design and the material it has been trained on. These technologies, often described as "generative AI," raise questions about whether the material they produce

is protected by copyright, whether works consisting of both human-authored and AI-generated material may be registered, and what information should be provided to the Office by applicants seeking to register them.

These are no longer hypothetical questions, as the Office is already receiving and examining applications for registration that claim copyright in AI-generated material. For example, in 2018 the Office received an application for a visual work that the applicant described as "autonomously created by a computer algorithm running on a machine." [7] The application was denied because, based on the applicant's representations in the application, the examiner found that the work contained no human authorship. After a series of administrative appeals, the Office's Review Board issued a final determination affirming that the work could not be registered because it was made "without any creative contribution from a human actor." [8]

More recently, the Office reviewed a registration for a work containing human-authored elements combined with AI-generated images. In February 2023, the Office concluded that a graphic novel[9] comprised of human-authored text combined with images generated by the AI service Midjourney constituted a copyrightable work, but that the individual images themselves could not be protected by copyright. [10]

The Office has received other applications that have named AI technology as the author or co-author of the work or have included statements in the "Author Created" or "Note to Copyright Office" sections of the application indicating that the work was produced by or with the assistance of AI. Other applicants have not disclosed the inclusion of AI-generated material but have mentioned the names of AI technologies in the title of the work or the "acknowledgments" section of the deposit.

Based on these developments, the Office concludes that public guidance is needed on the registration of works containing AI-generated content. This statement of policy describes how the Office applies copyright law's human authorship requirement to applications to register such works and provides guidance to applicants.

The Office recognizes that AI-generated works implicate other copyright issues not addressed in this statement. It has launched an agency-wide initiative to delve into a wide range of these issues. Among other things, the Office intends to publish a notice of inquiry later this year seeking public input on additional legal and policy topics, including how the law should apply to the use of copyrighted works in AI training and the resulting treatment of outputs.

II. The Human Authorship Requirement

In the Office's view, it is well-established that copyright can protect only material that is the product of human creativity. Most fundamentally, the term "author," which is used in both the Constitution and the Copyright Act, excludes non-humans. The Office's registration policies and regulations reflect statutory and judicial guidance on this issue.

In its leading case on authorship, the Supreme Court used language excluding non-humans in interpreting Congress's constitutional power to provide "authors" the exclusive right to their "writings."[11] In *Burrow-Giles Lithographic Co.* v. *Sarony*, a defendant accused of making unauthorized copies of a photograph argued that the expansion of copyright protection to photographs by Congress was unconstitutional because "a photograph is not a writing nor the production of an author" but is instead created by a camera.[12] The Court disagreed, holding that there was "no doubt" the Constitution's Copyright Clause permitted photographs to be subject to copyright, "so far as they are representatives of original intellectual conceptions of the author."[13] The Court defined an "author" as "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature."[14] It repeatedly referred to such "authors" as human, describing authors as a class of "persons"[15] and a copyright as "the exclusive right of a man to the production of his own genius or intellect."[16]

Federal appellate courts have reached a similar conclusion when interpreting the text of the Copyright Act, which provides copyright protection only for "works of authorship."[17] The Ninth Circuit has held that a book containing words "authored by non-human spiritual beings" can only qualify for copyright protection if there is "human selection and arrangement of the revelations."[18] In another case, it held that a monkey cannot register a copyright in photos it captures with a camera because the Copyright Act refers to an author's "children," "widow," "grandchildren," and "widower,"— terms that "all imply humanity and necessarily exclude animals."[19]

Relying on these cases among others, the Office's existing registration guidance has long required that works be the product of human authorship. In the 1973 edition of the Office's *Compendium of Copyright Office Practices*, the Office warned that it would not register materials that did not "owe their origin to a human agent."[20] The second edition of the Compendium, published in 1984, explained that the "term 'authorship' implies that, for a work to be copyrightable, it must owe its origin to a human being."[21] And in the current edition of the *Compendium*, the Office states that "to qualify as a work of 'authorship' a work must be created by a human being" and that it "will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author."[22]

III. The Office's Application of the Human Authorship Requirement

As the agency overseeing the copyright registration system, the Office has extensive experience in evaluating works submitted for registration that contain human authorship combined with uncopyrightable material, including material generated by or with the assistance of technology. It begins by asking "whether the 'work' is basically one of human authorship, with the computer [or other device] merely being an assisting instrument, or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine."[23] In the case of works containing AI-generated material, the Office will consider whether the AI contributions are the result

of "mechanical reproduction" or instead of an author's "own original mental conception, to which [the author] gave visible form." [24] The answer will depend on the circumstances, particularly how the AI tool operates and how it was used to create the final work.[25] This is necessarily a case-by-case inquiry.

If a work's traditional elements of authorship were produced by a machine, the work lacks human authorship and the Office will not register it [26] For example, when an AI technology receives solely a prompt [27] from a human and produces complex written, visual, or musical works in response, the "traditional elements of authorship" are determined and executed by the technology—not the human user. Based on the Office's understanding of the generative AI technologies currently available, users do not exercise ultimate creative control over how such systems interpret prompts and generate material. Instead, these prompts function more like instructions to a commissioned artist—they identify what the prompter wishes to have depicted, but the machine determines how those instructions are implemented in its output. [28] For example, if a user instructs a text-generating technology to "write a poem about copyright law in the style of William Shakespeare," she can expect the system to generate text that is recognizable as a poem, mentions copyright, and resembles Shakespeare's style. [29] But the technology will decide the rhyming pattern, the words in each line, and the structure of the text. [30] When an AI technology determines the expressive elements of its output, the generated material is not the product of human authorship.[31] As a result, that material is not protected by copyright and must be disclaimed in a registration application. [32]

In other cases, however, a work containing AI-generated material will also contain sufficient human authorship to support a copyright claim. For example, a human may select or arrange AI-generated material in a sufficiently creative way that "the resulting work as a whole constitutes an original work of authorship." [33] Or an artist may modify material originally generated by AI technology to such a degree that the modifications meet the standard for copyright protection. [34] In these cases, copyright will only protect the human-authored aspects of the work, which are "independent of" and do "not affect" the copyright status of the AI-generated material itself. [35]

This policy does not mean that technological tools cannot be part of the creative process. Authors have long used such tools to create their works or to recast, transform, or adapt their expressive authorship. For example, a visual artist who uses Adobe Photoshop to edit an image remains the author of the modified image, [36] and a musical artist may use effects such as guitar pedals when creating a sound recording. In each case, what matters is the extent to which the human had creative control over the work's expression and "actually formed" the traditional elements of authorship.[37]

IV. Guidance for Copyright Applicants

Consistent with the Office's policies described above, applicants have a duty to disclose the inclusion of AI-generated content in a work submitted for registration and to provide a brief explanation of the human author's contributions to the work. As contemplated

by the Copyright Act, such disclosures are "information regarded by the Register of Copyrights as bearing upon the preparation or identification of the work or the existence, ownership, or duration of the copyright." [38]

A. How To Submit Applications for Works Containing AI-Generated Material

Individuals who use AI technology in creating a work may claim copyright protection for their own contributions to that work. They must use the Standard Application, [39] and in it identify the author(s) and provide a brief statement in the "Author Created" field that describes the authorship that was contributed by a human. For example, an applicant who incorporates AI-generated text into a larger textual work should claim the portions of the textual work that is human-authored. And an applicant who creatively arranges the human and non-human content within a work should fill out the "Author Created" field to claim: "Selection, coordination, and arrangement of [describe human-authored content] created by the author and [describe AI content] generated by artificial intelligence." Applicants should not list an AI technology or the company that provided it as an author or co-author simply because they used it when creating their work.

AI-generated content that is more than *de minimis* should be explicitly excluded from the application. [40] This may be done in the "Limitation of the Claim" section in the "Other" field, under the "Material Excluded" heading. Applicants should provide a brief description of the AI-generated content, such as by entering "[description of content] generated by artificial intelligence." Applicants may also provide additional information in the "Note to CO" field in the Standard Application.

Applicants who are unsure of how to fill out the application may simply provide a general statement that a work contains AI-generated material. The Office will contact the applicant when the claim is reviewed and determine how to proceed. In some cases, the use of an AI tool will not raise questions about human authorship, and the Office will explain that nothing needs to be disclaimed on the application.

B. How To Correct a Previously Submitted or Pending Application

Applicants who have already submitted applications for works containing AI-generated material should check that the information provided to the Office adequately disclosed that material. If not, they should take steps to correct their information so that the registration remains effective.

For applications currently pending before the Office, applicants should contact the Copyright Office's Public Information Office and report that their application omitted the fact that the work contained AI-generated material. [41]

Staff will add a note to the record, which the examiner will see when reviewing the claim. If necessary, the examiner then will correspond with the applicant to obtain additional information about the nature of the human authorship included in the work.

For applications that have already been processed and resulted in a registration, the applicant should correct the public record by submitting a supplementary registration. A supplementary registration is a special type of registration that may be used "to correct an error in a copyright registration or to amplify the information given in a registration." [42] In the supplementary registration, the applicant should describe the original material that the human author contributed in the "Author Created" field, disclaim the AI-generated material in the "Material Excluded/Other" field, and complete the "New Material Added/Other" field. As long as there is sufficient human authorship, the Office will issue a new supplementary registration certificate with a disclaimer addressing the AI-generated material. [43]

Applicants who fail to update the public record after obtaining a registration for material generated by AI risk losing the benefits of the registration. If the Office becomes aware that information essential to its evaluation of registrability "has been omitted entirely from the application or is questionable," it may take steps to cancel the registration. [44] Separately, a court may disregard a registration in an infringement action pursuant to section 411(b) of the Copyright Act if it concludes that the applicant knowingly provided the Office with inaccurate information, and the accurate information would have resulted in the refusal of the registration. [45]

V. Conclusion

This policy statement sets out the Office's approach to registration of works containing material generated by AI technology. The Office continues to monitor new factual and legal developments involving AI and copyright and may issue additional guidance in the future related to registration or the other copyright issues implicated by this technology.

DATED: MARCH 10, 2023
SHIRA PERLMUTTER, REGISTER OF COPYRIGHTS AND DIRECTOR OF THE U.S. COPYRIGHT OFFICE
[FR DOC. 2023–05321 FILED 3–15–23; 8:45 AM]

END NOTES

1. *See* 17 U.S.C. 408 (copyright registration requires delivering deposit, application, and fee to Copyright Office), 701(a) (all administrative functions and duties set out in Title 17 are the responsibility of the Register of Copyrights), 701(b)(2) (the Register's duties include providing "information and assistance" to Federal agencies and courts on copyright and related matters).

2. *Norris Indus.* v. *Int'l Tel. & Tel. Corp.*, 696 F.2d 918, 922 (11th Cir. 1983). For this reason, courts credit the Office's expertise in interpreting the Copyright Act, particularly in the context of registration. *See, e.g., Esquire, Inc.* v. *Ringer*, 591 F.2d 796, 801–02 (D.C. Cir. 1978) (giving "considerable weight" to the Register's refusal determination); *Varsity Brands, Inc.* v. *Star Athletica, LLC*, 799 F.3d 468, 480 (6th Cir. 2015) ("the Copyright Office's expertise in identifying and thinking about the difference between art and function surpasses ours"), *aff'd on other grounds*, 580 U.S. 405 (2017).

3. 17 U.S.C. 409.

4. *Id.* at 409(10).

5. The term "expressive material" is used here to refer to AI output that, if it had been created by a human, would fall within the subject matter of copyright as defined in section 102 of the Act. *See id.* at 102(a).

6. *See Prompts*, Midjourney, *https://docs.midjourney.com/docs/prompts* (noting for users of the artificial intelligence service Midjourney a prompt is "a short text phrase that the Midjourney [service] uses to produce an image"). To be clear, this policy statement is not limited to AI technologies that accept text "prompts" or to technologies permitting prompts of a particular length or complexity.

7. U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of a Recent Entrance to Paradise* at 2 (Feb. 14, 2022), *https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf*.

8. *Id.* at 2–3. The Office's decision is currently being challenged in *Thaler* v. *Perlmutter*, Case No. 1:22–cv–01564 (D.D.C.).

9. On the application, the applicant described the work as a "comic book." *See* U.S. Copyright Office, *Cancellation Decision re: Zarya of the Dawn (VAu001480196)* at 2 (Feb. 21, 2023), *https://www.copyright.gov/docs/zarya-of-the-dawn.pdf*.

10. *Id.*

11. U.S. Const. art. I, sec. 8, cl. 8 (Congress has the power "[t]o 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.").

12. 111 U.S. 53, 56 (1884) (explaining that the defendant had argued that photographs were merely "reproduction on paper of the exact features of some natural object or of some person").

13. *Id.* at 58.

14. *Id.* at 57–58.

15. *Id.* at 56 (describing beneficiaries of the Constitution's Copyright Clause as "authors," who are one of "two classes" of "persons").

16. *Id.* at 58; *see also id.* at 60–61 (agreeing with an English decision describing an "author" as the "person" who was "the cause of the picture which is produced" and "the man" who creates or gives effect to the idea in the work).

17. 17 U.S.C. 102(a).

18. *Urantia Found.* v. *Kristen Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997) (internal punctuation omitted) (holding that "some element of human creativity must have occurred in order for the Book to be copyrightable" because "it is not creations of divine beings that the copyright laws were intended to protect"). While the compilation of the book was entitled to copyright, the alleged "divine messages" were not. Id.

19. *Naruto* v. *Slater*, 888 F.3d 418, 426 (9th Cir. 2018), decided on other grounds.

20. U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices* sec. 2.8.3(I)(a)(1)(b) (1st ed. 1973), *https://copyright.gov/history/comp/compendium-one.pdf* (providing example of shapes formed by liquid petroleum); see also U.S. Copyright Office, *Sixty-Eighth Annual Report of the Register of Copyrights for the Fiscal Year Ending June 30, 1965*, at 5 (1966), *https://www.copyright.gov/reports/annual/archive/ar-1965.pdf* (noting that computer-generated works raise a "crucial question" of whether the work "is basically one of human authorship").

21. U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices* sec. 202.02(b) (2d ed. 1984), *https://www.copyright.gov/history/comp/compendium-two.pdf* (explaining that as a result, "[m]aterials produced solely by nature, by plants, or by animals are not copyrightable"). It went on to state that because "a work must be the product of human authorship," works "produced by mechanical processes or random selection without any contribution by a human author are not registrable." *Id.* at 503.03(a).

22. U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices* sec. 313.2 (3d ed. 2021) ("*Compendium (Third)*").

23. *Id.* (quoting U.S. Copyright Office, *Sixty-Eighth Annual Report of the Register of Copyrights for the Fiscal Year Ending June 30, 1965*, at 5 (1966)).

24. *Sarony,* 111 U.S. at 60.

25. Many technologies are described or marketed as "artificial intelligence," but not all of them function the same way for purposes of copyright law. For that reason, this analysis will be fact specific.

26. This includes situations where an AI technology is developed such that it generates material autonomously without human involvement. *See* U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of a Recent Entrance to Paradise* at 2–3 (Feb. 14, 2022), *https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf* (determining a work "autonomously created by artificial intelligence without any creative contribution from a human actor" was "ineligible for registration").

27. While some prompts may be sufficiently creative to be protected by copyright, that does not mean that material generated from a copyrightable prompt is itself copyrightable.

28. One image-generating AI product describes prompts as "influencing" the output but does not suggest the prompts dictate or control it. *See Prompts*, Midjourney, *https://docs.midjourney.com/docs/prompts* (explaining that short text prompts cause "each word [to have] a more powerful *influence*" and that images including in a prompt may "*influence* the style and content of the finished result") (emphasis added).

29. AI technologies do not always operate precisely as instructed. For example, a text-generating tool prompted to provide factual information may provide inaccurate information. One AI service describes this as the AI "mak[ing] up facts or 'hallucinat[ing]' outputs." *ChatGPT General FAQ*, OpenAI, *https://help.openai.com/en/articles/ 6783457-chatgpt-general-faq*. *See* also James Romoser, *No, Ruth Bader Ginsburg did not dissent in Obergefell—and other things ChatGPT gets wrong about the Supreme Court*, SCOTUSblog (Jan. 26, 2023), *https://www.scotusblog.com/2023/01/no-ruth-bader-ginsburg-did-not-dissent-in-obergefell-and-other-things-chatgpt-gets-wrong-about-the-supreme-court/*.

30. Some technologies allow users to provide iterative "feedback" by providing additional prompts to the machine. For example, the user may instruct the AI to revise the generated text to mention a topic or emphasize a particular point. While such instructions may give a user greater influence over the output, the AI technology is what determines how to implement those additional instructions.

31. *See* id. at 61 (quoting British decision by Lord Justice Cotton describing an author as the person "who has actually formed the picture").

32. *See Compendium (Third)* sec. 503.5 (a copyright registration "does not cover any unclaimable material that the work may contain," and applicants "should exclude that material from the claim").

33. 17 U.S.C. 101 (definition of "compilation"). In the case of a compilation including AI-generated material, the computer-generated material will not be protected outside of the compilation.

34. *See Compendium (Third)* sec. 507.1 (identifying that where a new author modifies a preexisting work, the "new authorship . . . may be registered, provided that it contains a sufficient amount of original authorship"); *see* also 17 U.S.C. 101 (defining "derivative work" to include works "based upon one or more preexisting works" where modifications to the work "which, as a whole, represent an original work of authorship").

35. 17 U.S.C. 103(b).

36. To the extent, however, that an artist uses the AI-powered features in Photoshop, the edits will be subject to the above analysis.

37. *Sarony*, 111 U.S. at 61.

38. 17 U.S.C. 409(10).

39. The Office's other types of application forms do not contain fields where applicants can disclaim unprotectable material such as AI-generated content. For example, the Single Application may only be used if "[a]ll of the content appearing in the work" was "created by the same individual." 37 CFR 202.3(b)(2)(i)(B).

40. The Office does not require applicants to disclaim "brief quotes, short phrases, and other *de minimis* uses" of preexisting works. *Compendium (Third)* sec. 503.5.

41. The Public Information Office can be reached through the Office's website (*https://copyright.gov/help/*) or by phone at (202) 707–3000 or (877) 476–0778.

42. 17 U.S.C. 408(d); *see also Compendium (Third)* sec. 1802 (discussing supplementary registration process); U.S. Copyright Office, *Circular 8: Supplementary Registration*, *https://copyright.gov/circs/circ08.pdf* (last revised Mar. 2021); 37 CFR 201.3(c)(14) (fee schedule for supplementary registration).

43. Though the supplementary registration certificate will have a new registration number and effective date of registration, the original registration "will not be expunged," and the two effective dates "will coexist with each other in the registration record" so that a court can determine which date to apply if the copyrighted work is later subject to litigation. 37 CFR 202.6(f)(1)–(2); U.S. Copyright Office, *Circular 8: Supplementary Registration*, *https://copyright.gov/circs/circ08.pdf* (last revised Mar. 2021).

44. *See* 37 CFR 201.7(c)(4). If the work contains human authorship intermingled with AI-created material, the Office may add an annotation to clarify the scope of the claim.

45. 17 U.S.C. 411(b)(1)(A); *Unicolors, Inc.* v. *H&M Hennes & Mauritz, L.P.*, 142 S. Ct. 941, 948 (2022) (requiring that the applicant "was actually aware of, or willfully blind to" the inaccurate information).

OCTOBER 30, 2023

FACT SHEET: President Biden Issues Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence

Today, President Biden is issuing a landmark Executive Order to ensure that America leads the way in seizing the promise and managing the risks of artificial intelligence (AI). The Executive Order establishes new standards for AI safety and security, protects Americans' privacy, advances equity and civil rights, stands up for consumers and workers, promotes innovation and competition, advances American leadership around the world, and more.

As part of the Biden-Harris Administration's comprehensive strategy for responsible innovation, the Executive Order builds on previous actions the President has taken, including work that led to voluntary commitments from 15 leading companies to drive safe, secure, and trustworthy development of AI.

The Executive Order directs the following actions:

New Standards for AI Safety and Security

As AI's capabilities grow, so do its implications for Americans' safety and security. With this Executive Order, the President directs the most sweeping actions ever taken to protect Americans from the potential risks of AI systems:

- Require that developers of the most powerful AI systems share their safety test results and other critical information with the U.S. government. In accordance with the Defense Production Act, the Order will require that companies developing any foundation model that poses a serious risk to national security, national economic security, or national public health and safety must notify the federal government when training the model, and must share the results of all red-team safety tests. These measures will ensure AI systems are safe, secure, and trustworthy before companies make them public.

- Develop standards, tools, and tests to help ensure that AI systems are safe, secure, and trustworthy. The National Institute of Standards and Technology will set the rigorous standards for extensive red-team testing to ensure safety before public release. The Department of Homeland Security will apply those standards to critical infrastructure sectors and establish the AI Safety and Security Board. The Departments of Energy and Homeland Security will also address AI systems' threats to critical infrastructure, as well as chemical, biological, radiological, nuclear, and cybersecurity risks. Together, these are the most significant actions ever taken by any government to advance the field of AI safety.

- Protect against the risks of using AI to engineer dangerous biological materials by developing strong new standards for biological synthesis screening. Agencies that fund life-science projects will establish these standards as a condition of federal funding, creating powerful incentives to ensure appropriate screening and manage risks potentially made worse by AI.

- Protect Americans from AI-enabled fraud and deception by establishing standards and best practices for detecting AI-generated content and authenticating official content. The Department of Commerce will develop guidance for content authentication and watermarking to clearly label AI-generated content. Federal agencies will use these tools to

make it easy for Americans to know that the communications they receive from their government are authentic—and set an example for the private sector and governments around the world.

- Establish an advanced cybersecurity program to develop AI tools to find and fix vulnerabilities in critical software, building on the Biden-Harris Administration's ongoing AI Cyber Challenge. Together, these efforts will harness AI's potentially game-changing cyber capabilities to make software and networks more secure.

- Order the development of a National Security Memorandum that directs further actions on AI and security, to be developed by the National Security Council and White House Chief of Staff. This document will ensure that the United States military and intelligence community use AI safely, ethically, and effectively in their missions, and will direct actions to counter adversaries' military use of AI.

Protecting Americans' Privacy

Without safeguards, AI can put Americans' privacy further at risk. AI not only makes it easier to extract, identify, and exploit personal data, but it also heightens incentives to do so because companies use data to train AI systems. To better protect Americans' privacy, including from the risks posed by AI, the President calls on Congress to pass bipartisan data privacy legislation to protect all Americans, especially kids, and directs the following actions:

- Protect Americans' privacy by prioritizing federal support for accelerating the development and use of privacy-preserving techniques—including ones that use cutting-edge AI and that let AI systems be trained while preserving the privacy of the training data.

- Strengthen privacy-preserving research and technologies, such as cryptographic tools that preserve individuals' privacy, by funding a Research Coordination Network to advance rapid breakthroughs and development. The National Science Foundation will also work

with this network to promote the adoption of leading-edge privacy-preserving technologies by federal agencies.

- Evaluate how agencies collect and use commercially available information—including information they procure from data brokers—and strengthen privacy guidance for federal agencies to account for AI risks. This work will focus in particular on commercially available information containing personally identifiable data.
- Develop guidelines for federal agencies to evaluate the effectiveness of privacy-preserving techniques, including those used in AI systems. These guidelines will advance agency efforts to protect Americans' data.

Advancing Equity and Civil Rights

Irresponsible uses of AI can lead to and deepen discrimination, bias, and other abuses in justice, healthcare, and housing. The Biden-Harris Administration has already taken action by publishing the Blueprint for an AI Bill of Rights and issuing an Executive Order directing agencies to combat algorithmic discrimination, while enforcing existing authorities to protect people's rights and safety. To ensure that AI advances equity and civil rights, the President directs the following additional actions:

- Provide clear guidance to landlords, Federal benefits programs, and federal contractors to keep AI algorithms from being used to exacerbate discrimination.
- Address algorithmic discrimination through training, technical assistance, and coordination between the Department of Justice and Federal civil rights offices on best practices for investigating and prosecuting civil rights violations related to AI.
- Ensure fairness throughout the criminal justice system by developing best practices on the use of AI in sentencing, parole and probation, pretrial release and detention, risk assessments, surveillance, crime forecasting and predictive policing, and forensic analysis.

Standing Up for Consumers, Patients, and Students

AI can bring real benefits to consumers—for example, by making products better, cheaper, and more widely available. But AI also raises the risk of injuring, misleading, or otherwise harming Americans. To protect consumers while ensuring that AI can make Americans better off, the President directs the following actions:

- Advance the responsible use of AI in healthcare and the development of affordable and life-saving drugs. The Department of Health and Human Services will also establish a safety program to receive reports of—and act to remedy – harms or unsafe healthcare practices involving AI.
- Shape AI's potential to transform education by creating resources to support educators deploying AI-enabled educational tools, such as personalized tutoring in schools.

Supporting Workers

AI is changing America's jobs and workplaces, offering both the promise of improved productivity but also the dangers of increased workplace surveillance, bias, and job displacement. To mitigate these risks, support workers' ability to bargain collectively, and invest in workforce training and development that is accessible to all, the President directs the following actions:

- Develop principles and best practices to mitigate the harms and maximize the benefits of AI for workers by addressing job displacement; labor standards; workplace equity, health, and safety; and data collection. These principles and best practices will benefit workers by providing guidance to prevent employers from undercompensating workers, evaluating job applications unfairly, or impinging on workers' ability to organize.

- Produce a report on AI's potential labor-market impacts, and study and identify options for strengthening federal support for workers facing labor disruptions, including from AI.

Promoting Innovation and Competition

America already leads in AI innovation—more AI startups raised first-time capital in the United States last year than in the next seven countries combined. The Executive Order ensures that we continue to lead the way in innovation and competition through the following actions:

- Catalyze AI research across the United States through a pilot of the National AI Research Resource—a tool that will provide AI researchers and students access to key AI resources and data—and expanded grants for AI research in vital areas like healthcare and climate change.
- Promote a fair, open, and competitive AI ecosystem by providing small developers and entrepreneurs access to technical assistance and resources, helping small businesses commercialize AI breakthroughs, and encouraging the Federal Trade Commission to exercise its authorities.
- Use existing authorities to expand the ability of highly skilled immigrants and nonimmigrants with expertise in critical areas to study, stay, and work in the United States by modernizing and streamlining visa criteria, interviews, and reviews.

Advancing American Leadership Abroad

AI's challenges and opportunities are global. The Biden-Harris Administration will continue working with other nations to support safe, secure, and trustworthy deployment and use of AI worldwide. To that end, the President directs the following actions:

- Expand bilateral, multilateral, and multistakeholder engagements to collaborate on AI. The State Department, in collaboration, with the Commerce Department will lead an effort to establish robust international frameworks for harnessing AI's benefits and managing its risks and ensuring safety. In addition, this week, Vice President Harris will speak at the UK Summit on AI Safety, hosted by Prime Minister Rishi Sunak.
- Accelerate development and implementation of vital AI standards with international partners and in standards organizations, ensuring that the technology is safe, secure, trustworthy, and interoperable.
- Promote the safe, responsible, and rights-affirming development and deployment of AI abroad to solve global challenges, such as advancing sustainable development and mitigating dangers to critical infrastructure.

Ensuring Responsible and Effective Government Use of AI

AI can help government deliver better results for the American people. It can expand agencies' capacity to regulate, govern, and disburse benefits, and it can cut costs and enhance the security of government systems. However, use of AI can pose risks, such as discrimination and unsafe decisions. To ensure the responsible government deployment of AI and modernize federal AI infrastructure, the President directs the following actions:

- Issue guidance for agencies' use of AI, including clear standards to protect rights and safety, improve AI procurement, and strengthen AI deployment.
- Help agencies acquire specified AI products and services faster, more cheaply, and more effectively through more rapid and efficient contracting.
- Accelerate the rapid hiring of AI professionals as part of a government-wide AI talent surge led by the Office of Personnel Management, U.S. Digital Service, U.S. Digital Corps, and Presidential Innovation Fellowship. Agencies will provide AI training for employees at all levels in relevant fields.

As we advance this agenda at home, the Administration will work with allies and partners abroad on a strong international framework to govern the development and use of AI. The Administration has already consulted widely on AI governance frameworks over the past several months—engaging with Australia, Brazil, Canada, Chile, the European Union, France, Germany, India, Israel, Italy, Japan, Kenya, Mexico, the Netherlands, New Zealand, Nigeria, the Philippines, Singapore, South Korea, the UAE, and the UK. The actions taken today support and complement Japan's leadership of the G-7 Hiroshima Process, the UK Summit on AI Safety, India's leadership as Chair of the Global Partnership on AI, and ongoing discussions at the United Nations.

The actions that President Biden directed today are vital steps forward in the U.S.'s approach on safe, secure, and trustworthy AI. More action will be required, and the Administration will continue to work with Congress to pursue bipartisan legislation to help America lead the way in responsible innovation.

For more on the Biden-Harris Administration's work to advance AI, and for opportunities to join the Federal AI workforce, visit AI.gov.

United States Copyright Office

Library of Congress · 101 Independence Avenue SE · Washington DC 20559-6000 ·
www.copyright.gov

February 21, 2023

Van Lindberg
Taylor English Duma LLP
21750 Hardy Oak Boulevard #102
San Antonio, TX 78258

Previous Correspondence ID: 1-5GB561K

Re: Zarya of the Dawn (Registration # VAu001480196)

Dear Mr. Lindberg:

The United States Copyright Office has reviewed your letter dated November 21, 2022, responding to our letter to your client, Kristina Kashtanova, seeking additional information concerning the authorship of her work titled *Zarya of the Dawn* (the "Work"). Ms. Kashtanova had previously applied for and obtained a copyright registration for the Work, Registration # VAu001480196. We appreciate the information provided in your letter, including your description of the operation of the Midjourney's artificial intelligence ("AI") technology and how it was used by your client to create the Work.

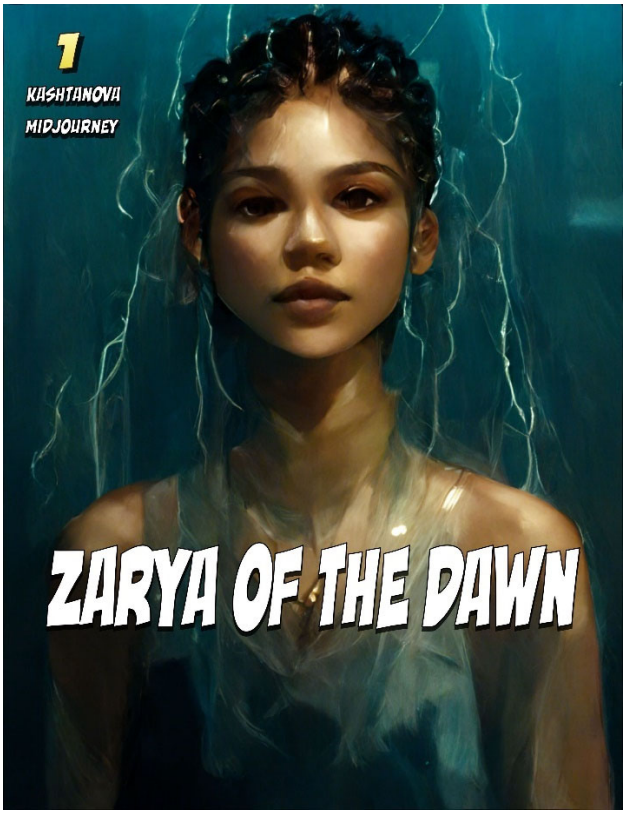
The Office has completed its review of the Work's original registration application and deposit copy, as well as the relevant correspondence in the administrative record.[1] We conclude that Ms. Kashtanova is the author of the Work's text as well as the selection, coordination, and arrangement of the Work's written and visual elements. That authorship is protected by copyright. However, as discussed below, the images in the Work that were generated by the Midjourney technology are not the product of human authorship. Because the current registration for the Work does not disclaim its Midjourney-generated content, we intend to cancel the original certificate issued to Ms. Kashtanova and issue a new one covering only the expressive material that she created.

The Office's reissuance of the registration certificate will not change its effective date—the new registration will have the same effective date as the original: September 15, 2022. The public record will be updated to cross-reference the cancellation and the new registration, and it will briefly explain that the cancelled registration was replaced with the new, more limited registration.

[1] The Office has only considered correspondence from Ms. Kashtanova and her counsel in its analysis. While the Office received unsolicited communications from third parties commenting on the Office's decision, those communications were not considered in connection with this letter.

I. DESCRIPTION OF THE WORK

As described in the application and accompanying deposit materials provided by Ms. Kashtanova, the Work is a "comic book" consisting of eighteen pages, one of which is a cover. The cover page consists of an image of a young woman, the Work's title, and the words "Kashtanova" and "Midjourney." The remaining pages consist of mixed text and visual material. A reproduction of the cover page and the second page are provided below:



II. SUMMARY OF ADMINISTRATIVE RECORD

On September 15, 2022, Ms. Kashtanova submitted an application for the Work and copies of each page of the Work as the deposit copy. In her application, Ms. Kashtanova listed the author of the Work as "Kristina Kashtanova" and stated that she had created a "[c]omic book." The application did not disclose that she used artificial intelligence to create any part of the Work, nor did she disclaim any portion of the Work.[2] The Office reviewed the application on the same day and registered the Work as registration number VAu001480196.

Shortly after registering the Work, the Office became aware of statements on social media attributed to Ms. Kashtanova that she had created the comic book using Midjourney artificial intelligence. Because the application had not disclosed the use of artificial intelligence,

[2] As we explained in our previous letter, while the word "Midjourney" appears on the cover page of the Work, there is no indication of the intent or meaning of the word on the cover. Letter from U.S. Copyright Office to Kristina Kashtanova at 2 (Oct. 28, 2022).

the Office determined that the application was incorrect, or at a minimum, substantively incomplete. In a letter dated October 28, 2022, the Office notified Ms. Kashtanova that it intended to cancel the registration unless she provided additional information in writing showing why the registration should not be cancelled.[3] Letter from U.S. Copyright Office to Kristina Kashtanova (Oct. 28, 2022).

On November 21, 2022, the Office received a timely response from Ms. Kashtanova's attorney, Mr. Van Lindberg. Letter from Van Lindberg, Taylor English Duma LLP, to U.S. Copyright Office (Nov. 21, 2022) ("Kashtanova Letter"). The letter describes Ms. Kashtanova's creation of the Work, including specific information about her use of Midjourney. Mr. Lindberg argues that the Work's registration should not be cancelled because (1) Ms. Kashtanova authored every aspect of the work, with Midjourney serving merely as an assistive tool, and, (2) alternatively, portions of the work are registrable because the text was authored by Ms. Kashtanova and the Work is a copyrightable compilation due to her creative selection, coordination, and arrangement of the text and images.

III. DISCUSSION

A. Legal Standards

Before turning to our analysis of the Work, we summarize here the legal principles that guide that analysis. The Copyright Act defines the scope of copyright protection. Under the Act, a work may be registered if it qualifies as an "original work[] of authorship fixed in any tangible medium of expression." 17 U.S.C. § 102(a). The Supreme Court has explained that the term "original" in this context consists of two components: independent creation and sufficient creativity. *See Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991). First, the work must have been independently created by the author. *Id.* Second, the work must possess sufficient creativity. *Id.* Only a modicum of creativity is necessary, but the Supreme Court has ruled that some works—such as the alphabetized telephone directory at issue in *Feist*—fail to meet even this low threshold. *Id.* The Court observed that "[a]s a constitutional matter, copyright protects only those constituent elements of a work that possess more than a *de minimis* quantum of creativity." *Id.* at 363. It found that there can be no copyright in a work in which "the creative spark is utterly lacking or so trivial as to be virtually nonexistent." *Id.* at 359.

Courts interpreting the phrase "works of authorship" have uniformly limited it to the creations of human authors. For example, in *Burrow-Giles Lithographic Co. v. Sarony*, the Supreme Court held that photographs were protected by copyright because they were "representatives of original intellectual conceptions of the author," defining authors as "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature." 111 U.S. 53, 57–59 (1884). In doing so, the Court rejected the argument that a photograph was merely "a reproduction on paper of the exact features of some natural object or of some person" made by a machine. *Id.* at 56. But the Court explained that if photography was

[3] Under 37 C.F.R. § 201.7(c)(4), if the Office becomes aware that an issued registration does not satisfy the statutory requirements for copyright "or that information essential to registration has been omitted entirely from the application or is questionable," the Office will correspond with the copyright claimant "in an attempt to secure the required information . . . or to clarify the information previously given on the application." If the claimant does not reply in 30 days, the Office will cancel the registration. *Id.*

a "merely mechanical" process, "with no place for novelty, invention or originality" by the human photographer, then "in such case a copyright is no protection." *Id.* at 59.[4]

In cases where non-human authorship is claimed, appellate courts have found that copyright does not protect the alleged creations. For example, the Ninth Circuit held that a book containing words "'authored' by non-human spiritual beings" can only gain copyright protection if there is "human selection and arrangement of the revelations." *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997). The *Urantia* court held that "some element of human creativity must have occurred in order for the Book to be copyrightable" because "it is not creations of divine beings that the copyright laws were intended to protect." *Id.*

The Office's registration practices follow and reflect these court decisions. The Office collects its understanding of the law in the *Compendium of U.S. Copyright Office Practices (Third Edition)*, which provides standards for examining and registering copyrighted works. Following the cases described above, the *Compendium* explains that the Office "will refuse to register a claim if it determines that a human being did not create the work." U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 313.2 (3d ed. 2021) ("COMPENDIUM (THIRD)") (providing examples of works lacking human authorship such as "a photograph taken by a monkey" and "an application for a song naming the Holy Spirit as the author of the work").[5]

Having considered the requirements for copyright protection, the Office turns to the elements of the Work as described in your letter.

B. The Work's Text

The Office agrees that the text of the Work is protected by copyright. Your letter states that "the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program." Kashtanova Letter at 2. Based on this statement, the Office finds that the text is the product of human authorship. Moreover, the Office finds that the text in the Work contains more than the "modicum of creativity" required for protection under *Feist*. *See* 499 U.S. at 346. For this reason, the text of the Work is registrable.[6]

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[4] This echoed the Court's decision five years earlier in the *Trade-Mark Cases*, which noted that "the writings which are to be protected [under the Copyright Clause] are the fruits of intellectual labor, embodied in the form of books, prints, engravings and the like." 100 U.S. 82, 94 (1879). The Court's later cases have similarly articulated a nexus between human expression and copyright. In *Mazer v. Stein*, the Court cited *Sarony* for the proposition that a work "must be original, that is, the author's tangible expression of his ideas." 347 U.S. 201, 214 (1954). And in *Goldstein v. California*, the Court again cited *Sarony* for the proposition that "[w]hile an 'author' may be viewed as an individual who writes an original composition, the term, in its constitutional sense, has been construed to mean an 'originator,' 'he to whom anything owes its origin.'" 412 U.S. 546, 561 (1973).

[5] The Office has refused to register a visual work created autonomously by an AI. *See* U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of A Recent Entrance to Paradise* (Feb. 14, 2022), https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf.

[6] The Work is described as "an adaption of Kashtanova's original story about Zarya." Kashtanova Letter at 3–4. This would make the Work a derivative of the original story and require that the Work contain separate textual authorship from the story that is itself sufficiently creative for copyright protection. *See* COMPENDIUM (THIRD)

C. The Selection and Arrangement of Images and Text

The Office also agrees that the selection and arrangement of the images and text in the Work are protectable as a compilation. Copyright protects "the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged" in a sufficiently creative way. 17 U.S.C. § 101 (definition of "compilation"); *see also* COMPENDIUM (THIRD) § 312.1 (providing examples of copyrightable compilations). Ms. Kashtanova states that she "selected, refined, cropped, positioned, framed, and arranged" the images in the Work to create the story told within its pages. Kashtanova Letter at 13; *see also id.* at 4 (arguing that "Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole."). Based on the representation that the selection and arrangement of the images in the Work was done entirely by Ms. Kashtanova, the Office concludes that it is the product of human authorship. Further, the Office finds that the compilation of these images and text throughout the Work contains sufficient creativity under *Feist* to be protected by copyright. Specifically, the Office finds the Work is the product of creative choices with respect to the selection of the images that make up the Work and the placement and arrangement of the images and text on each of the Work's pages. Copyright therefore protects Ms. Kashtanova's authorship of the overall selection, coordination, and arrangement of the text and visual elements that make up the Work.

D. The Individual Images

Turning to the individual images in the Work, the Office must consider the impact of Ms. Kashtanova's use of Midjourney's artificial intelligence technology in its copyrightability analysis. The majority of the Kashtanova Letter focuses on how Ms. Kashtanova used Midjourney to create these images. Before addressing the question of whether the images are copyrightable, the Office describes its understanding of Midjourney and how it works. The Office's understanding is based on the letter's description of the artificial intelligence service,[7] the Office's own knowledge, and Midjourney's public documentation, of which the Office takes administrative notice.[8]

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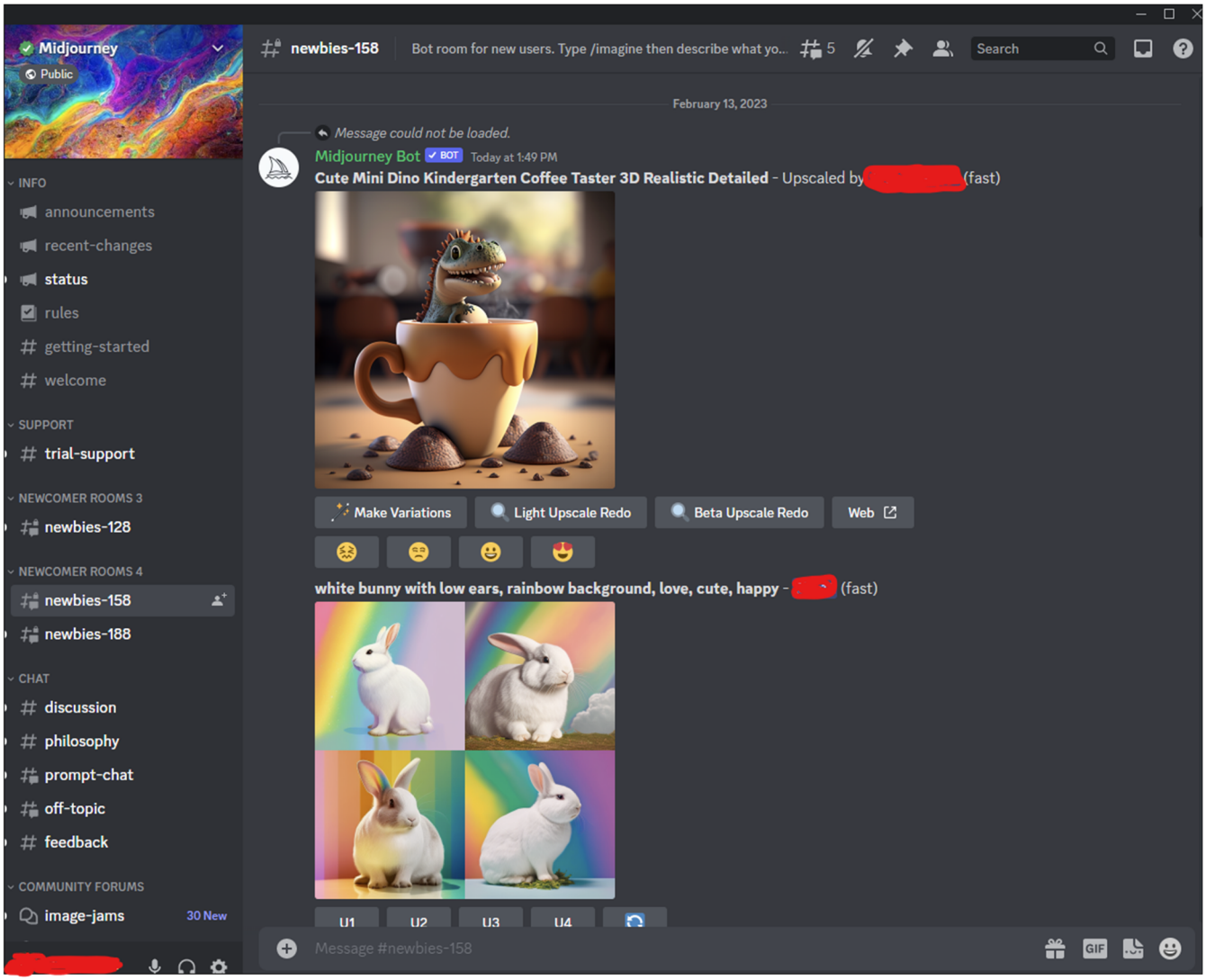
§§ 507.1, 507.2 (discussing derivative works). Ms. Kashtanova has provided a narrative passage in her letter, *see* Kashtanova Letter at 3–4, but it is unclear whether the passage is an excerpt of the short story or the story in full. In any event, the story was not submitted as part of the deposit for the Work, so the Office does not need to address it in connection with this application.

[7] Midjourney is a subscription service that allows users to pay to generate images, with subscription plans corresponding to the computational time it uses to generate images. *See Fast and Relax Mode*, MIDJOURNEY, https://docs.midjourney.com/docs/fast-relax ("Midjourney uses powerful Graphics Processing Units (GPUs) to interpret and process each prompt. When you purchase a subscription to Midjourney, you are purchasing time on these GPUs."); *Subscription Plans*, MIDJOURNEY, https://docs.midjourney.com/docs/plans (providing information about different subscription plans). Unless stated otherwise, all websites were last visited on February 17, 2023.

[8] "Ordinarily, the Office does not conduct investigations or make findings of fact to confirm the truth of any statement made in an application." COMPENDIUM (THIRD) § 602.4(C). But the Office "may take administrative notice of facts or matters that are known by the Office or the general public," and the Office may use that knowledge to evaluate an application that appears to be based on inaccurate or incomplete information. *Id.*

1. How Midjourney Works

Midjourney offers an artificial intelligence technology capable of generating images in response to text provided by a user. Midjourney operates on top of an unaffiliated third-party communication service called Discord, which is made up of individual servers operated by its users.[9] In order to use Midjourney, users must first join the Midjourney Discord server, which contains public "channels" where users can enter text.[10] Midjourney primarily operates through an automated account on these channels that reads user-entered text and generates images based on it. An example of a public channel depicting the use of Midjourney by individuals to generate images is provided below:



[9] Discord is a communication service that allows users to create "servers" that contain individual "channels" for text or voice communication. *See* Librarian, *Beginner's Guide to Discord*, DISCORD, https://support.discord.com/hc/en-us/articles/360045138571-Beginner-s-Guide-to-Discord.

[10] *See Quick Start*, MIDJOURNEY, https://docs.midjourney.com/docs/quick-start (explaining that the first step for using Midjourney is to "go directly to the Midjourney Discord").

Users operate Midjourney through "prompts," which are text commands entered in one of Midjourney's channels. As Midjourney explains, prompts must start with the text "/imagine" and contain text describing what Midjourney should generate.[11] Users also have the option to include (1) a URL of one or more images to influence the generated output, or (2) parameters directing Midjourney to generate an image in a particular aspect ratio or providing other functional directions.[12]

After a user provides Midjourney with a prompt, the technology will generate four images in response. The images are provided in a grid, and buttons underneath the grid allow users to request that Midjourney provide a higher-resolution version of an image (*e.g.*, U1, U2, U3, U4), create new variations of an image (*e.g.*, V1, V2, V3, V4), or to generate four new images from scratch (see light blue circular icon at far right below). For example, entering the prompt "/imagine cute baby dinosaur shakespeare writing play purple" resulted in the following response from Midjourney:

It is relevant here that, by its own description, Midjourney does not interpret prompts as specific instructions to create a particular expressive result. Because Midjourney "does not understand grammar, sentence structure, or words like humans," it instead converts words and phrases "into smaller pieces, called tokens, that can be compared to its training data and then used to generate an image." *Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts. Generation involves Midjourney starting with "a field of visual noise, like television static, [used] as a starting point to generate the initial image grids" and then using an algorithm to refine

[11] *See id.*; *see also Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts.
[12] For a list of parameters, see *Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list.

that static into human-recognizable images. *Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.[13]

The process by which a Midjourney user obtains an ultimate satisfactory image through the tool is not the same as that of a human artist, writer, or photographer. As noted above, the initial prompt by a user generates four different images based on Midjourney's training data. While additional prompts applied to one of these initial images can influence the subsequent images, the process is not controlled by the user because it is not possible to predict what Midjourney will create ahead of time. *See, e.g.*, Kashtanova Letter at 8 (describing the process of "provid[ing] the Midjourney service with [] prompts and inputs" so that it will "render[] another iteration" of the input "Raya as a hologram").

2. Application of Copyright Law to Midjourney Images

Based on the record before it, the Office concludes that the images generated by Midjourney contained within the Work are not original works of authorship protected by copyright. *See* COMPENDIUM (THIRD) § 313.2 (explaining that "the Office will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author"). Though she claims to have "guided" the structure and content of each image, the process described in the Kashtanova Letter makes clear that it was Midjourney—not Kashtanova—that originated the "traditional elements of authorship" in the images.

Ms. Kashtanova claims that each image was created using "a similar creative process." Kashtanova Letter at 5. Summarized here, this process consisted of a series of steps employing Midjourney. First, she entered a text prompt to Midjourney, which she describes as "the core creative input" for the image. *Id.* at 7–8 (providing example of first generated image in response to prompt "dark skin hands holding an old photograph --ar 16:9").[14] Next, "Kashtanova then picked one or more of these output images to further develop." *Id.* at 8. She then "tweaked or changed the prompt as well as the other inputs provided to Midjourney" to generate new intermediate images, and ultimately the final image. *Id.* Ms. Kashtanova does not claim she created any visual material herself—she uses passive voice in describing the final image as "created, developed, refined, and relocated" and as containing elements from intermediate images "brought together into a cohesive whole." *Id.* at 7. To obtain the final image, she describes a process of trial-and-error, in which she provided "hundreds or thousands of descriptive prompts" to Midjourney until the "hundreds of iterations [created] as perfect a rendition of her vision as possible." *Id.* at 9–10.

[13] While Midjourney starts with a randomly chosen number, called a "seed," as the "starting point" for an image grid, users can use a parameter to specify a particular seed for the image-generation process. *See Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.

[14] As described above, the text "--ar 16:9" is a "parameter," or command, instructing Midjourney to generate an image in a 16:9 aspect ratio. *See Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list (adding "--aspect, or --ar" to a prompt instructs Midjourney to "[c]hange the aspect ratio of a generation"). *See also* Kashtanova Letter at 8 ("This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio").

Rather than a tool that Ms. Kashtanova controlled and guided to reach her desired image, Midjourney generates images in an unpredictable way. Accordingly, Midjourney users are not the "authors" for copyright purposes of the images the technology generates. As the Supreme Court has explained, the "author" of a copyrighted work is the one "who has actually formed the picture," the one who acts as "the inventive or master mind." *Burrow-Giles*, 111 U.S. at 61. A person who provides text prompts to Midjourney does not "actually form" the generated images and is not the "master mind" behind them. Instead, as explained above, Midjourney begins the image generation process with a field of visual "noise," which is refined based on tokens created from user prompts that relate to Midjourney's training database. The information in the prompt may "influence" generated image, but prompt text does not dictate a specific result. *See Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts (explaining that short text prompts cause "each word [to have] a more powerful influence" and that images including in a prompt may "influence the style and content of the finished result"). Because of the significant distance between what a user may direct Midjourney to create and the visual material Midjourney actually produces, Midjourney users lack sufficient control over generated images to be treated as the "master mind" behind them.

The fact that Midjourney's specific output cannot be predicted by users makes Midjourney different for copyright purposes than other tools used by artists. *See* Kashtanova Letter at 11 (arguing that the process of using Midjourney is similar to using other "computer-based tools" such as Adobe Photoshop). Like the photographer in *Burrow-Giles*, when artists use editing or other assistive tools, they select what visual material to modify, choose which tools to use and what changes to make, and take specific steps to control the final image such that it amounts to the artist's "own original mental conception, to which [they] gave visible form."[15] *Burrow-Giles*, 111 U.S. at 60 (explaining that the photographer's creative choices made the photograph "the product of [his] intellectual invention"). Users of Midjourney do not have comparable control over the initial image generated, or any final image. It is therefore understandable that users like Ms. Kashtanova may take "over a year from conception to creation" of images matching what the user had in mind because they may need to generate "hundreds of intermediate images." Kashtanova Letter at 3, 9.

Nor does the Office agree that Ms. Kashtanova's use of textual prompts permits copyright protection of resulting images because the images are the visual representation of "creative, human-authored prompts."[16] *Id.* at 10. Because Midjourney starts with randomly generated noise that evolves into a final image, there is no guarantee that a particular prompt will

[15] For this reason, the cases cited by Ms. Kashtanova regarding Photoshop do not alter our conclusion. *See* Kashtanova Letter at 11 n.13. Both cases involved situations where the artist had made deliberate, intentional edits to an image using Photoshop. In *Etrailer Corp. v. Onyx Enters., Int'l Corp.*, the court credited the plaintiff's statement that she used Photoshop to "smooth, crop, saturate, and burn" photographs of trailer accessories. Case No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916, at *4 (E.D. Mo. Feb. 7, 2018) (rejecting motion to dismiss that photographs were not protected by copyright). And in *Payton v. Defend, Inc.*, the court found a triable issue on copyrightability where the plaintiff used Photoshop to create a shirt design containing a silhouette of an AR-15 rifle based on a preexisting "picture of a model AR-15 Airsoft gun." No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358, at *9 (D. Haw. Dec. 19, 2017).

[16] While Ms. Kashtanova suggests that her text prompts are copyrightable because they are similar to poems, she did not submit them in the application and is not seeking to register the text prompts themselves, either separately or as part of the Work. *See* Kashtanova Letter at 9–10. Accordingly, the Office has not addressed the question of copyrightability of prompts here.

generate any particular visual output. Instead, prompts function closer to suggestions than orders, similar to the situation of a client who hires an artist to create an image with general directions as to its contents. If Ms. Kashtanova had commissioned a visual artist to produce an image containing "a holographic elderly white woman named Raya," where "[R]aya is having curly hair and she is inside a spaceship," with directions that the image have a similar mood or style to a "Star Trek spaceship," "a hologram," an "octane render," "unreal engine," and be "cinematic" and "hyper detailed," Ms. Kashtanova would not be the author of that image. *See id.* at 8 (text of prompt provided to Midjourney). Absent the legal requirements for the work to qualify as a work made for hire,[17] the author would be the visual artist who received those instructions and determined how best to express them. And if Ms. Kashtanova were to enter those terms into an image search engine, she could not claim the images returned in response to her search were "authored" by her, no matter how similar they were to her artistic vision.

The Office does not question Ms. Kashtanova's contention that she expended significant time and effort working with Midjourney. But that effort does not make her the "author" of Midjourney images under copyright law. Courts have rejected the argument that "sweat of the brow" can be a basis for copyright protection in otherwise unprotectable material.[18] The Office "will not consider the amount of time, effort, or expense required to create the work" because they "have no bearing on whether a work possesses the minimum creative spark required by the Copyright Act and the Constitution." COMPENDIUM (THIRD) § 310.7.

The Office's determination here is based on the specific facts provided about Ms. Kashtanova's use of Midjourney to create the Work's images. It is possible that other AI offerings that can generate expressive material operate differently than Midjourney does. However, on the administrative record before the Office, Ms. Kashtanova is not the author for copyright purpose of the individual images generated by Midjourney.

3. Images Edited by Ms. Kashtanova

Finally, Ms. Kashtanova suggests that she personally edited some of the images created by Midjourney. Her letter points to two specific images contained in the Work. While the Office accepts the statement that the changes were made directly by Ms. Kashtanova, it cannot definitively conclude that the editing alterations are sufficiently creative to be entitled to copyright.

First, Ms. Kashtanova explains that she "modif[ied] the rendering of Zarya's lips and mouth" in an image on page 2 of the Work. Kashtanova Letter at 12.

[17] *See* 17 U.S.C. § 101 (definition of "work made for hire").
[18] Copyright protection cannot serve "a reward for the hard work that went into" creating an otherwise unprotectable work, because otherwise "sweat of the brow" would permit copyright to extend further than the author's original contributions. *Feist*, 499 U.S. at 352–53.

Detail before Photoshop *Detail after Photoshop*

The changes to Zarya's mouth, particularly her upper lip, are too minor and imperceptible to supply the necessary creativity for copyright protection. The Office will register works that contain otherwise unprotectable material that has been edited, modified, or otherwise revised by a human author, but only if the new work contains a "sufficient amount of original authorship" to itself qualify for copyright protection. COMPENDIUM (THIRD) § 313.6(D). Ms. Kashtanova's changes to this image fall short of this standard. *Contra Eden Toys, Inc. v. Florelee Undergarment Co*., 697 F.2d 27, 34–35 (2d Cir. 1982) (revised drawing of Paddington Bear qualified as a derivative work based on the changed proportions of the character's hat, the elimination of individualized fingers and toes, and the overall smoothing of lines that gave the drawing a "different, cleaner 'look'").

Second, Ms. Kashtanova points to an image on page 12 of the Work depicting an old woman with her eyes closed. She describes this work as created "using both the Midjourney service and Photoshop together," with edits in Photoshop made to "show[] aging of the face, smoothing of gradients[,] and modifications of lines and shapes." Kashtanova Letter at 11. The image as it appears in the Work is displayed below:

Based on Ms. Kashtanova's description, the Office cannot determine what expression in the image was contributed through her use of Photoshop as opposed to generated by Midjourney. She suggests that Photoshop was used to modify an intermediate image by Midjourney to "show[] aging of the face," but it is unclear whether she manually edited the youthful face in a previous intermediate image, created a composite image using a previously generated image of an older woman, or did something else. To the extent that Ms. Kashtanova made substantive edits to an intermediate image generated by Midjourney, those edits could provide human authorship and would not be excluded from the new registration certificate.

IV. CONCLUSION

For the reasons explained above, the Office concludes that the registration certificate for *Zarya of the Dawn*, number VAu001480196 was issued based on inaccurate and incomplete information. Had the Office known the information now provided by Ms. Kashtanova, it would have narrowed the claim to exclude material generated by artificial intelligence technology. In light of the new information, the Office will cancel the previous registration pursuant to 37 C.F.R, § 201.7(c)(4) and replace it with a new registration covering the original authorship that Ms. Kashtanova contributed to this work, namely, the "text" and the "selection, coordination, and arrangement of text created by the author and artwork generated by artificial intelligence." Because these contributions predominantly contain textual material, they will be reregistered as an unpublished literary work.[19] The new registration will explicitly exclude "artwork generated by artificial intelligence."

The public record will reflect this decision. First, the record for the cancelled registration will indicate that the cancellation was due to a failure to exclude non-human authorship contained in the work. Second, the record will reflect that a new, more limited registration for this work has been issued in Class TXu and will include a cross-reference to that new registration. Third, the new registration will include a cross-reference to the cancelled registration in the "Prior Registration Cancelled" field. Finally, the Office will add the following annotation to the new certificate: "Reason for Reregistration: VAU001480196 cancelled pursuant to 37 CFR 201.7(c)(4) for failure to exclude non-human authorship." The new registration will have the same effective date as the cancelled registration: September 15, 2022.

The Office will cancel the original certificate of registration and issue a new certificate reflecting these changes and mail it to Ms. Kashtanova under separate cover.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of the Office of Registration Policy & Practice

[19] To be clear, this reclassification is made solely for purposes of registration. It "has no significance with respect to the subject matter of copyright or the exclusive rights" in this work. 17 U.S.C. 408(c)(1).

Enclosures:
U.S. Copyright Office Letter (Oct. 28, 2022)
Kris Kashtanova Letter (Nov. 21, 2022)

United States Copyright Office
Library of Congress · 101 Independence Avenue SE · Washington DC 20559-6000 · www.copyright.gov

October 28, 2022

Kristina Kashtanova
347 West 57th Street, Apt 4B
New York, NY 10019

Correspondence ID: 1-5GB561K

RE: Zarya Of The Dawn

Dear Ms. Kashtanova:

We are writing you regarding the copyright registration that you obtained for the work titled *Zarya Of The Dawn* (the "Work") on September 15, 2022 (Registration # VAu001480196). The application you submitted for the Work identified yourself as the sole author and did not disclaim any portions of the Work. The only information available to the Registration Specialist during examination was what you provided in the application and the deposit copy of the Work. Based on this information, the U.S. Copyright Office (the "Office") registered the Work and issued a certification of registration that reflected you as the sole author.

Soon after the Work was registered, the Office was contacted by a reporter in response to public statements you made regarding the creation of the Work. You stated that an artificial intelligence tool was used to create some or all of the content in the Work. This information was not provided to the Office in your application. Based on these comments, we have preliminarily concluded that the information in your application was incorrect or, at a minimum, substantively incomplete. Pursuant to 37 C.F.R. § 201.7(c)(4), by this letter, we are initiating cancellation of U.S. Copyright Office Registration VAu001480196 because by your own admission, you are not the sole author of the entire work and, at a minimum, the claim should have been limited to exclude non-human authorship. You have thirty days to respond in writing to show cause why this registration should not be cancelled.

Copyright's Human Authorship Requirement

The U.S. Copyright Office will register an original work of authorship only if the work was created by a human being. *U.S. Copyright Office, Compendium of U.S. Copyright Office Practices* § 306 (3d ed. 2021). The copyright law only protects "the fruits of intellectual labor" that "are founded in the creative powers of the mind." *Trade-Mark Cases*, 100 U.S. 82, 94 (1879). Because copyright law is limited to "original intellectual conceptions of the author," the Office will refuse to register a claim if it determines that a human being did not create the work. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884). *See also* 17 U.S.C. § 102(a); *Compendium (Third)* § 306.

Consistent with the law, the Office will not knowingly register works produced by a machine or mere mechanical process that operates randomly or automatically without sufficient creative input or intervention from a human author. *See* 17 U.S.C. § 102(b) (The Copyright Act prohibits copyright protection for "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."); *Compendium (Third)* § 313.2. The Office recently discussed its requirement of human authorship in a written decision affirming the denial of an application for a 2D visual work claimed to be solely created by an artificial intelligence machine. *See* Copyright Review Board Letter to Ryan Abbott, dated February 14, 2022 (available at https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf).

The Application for Registration of the Work

Upon submission of your application, you signed a certification confirming that all of the statements in the application are true to the best of your knowledge.[1] In the space for "author," you identified yourself. Because the "limitation of claim" and "Note to C.O." spaces on the application were left blank and there was no cover letter explaining how the work was created, the Registration Specialist examining the application had no reason to conclude that you were not the sole author of the entire work as stated on your application). Nothing in the deposit copy of the Work contradicted this conclusion. The material deposited for registration consists of eighteen (18) individual files containing .jpg images. Each of the images contain text and graphical material. While the word "Midjourney" appears on the cover page of the work, there is no indication of the intent or meaning of the word on the cover. Based on the information submitted, the Registration Specialist appropriately approved the registration without correspondence or annotation per Copyright Office practices. The effective date of this registration is September 15, 2022.

After the registration was approved, the Office became aware of public statements and online articles in which you discuss the creation of *Zarya Of The Dawn*.[2] After reviewing these statements, the Office now understands that "Midjourney" is an artificial intelligence tool you used to create some or all of the material contained in the work. In those public statements, you claim that your reliance on this artificial intelligence tool was clearly disclosed in your application. However, the word "Midjourney" appears only once within eighteen (18) individual files of material submitted to the Office for registration. This cryptic inclusion of the name of the tool was by no means an obvious or clear indication that you may not have created some or all of the material included in this work—contrary to the information you provided in your application. Had you included such a clear statement in an appropriate space on the application, the Registration Specialist would have corresponded with you to determine if this work was created by a human author, and if so, to clarify the appropriate scope of your claim. The fact that the

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[1] 37 C.F.R. § 202.3(c)(3)(iii). Knowingly making a false representation of a material fact in an application for copyright registration, or in any written statement filed in connection with the application, is a crime that is punishable under 17 U.S.C. § 506(e).

[2] *See* Kris.Kashtanova, Instagram, (September 22, 2022), Kris Kashtanova on Instagram: "I got Copyright from the Copyright Office of the USA on my Ai-generated graphic novel. I was open how it was made and put Midjourney on…"; *Artist Claims First U.S. Copyright for Graphic Novel Featuring AI Art,* Gizmodo, Kyle Barr (September 26, 2021, 1:15 PM) https://gizmodo.com/ai-art-shutterstock-getty-fur-infinity-1849574917; *SO IT IS POSSIBLE—Artist receives first known US copyright registration for latent diffusion AI art,* Ars Technica, Benj Edwards (September 22, 2022, 5:38 PM) https://arstechnica.com/information-technology/2022/09/artist-receives-first-known-us-copyright-registration-for-generative-ai-art/.

word "Midjourney" appears on the cover page of a Work does not constitute notice to the Office that an AI tool created some or all of the Work.

Cancellation

The Copyright Office may cancel a completed registration where it is clear that no registration should have been made because the work does not constitute copyrightable subject matter or fails to satisfy the other legal and formal requirements for obtaining a registration. 37 C.F.R. § 201.7(b)(1). The Copyright Office will cancel a completed registration where it is clear that no registration should have been made because "information essential to registration has been omitted entirely from the application or is questionable." 37 C.F.R. § 201.7(c)(4).

In such instances, the Copyright Office will notify the copyright claimant named on the original registration in writing of the proposed cancellation, and the claimant will be given thirty (30) days from the date of this communication, to show cause in writing why the registration should not be cancelled. *Id*. If the claimant fails to respond within the thirty (30) day period, or if after considering the claimant's response, the Copyright Office determines that the registration was made in error and not in accordance with the law, the registration will be cancelled. *Id*.

Conclusion

After carefully reviewing your numerous public statements describing the facts surrounding the creation of the Work registered under VAu001480196, the Office finds that the Work should not have been registered because it cannot be determined that it contains enough original human authorship to sustain a claim to copyright.

Should you choose to respond as provided in 37 C.F.R. § 201.7(c)(4), your response must be received no later than thirty (30) days from the date of this message. If you choose to respond, you should explain in detail exactly how the Work was created, including your reliance on pre-existing photographs, artificial intelligence tools, or any other material incorporated into the work, which you did not author.

Please email your response as an attachment to *registrationprogramoffice@copyright.gov*.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

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21 November 2022

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

Sent via email to registrationprogramoffice@copyright.gov

RE: Response under 37 C.F.R. § 201.7(c)(4) to the correspondence of Oct 28, 2022
RE: Registration of Zarya of the Dawn, Reg. No. VAu001480196
(Correspondence ID: 1-5GB561K)

Dear Mr. Kasunic:

We are writing in response to your correspondence of October 28, 2022 as counsel to Kristina Kashtanova. Kashtanova was recently granted copyright registration no. VAu001480196 for her work “Zarya of the Dawn” (the “Work”).

Subsequent to Kashtanova’s successful registration of the Work, the Office initiated cancellation of her registration on the basis that “the information in [her] application was incorrect or, at a minimum, substantively incomplete” due to Kashtanova’s use of an artificial intelligence generative tool (“the Midjourney service”) as part of her creative process. The concern of the Office appears to be that the Work does not have human authorship, or alternatively that Kashtanova’s claim of authorship was not limited to exclude elements with potential non-human authorship.

We are writing to affirm Kashtanova’s authorship of the entirety of the Work, despite her use of Midjourney’s image generation service as part of her creative process.

In this letter, we will describe the creative process that Kashtanova used to author every element of the Work. Accordingly, Kashtanova had no reason to recite any limitations of the claim or to provide notes to the Office, for the same reason that photographers do not

typically recite that they "used a camera" to create an image and authors do not disclaim portions of an image that they used Adobe Photoshop to create or modify.

We note that Kashtanova previously replied to your letter, providing some details of her creative work. That reply, however, was made without benefit of counsel and did not address all the issues raised. This letter supersedes any previous replies and constitutes Kashtanova's full response.[1]

Copyright Status of the Text

Before describing the creative process resulting in the images in the Work, we note that the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program. As such, we assume that there is no dispute about the human authorship or copyrightability of the textual elements of the Work.

Legal Basis for Registration

The Copyright Office has recognized and registered works generated with the help of machines since *Burrow-Giles Lithographic Co. v. Sarony*.[2] In *Burrow-Giles*, the Supreme Court says that authorship "involves originating, making, producing, as the inventive or master mind, the thing which is to be protected," and "the author is the [person] who really represents, creates, or gives effect to the idea, fancy, or imagination."[3]

As stated in the *Compendium of U.S. Copyright Office Practices* (3d ed. 2021), the Office will not register works produced by a machine or mere mechanical intervention from a human author. The crucial question is "**whether the 'work' is basically one of human authorship, with the computer [or other device] merely being an assisting instrument,** or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine."[4]

As described below, Kashtanova engaged in a creative, iterative process which she describes as "working with the computer to get closer and closer to what I wanted to express." This process included multiple rounds of composition, selection, arrangement, cropping, and editing for each image in the Work. Her efforts make her the author of the Work, including authorship of each image in the Work. The computer programs she used,

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[1] We are also aware that one or more third parties also reached out to comment on your letter. No other parties represent Kashtanova and no other communications should be considered part of her response.
[2] 111 U.S. 53, 4 S. Ct. 298 (1884).
[3] *Id.* at 61, 283, internal citations and quotation marks omitted.
[4] *Compendium of U.S. Copyright Office Practices* (3d ed. 2021) at § 313.2, quoting U.S. Copyright Office, Report to the Librarian of Congress by the Register of Copyrights 5 (1966), emphasis added.

including the Midjourney image creation service, were but “an assisting instrument” to Kashtanova.

The Press Accounts Oversimplify Kashtanova’s Creative Process

Per your correspondence of October 28, we understand that the Office reviewed various press accounts describing the creation of the Work. Those accounts oversimplified Kashtanova’s process and improperly characterized the role of the Midjourney service for dramatic effect. Even without detailing all the steps taken by Kashtanova, the fact that the Work took over a year from conception to creation makes it clear that it was not an unguided, “push-button” process. Developing each individual image took hours; finalizing each individual page took a day or more.

The Work Embodies the Original Conception of Kashtanova

The initial inspiration for the Work came in September 2021. As described by Kashtanova:

> I was taking self-portraits and creating different worlds using Cinema4D and Photoshop. I lost my best friend in August and my grandmother (Raya) in February. At that time, I didn't know I would experience more loss, but it felt that the year was painfully difficult. Photography wasn't bringing any income, and I tried to learn 3D and get a job in that area (unsuccessfully). Those worlds were my escape, and it was less about visuals and more about writing.

The loss of Kashtanova’s grandmother had a powerful influence on her, so she set out to create a story exploring her grief through the perspective of a girl who is transported to a new world and has to discover where she is from the clues around her:

> There was a postcard in my pocket with a beautiful view that said: “Zarya, lead me on a journey. Rusty”
>
> I assumed Zarya was me. I didn’t remember who Rusty was. Later that day I found Raya, my interworld ship, and I also discovered that I could travel through the worlds and I could adjust to any of them without any additional equipment. My only strength is adaptability. I get tired a lot and often need a nap. I can’t fly or jump. Some days I find it hard to leave my ship and explore. So I’m pretty ordinary, I don’t have superpowers.
>
> Every world I have visited so far was uninhabited. Today’s world looked familiar even though I haven’t been here before. It was Zaraya. A world of everlasting dawn. It wasn’t until I stood on the rock looking at its sun that froze above the horizon when I realized it was the same view as I had on my postcard. Rusty saw this view, whoever this Rusty was! I felt deeply connected to this entity I knew nothing about, and a longing to find

> someone in those worlds. I stood there for a long time and imagined how one day I'll tell Rusty about my adventures.

The Work at issue in this registration is an adaptation of Kashtanova's original story about Zarya. It is designed to communicate–through words *and* pictures–the experience of a girl who wakes up in an abandoned world with no memory and only a postcard in her pocket, traveling around different worlds to find clues about what happened to the Earth.

The Work, Including the Images, is Registrable as a Compilation Under the Copyright Act

There are no tools, of any sort, that can take the original conception of Kashtanova and, un-guided by humans, create the type of immersive and integrated story that exists in the Work. Each picture communicates an essential element of the story, supporting and expanding upon the text written by Kashtanova.

Our position is that every element of the Work reflects Kashtanova's authorship. But if we were to assume for the sake of argument that some individual images didn't meet the legal standard, the Work would still be copyrightable as a compilation under § 101 of the Copyright Act.[5] The Copyright Act defines a compilation as "a work formed by the collection and assembling of preexisting materials *or of data* that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."[6] This definition does not require that the materials used to create a compilation be themselves copyrightable. Even under the most limited interpretation, the Midjourney-associated images used in the Work are "data." Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole.

The Structure and Content of Each Image was Guided by Kashtanova

In addition to the copyrightability of the Work as a whole, each individual picture is itself the result of a creative process that yields a copyrightable work. Kashtanova could extract any single image from the Work and submit it to the Office and correctly assert her authorship of that image.

Unlike the "autonomously generated" picture known as "A Recent Entrance to Paradise,"[7] all the images in the Work were *designed* by Kashtanova. The visual structure of each image, the selection of the poses and points of view, and the juxtaposition of the various visual elements within each picture were consciously chosen. These creative selections are similar to a photographer's selection of a subject, a time of day, and the angle and framing of an image. In this aspect, Kashtanova's process in using the Midjourney tool to create the images in the Work was essentially similar to the artistic process of

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[5] 17 U.S.C. § 101 *et. seq.*
[6] *Id*. at 101, emphasis added.
[7] https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf

photographers - and, as detailed below, was more intensive and creative than the effort that goes into many photographs. Even a photographer's most basic selection process has been found sufficient to make an image copyrightable.[8] The same reasoning and result should apply to the images in Kashtanova's Work.

The Creative Process Resulting in Each Image

Each image in the Work went through a similar creative process. We will describe the process with regard to a few particular images as examples, but each and every image in the Work was created in a similar fashion.

Image: Zarya Holding a Postcard

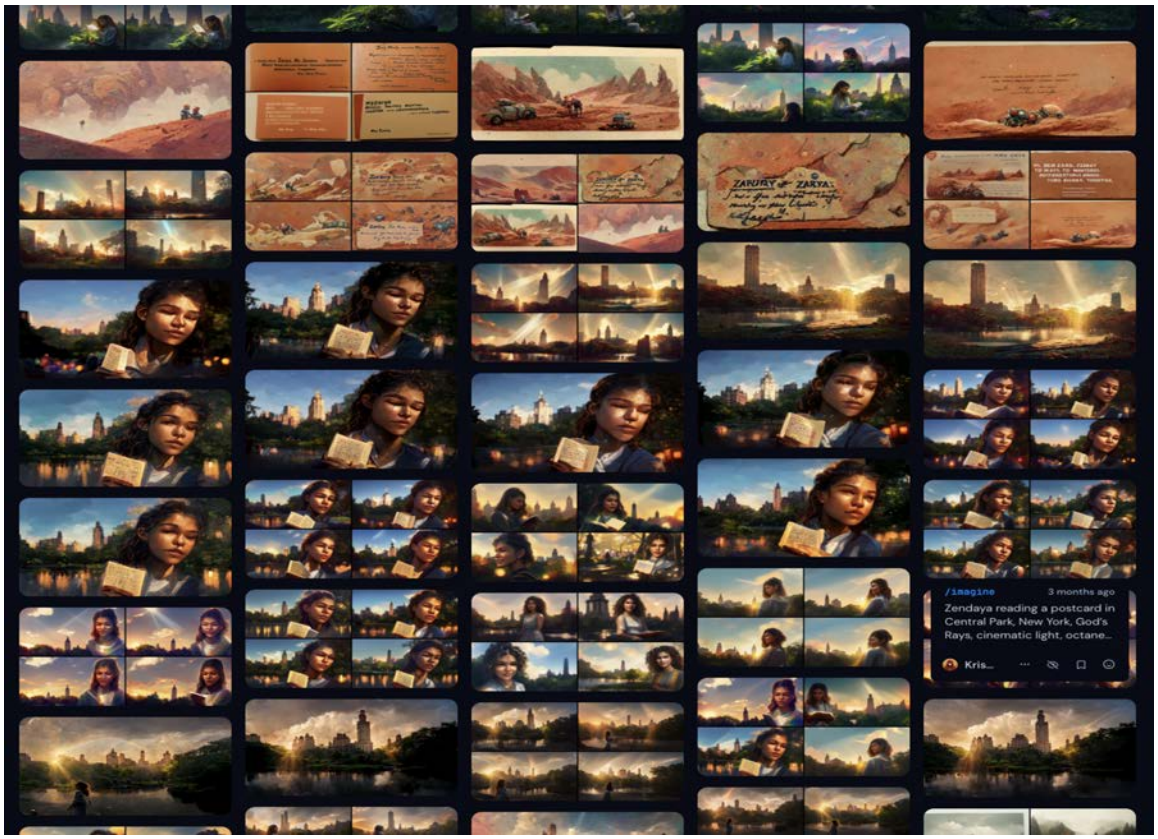
This image, "Zarya Holding a Postcard," is one of the most important images in the Work. It is contained within the first pages of the story and is used to establish Zarya's character and the setting for the story. This was the final image resulting from Kashtanova's creative process before it was cropped and placed in context in the Work.

The first version of "Zarya Holding a Postcard"–shown to the right–was much less refined. So how did Kashtanova develop this initial image into the final version shown above? She went through an extensive iterative process involving hundreds of versions as shown below.

Screenshot #1 of intermediate versions of "Zarya Holding a Postcard":

[8] *see Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 23 S. Ct. 298 (1903).

Screenshot #2 of intermediate versions of “Zarya Holding a Postcard”:



Screenshot #3 of intermediate versions of “Zarya Holding a Postcard”:

Looking at the intermediate versions of “Zarya Holding a Postcard” gives some insight into the thought process involved in creating the final image. Different elements of the final image are created, developed, refined, and relocated. The final image includes multiple elements from different generations of intermediate images all brought together into a cohesive whole. The evolution of the image under the direction of Kashtanova, and her selection, arrangement, compositing, and visual juxtaposition of various image elements all show how her authorial intent guided her use of the Midjourney tool.

Prompt Engineering and Copyrightable Expression

Further insight into Kashtanova’s authorship can be seen through an analysis of Kashtanova’s “prompts.” Midjourney’s image creation service can take various types of inputs:

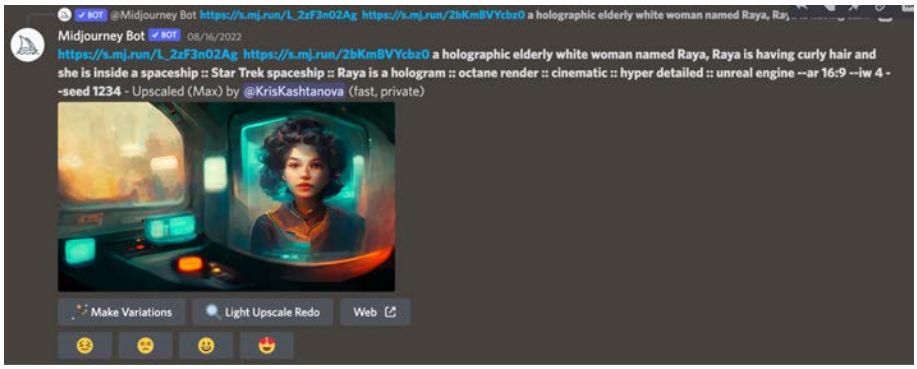
- A “prompt,” a English description of a scene or objects in a scene
- One or more pre-existing images including aspects of the layout, textures, or “feel” desired by the artist
- “Masks” that isolate portions of an input image to allow or disallow generation in defined portions of the input image
- Options that constrain various aspects of the generative process (such as size and aspect ratio)
- Options that modify the generative process, making the final images more refined, or closer/farther from a chosen input

These inputs are the tools by which an author, such as Kashtanova, guides the Midjourney service’s generation of images consistent with the author’s creative vision.[9] For example, the text prompt corresponding to the very first version of “Zarya Holding a Postcard” can be seen in the included image. It reads: “dark skin hands holding an old photograph –ar 16:9”.

[9] This letter does not address the use of the “mask” input type because it was not used by Kashtanova in creation of her Work.

This input, while simple, contains the core creative input that went into *this initial version* of the "Zarya Holding a Postcard" image. Kashtanova specified a subject ("hands"), an object ("a … photograph"), and descriptive context ("dark skin," "holding," and "old.") This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio. Responsive to her inputs, the service generated four output images based upon Kashtanova's inputs. Kashtanova then picked one or more of these output images to further develop. Subsequent iterations tweaked or changed the prompt as well as the other inputs provided to Midjourney.

For another example, this screenshot shows some of the inputs for an intermediate version of the image "Raya as a Hologram."



The inputs for this intermediate image included two images previously developed by Kashtanova, each identified by a URL:

The prompt includes a description of a scene ("a holographic elderly white woman named Raya, raya is having curly hair and she is inside a spaceship") as well as some mood and style-related directions ("Star Trek spaceship," "Raya is a hologram," "octane render," "cinematic," "hyper detailed," "unreal engine"). The inputs also include constraints on the output ("--ar 16:9" and "--iw 4") as well as a technical option modifying the generative path taken by the service ("-seed 1234"). After Kashtanova provided the Midjourney service with her prompt and inputs, including the multiple previously-authored intermediate images of different subjects, the tool rendered another iteration of the "Raya as a Hologram" image.

The Supreme Court has said that only "a modicum of creativity" is necessary to make a work copyrightable.[10] As shown in the screenshot evidence above, each one of the

[10] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 342, 111 S. Ct. 1282, 1286 (1991).

images, including each intermediate image above, is the result of Kashtanova's creative input by means of the prompts and inputs provided to the Midjourney service. Kashtanova visibly guided the creation of each image in accord with her artistic vision.

When further considering the Work at issue here, the creative input associated with each image in the final Work is multiplied. *Each* of the hundreds of intermediate images used to produce a final image required the composition of inputs and prompts, followed by one or more selections to use in the next iteration. The Copyright Act does not dictate that an author's creative input be provided in a particular form or that an artist use a particular tool.[11] So long as the creative output is fixed into a tangible medium of expression, any tool that allows the author's creative expression to "be perceived, reproduced, or otherwise communicated" is eligible for copyright. This includes works created by using the Midjourney service.

The Creative Inputs to the Midjourney Service Show Human Authorship

As described above, each iteration of each image is the result of a unique set of inputs composed by Kashtanova. These inputs include hundreds or thousands of descriptive prompts. For example, one prompt written by Kashtanova reads as follows:

sci-fi scene future empty New York,
Zendaya leaving gates of Central Park
and walking towards an empty city,
no people, tall trees,
New York Skyline forest punk,
crepuscular rays, epic scene,
hyper realistic, photo realistic,
overgrowth,
cinematic atmosphere, ethereal lighting.

Kashtanova paired this poetic scene description with an intermediate image, previously created by Kashtanova, that captured some aspects of her vision for the final work (shown to the right).

This example image is not unusual or unique in having Kashtanova's

[11] "Copyright protection subsists ... in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. 102(a) (1994).

authorial input. The Midjourney service does not generate images randomly. It takes creative, human-authored prompts and inputs and renders them in another form. Each and every image included in the Work was rendered in similar fashion in response to inputs provided by Kashtanova. All the images used in the Work are simply alternative representations of the creative input provided to the Midjourney service by the author.

We believe that had Kashtanova applied to register this set of inputs alone, the Office would have recognized the creative input and human authorship inherent in the composed text and selected image. Likewise with almost all of Kashtanova's prompts. Although many of the prompts are short, some are much longer, up to hundreds of words in length. However, length and complexity are not requirements for copyrightability. Many poems are short–and just like a poem, each Midjourney prompt was crafted by Kashtanova to succinctly paint a word picture of a particular scene. If Kashtanova's scene description and input image selection are themselves creative and copyrightable, then the alternative rendering of those inputs generated by the Midjourney service should be equally copyrightable.

Further, each final image in the Work was not the result of a single creative input. Kashtanova painstakingly shaped each set of inputs and prompts over hundreds of iterations to create as perfect a rendition of her vision as possible.

The Cropping, Juxtaposition, and Framing of the Images Shows Human Authorship

After writing all the text for the story and generating hundreds of potential images, Kashtanova's work on each image was not done. She selected which images to use and sequenced and arranged them into a unique and personal Work, like a collage. Further, every image in the final Work was cropped, framed, and placed to better convey the story and feel Kashtanova had in mind.

Even in the final arrangement and cropping of the images, Kashtanova's authorship shines through. Using again the example of the image "Zarya Holding a Postcard," Kashtanova made the decision to closely crop the image, obscuring part of Zarya's face and almost entirely removing the city background she had painstakingly developed. Her crop changed the horizontally-oriented source image into a vertically-oriented image, which she placed at the lower right hand corner of the page. She did this to create a sense of expectation, movement, and intrigue.

This imposition of meaning and expectation on the image demonstrates Kashtanova's "creative spark,"[12]

[12] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345, 111 S. Ct. 1282, 1287 (1991).

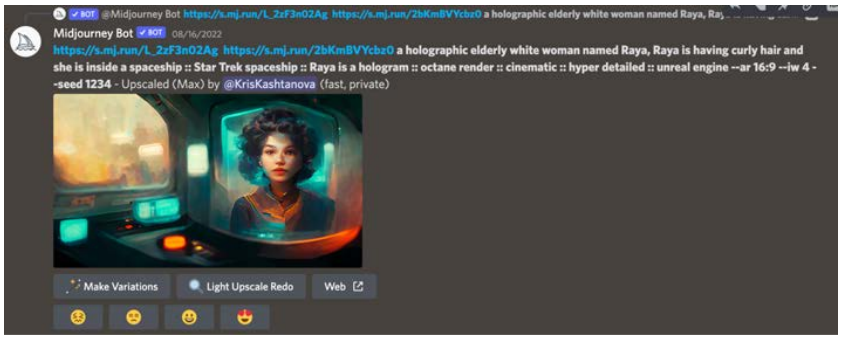
the minimal amount of originality needed to make this image her own. Kashtanova used tools to perform this cropping, juxtaposition, and arrangement–in this case a tool called "Comic Life 3"–but no tool could independently imbue it with emotional meaning as Kashtanova did.

Use of Computer Tools is Already Allowed by the Copyright Office

The use of computer-based tools is already allowed by the Office. The refinement process illustrated above is similar to the processes used in other images registered by the Office every day. Artists use programs such as Adobe Photoshop as part of an iterative process to refine images to match their expressive intent. These final works are recognized by courts and by the Office as having human authorship in spite of the use of Photoshop as a tool for generating and refining the image.[13] Kashtanova's use of the Midjourney service is no different.

In fact, at times the Midjourney service was not enough and Kashtanova used Photoshop to perform the type of creative refinement typical of the process for similar works.

For example, page 12 of the Work includes an image based on Kashtanova's grandmother. This image was developed using both the Midjourney service and Photoshop together.



As with other images from the Work, Kashtanova used the Midjourney service to iteratively create and refine the image. She then used Photoshop to alter the image into its final form (as shown to the right). This final form shows aging of the face, smoothing of gradients and modification of lines and shapes, and cropping for effect. Once Kashtanova had all of the images necessary for a page, she used the previously-mentioned "Comic Life 3" to crop and place the images into her desired arrangement.

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[13] In contrast, some courts have found that *using* a tool like Photoshop to make any adjustment to an input is sufficient to meet the legal standards for copyrightability. *See, e.g., Etrailer Corp. v. Onyx Enters., Int'l Corp.,* No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916 (E.D. Mo. Feb. 7, 2018), *Payton v. Defend, Inc.,* No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358 (D. Haw. Dec. 19, 2017).

Similarly, Kashtanova used Photoshop to refine the image “Zarya Holding a Postcard” discussed earlier, by modifying the rendering of Zarya’s lips and mouth:

Detail before Photoshop *Detail after Photoshop*


Kashtanova used the Midjourney service, Photoshop, and Comic Life 3 to create this image and place it in the Work–but she could have created the exact same image using similar tools already included in Photoshop. There is a plugin called “Stability” that embeds AI-powered image generation functionality directly into Photoshop.[14] Similar AI-powered content generation tools (such as Adobe’s “Context-Aware Fill”[15]) have been available in Photoshop for years. The cropping and placement functions could have been performed entirely in Photoshop, but Kashtanova–like many other artists today–was experimenting with the new generative tools to explore their capabilities. Kashtanova’s choice to use one tool over another should have no bearing on the copyrightability of her creative output. If this image would have been copyrightable had she used only Photoshop, it should be equally copyrightable using tools such as the Midjourney service and Comic Life 3.

Kashtanova’s Registration Should Be Affirmed

The question raised in the correspondence of October 28th was whether the Work provided to the Office for registration was the result of human authorship or was the result of a purely mechanical or autonomous computer process.

Our response is that the Work, “Zarya of the Dawn,” is wholly the result of Kashtanova’s authorship and input. Each and every part of the Work was guided by her creative input and reflects her authorship. In the language of *Burrow-Giles,* Kashtanova was the

[14] https://exchange.adobe.com/apps/cc/114117da/stable-diffusion
[15] https://helpx.adobe.com/photoshop/how-to/fills-masks-sensei.html

mastermind, "the one who really represents, creates, or gives effect to the idea, fancy, or imagination."[16]

While Kashtanova used the Midjourney service to assist her in creating some of the images in the Work, the use of that tool does not diminish the the human mind that conceived, created, selected, refined, cropped, positioned, framed, and arranged all the different elements of the Work into a story that reflects Kashtanova's personal experience and artistic vision. As such, the Work is the result of human authorship and Kashtanova's registration should be affirmed.

As shown by the recent attempt to register the purely AI-generated work "A Recent Entrance to Paradise," it is possible for AI-powered systems to autonomously create aesthetically pleasing pictures. This response cannot comment on how the work "A Recent Entrance to Paradise" was autonomously generated. But having a computer program spontaneously generate an aesthetically pleasing picture is similar to finding an aesthetically pleasing piece of driftwood or a beautiful geode. Given the current status of the law regarding human authorship, the decision to refuse registration of "A Recent Entrance to Paradise" was correct. That said, the law and policy of the Office should not focus on the specific tools authors use, but how those tools can be used to create works that meet the legal standards for copyrightability.

In contrast to the system that created "A Recent Entrance to Paradise," every use of the Midjourney service requires human input, guidance, and selection. Accordingly, the use of the Midjourney service is completely consistent with Copyright Office rules, the text of the Copyright Act, and article 1, clause 8 of the constitution.

Accordingly, we ask that the Office's prior decision to register Kashtanova's Work "Zarya of the Dawn" be affirmed.

Sincerely,

Van Lindberg
Taylor English Duma, LLP

[16] *Burrow-Giles*, 111 U.S. at 61, 4 S. Ct. at 283.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

STEPHEN THALER, Plaintiff, v. SHIRA PERLMUTTER, *Register of Copyrights and Director of the United States Copyright Office, et al.* Defendants.	Civil Action No. 22-1564 (BAH) Judge Beryl A. Howell

MEMORANDUM OPINION

Plaintiff Stephen Thaler owns a computer system he calls the "Creativity Machine," which he claims generated a piece of visual art of its own accord. He sought to register the work for a copyright, listing the computer system as the author and explaining that the copyright should transfer to him as the owner of the machine. The Copyright Office denied the application on the grounds that the work lacked human authorship, a prerequisite for a valid copyright to issue, in the view of the Register of Copyrights. Plaintiff challenged that denial, culminating in this lawsuit against the United States Copyright Office and Shira Perlmutter, in her official capacity as the Register of Copyrights and the Director of the United States Copyright Office ("defendants"). Both parties have now moved for summary judgment, which motions present the sole issue of whether a work generated entirely by an artificial system absent human involvement should be eligible for copyright. *See* Pl.'s Mot. Summ. J. (Pl.'s Mot."), ECF No. 16; Defs.' Cross-Mot. Summ. J. ("Defs.' Mot."), ECF No. 17. For the reasons explained below, defendants are correct that human authorship is an essential part of a valid copyright claim, and

therefore plaintiff's pending motion for summary judgment is denied and defendants' pending cross-motion for summary judgment is granted.

I. BACKGROUND

Plaintiff develops and owns computer programs he describes as having "artificial intelligence" ("AI") capable of generating original pieces of visual art, akin to the output of a human artist. *See* Pl.'s Mem. Supp. Mot. Summ. J. ("Pl.'s Mem.") at 13, ECF No. 16. One such AI system—the so-called "Creativity Machine"—produced the work at issue here, titled "A Recent Entrance to Paradise:"

Admin. Record ("AR"), Ex. H, Copyright Review Board Refusal Letter Dated February 14, 2022 "(Final Refusal Letter") at 1, ECF No. 13-8.

After its creation, plaintiff attempted to register this work with the Copyright Office. In his application, he identified the author as the Creativity Machine, and explained the work had been "autonomously created by a computer algorithm running on a machine," but that plaintiff sought to claim the copyright of the "computer-generated work" himself "as a work-for-hire to the owner of the Creativity Machine." *Id.*, Ex. B, Copyright Application ("Application") at 1, ECF No. 13-2; *see also id.* at 2 (listing "Author" as "Creativity Machine," the work as "[c]reated autonomously by machine," and the "Copyright Claimant" as "Steven [*sic*] Thaler" with the transfer statement, "Ownership of the machine"). The Copyright Office denied the application on the basis that the work "lack[ed] the human authorship necessary to support a copyright claim," noting that copyright law only extends to works created by human beings. *Id.*, Ex. D, Copyright Office Refusal Letter Dated August 12, 2019 ("First Refusal Letter") at 1, ECF No. 13-4.

Plaintiff requested reconsideration of his application, confirming that the work "was autonomously generated by an AI" and "lack[ed] traditional human authorship," but contesting the Copyright Office's human authorship requirement and urging that AI should be "acknowledge[d] . . . as an author where it otherwise meets authorship criteria, with any copyright ownership vesting in the AI's owner." *Id.*, Ex. E, First Request for Reconsideration at 2, ECF No. 13-5. Again, the Copyright Office refused to register the work, reiterating its original rationale that "[b]ecause copyright law is limited to 'original intellectual conceptions of the author,' the Office will refuse to register a claim if it determines that a human being did not create the work." *Id.*, Ex. F, Copyright Office Refusal Letter Dated March 30, 2020 ("Second Refusal Letter") at 1, ECF No. 13-6 (quoting *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) and citing 17 U.S.C. § 102(a); *U.S. Copyright Office, Compendium of U.S.*

Copyright Office Practices § 306 (3d ed. 2017)). Plaintiff made a second request for reconsideration along the same lines as his first, *see id.*, Ex. G, Second Request for Reconsideration at 2, ECF No. 13-7, and the Copyright Office Review Board affirmed the denial of registration, agreeing that copyright protection does not extend to the creations of non-human entities, Final Refusal Letter at 4, 7.

Plaintiff timely challenged that decision in this Court, claiming that defendants' denial of copyright registration to the work titled "A Recent Entrance to Paradise," was "arbitrary, capricious, an abuse of discretion and not in accordance with the law, unsupported by substantial evidence, and in excess of Defendants' statutory authority," in violation of the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(2). *See* Compl. ¶¶ 62–66, ECF No. 1. The parties agree upon the key facts narrated above to focus, in the pending cross-motions for summary judgment, on the sole legal issue of whether a work autonomously generated by an AI system is copyrightable. *See* Pl.'s Mem. at 13; Defs.' Mem. Supp. Cross-Mot. Summ. J. & Opp'n Pl.'s Mot. Summ. J. ("Defs.' Opp'n") at 7, ECF No. 17. Those motions are now ripe for resolution. *See* Defs.' Reply Supp. Cross-Mot. Summ. J. ("Defs.' Reply"), ECF No. 21.

II. LEGAL STANDARD

A. Administrative Procedure Act

The APA provides for judicial review of any "final agency action for which there is no other adequate remedy in a court," 5 U.S.C. § 704, and "instructs a reviewing court to set aside agency action found to be 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,'" *Cigar Ass'n of Am. v. FDA*, 964 F.3d 56, 61 (D.C. Cir. 2020) (quoting 5 U.S.C. § 706(2)(A)). This standard "'requires agencies to engage in reasoned decisionmaking,' and . . . to reasonably explain to reviewing courts the bases for the actions they take and the conclusions they reach." *Brotherhood of Locomotive Eng'rs & Trainmen v. Fed. R.R. Admin.*,

972 F.3d 83, 115 (D.C. Cir. 2020) (quoting *Dep't of Homeland Sec. v. Regents of Univ. of Cal.* ("*Regents*"), 140 S. Ct. 1891, 1905 (2020)). Judicial review of agency action is limited to "the grounds that the agency invoked when it took the action," *Regents*, 140 S. Ct. at 1907 (quoting *Michigan v. EPA*, 576 U.S. 743, 758 (2015)), and the agency, too, "must defend its actions based on the reasons it gave when it acted," *id.* at 1909.

B. Summary Judgment

Pursuant to Federal Rule of Civil Procedure 56, "[a] party is entitled to summary judgment only if there is no genuine issue of material fact and judgment in the movant's favor is proper as a matter of law." *Soundboard Ass'n v. FTC*, 888 F.3d 1261, 1267 (D.C. Cir. 2018) (quoting *Ctr. for Auto Safety v. Nat'l Highway Traffic Safety Admin.*, 452 F.3d 798, 805 (D.C. Cir. 2006)); *see also* Fed. R. Civ. P. 56(a). In APA cases such as this one, involving cross-motions for summary judgment, "the district judge sits as an appellate tribunal. The 'entire case' on review is a question of law." *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083–84 (D.C. Cir. 2001) (footnote omitted) (collecting cases). Thus, a court need not and ought not engage in fact finding, since "[g]enerally speaking, district courts reviewing agency action under the APA's arbitrary and capricious standard do not resolve factual issues, but operate instead as appellate courts resolving legal questions." *James Madison Ltd. by Hecht v. Ludwig*, 82 F.3d 1085, 1096 (D.C. Cir. 1996); *see also Lacson v. U.S. Dep't of Homeland Sec.*, 726 F.3d 170, 171 (D.C. Cir. 2013) (noting, in an APA case, that "determining the facts is generally the agency's responsibility, not [the court's]"). Judicial review, when available, is typically limited to the administrative record, since "[i]t is black-letter administrative law that in an [APA] case, a reviewing court should have before it neither more nor less information than did the agency when it made its decision." *CTS Corp. v. EPA*, 759 F.3d 52, 64 (D.C. Cir. 2014) (internal quotation marks and citation omitted).

III. DISCUSSION

Under the Copyright Act of 1976, copyright protection attaches "immediately" upon the creation of "original works of authorship fixed in any tangible medium of expression," provided those works meet certain requirements. *Fourth Estate v. Public Benefit Corporation v. Wall-Street.com, LLC*, 139 S. Ct. 881, 887 (2019); 17 U.S.C. § 102(a). A copyright claimant can also register the work with the Register of Copyrights. Upon concluding that the work is indeed copyrightable, the Register will issue a certificate of registration, which, among other advantages, allows the claimant to pursue infringement claims in court. 17 U.S.C. §§ 410(a), 411(a); *Unicolors v. H&M Hennes & Mauritz, L.P.*, 142 S. Ct. 941, 944–45 (2022). A valid copyright exists upon a qualifying work's creation and "apart" from registration, however; a certificate of registration merely confirms that the copyright has existed all along. *See Fourth Estate*, 139 S. Ct. at 887. Conversely, if the Register denies an application for registration for lack of copyrightable subject matter—and did not err in doing so—then the work at issue was never subject to copyright protection at all.

In considering plaintiff's copyright registration application as to "A Recent Entrance to Paradise," the Register concluded that "this particular work will not support a claim to copyright" because the work lacked human authorship and thus no copyright existed in the first instance. First Refusal Letter at 1; *see also* Final Refusal Letter at 3 (providing the same rationale in the final reconsideration decision). By design in plaintiff's framing of the registration application, then, the single legal question presented here is whether a work generated autonomously by a computer falls under the protection of copyright law upon its creation.

Plaintiff attempts to complicate the issues presented by devoting a substantial portion of his briefing to the viability of various legal theories under which a copyright in the computer's work would transfer to him, as the computer's owner; for example, by operation of common law property principles or the work-for-hire doctrine. *See* Pl.'s Mem. at 31–37; Pl.'s Reply Supp. Mot. Summ. J. & Opp'n Def.'s Cross-Mot. Summ. J. ("Pl.'s Opp'n") at 11–15, ECF No. 18. These arguments concern *to whom* a valid copyright should have been registered, and in so doing put the cart before the horse.[1] By denying registration, the Register concluded that no valid copyright had ever existed in a work generated absent human involvement, leaving nothing at all to register and thus no question as to whom that registration belonged.

The only question properly presented, then, is whether the Register acted arbitrarily or capriciously or otherwise in violation of the APA in reaching that conclusion. The Register did not err in denying the copyright registration application presented by plaintiff. United States copyright law protects only works of human creation.

Plaintiff correctly observes that throughout its long history, copyright law has proven malleable enough to cover works created with or involving technologies developed long after traditional media of writings memorialized on paper. *See, e.g.*, *Goldstein v. California*, 412 U.S. 546, 561 (1973) (explaining that the constitutional scope of Congress's power to "protect the 'Writings' of 'Authors'" is "broad," such that "writings" is not "limited to script or printed material," but rather encompasses "any physical rendering of the fruits of creative intellectual or aesthetic labor"); *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) (upholding

[1] In pursuing these arguments, plaintiff elaborates on his development, use, ownership, and prompting of the AI generating software in the so-called "Creativity Machine," implying a level of human involvement in this case entirely absent in the administrative record. As detailed, *supra*, in Part I, plaintiff consistently represented to the Register that the AI system generated the work "autonomously" and that he played no role in its creation, *see* Application at 2, and judicial review of the Register's final decision must be based on those same facts.

the constitutionality of an amendment to the Copyright Act to cover photographs). In fact, that malleability is explicitly baked into the modern incarnation of the Copyright Act, which provides that copyright attaches to "original works of authorship fixed in any tangible medium of expression, *now known or later developed*." 17 U.S.C. § 102(a) (emphasis added). Copyright is designed to adapt with the times. Underlying that adaptability, however, has been a consistent understanding that human creativity is the *sine qua non* at the core of copyrightability, even as that human creativity is channeled through new tools or into new media. In *Sarony*, for example, the Supreme Court reasoned that photographs amounted to copyrightable creations of "authors," despite issuing from a mechanical device that merely reproduced an image of what is in front of the device, because the photographic result nonetheless "represent[ed]" the "original intellectual conceptions of the author." *Sarony*, 111 U.S. at 59. A camera may generate only a "mechanical reproduction" of a scene, but does so only after the photographer develops a "mental conception" of the photograph, which is given its final form by that photographer's decisions like "posing the [subject] in front of the camera, selecting and arranging the costume, draperies, and other various accessories in said photograph, arranging the subject so as to present graceful outlines, arranging and disposing the light and shade, suggesting and evoking the desired expression, and from such disposition, arrangement, or representation" crafting the overall image. *Id.* at 59–60. Human involvement in, and ultimate creative control over, the work at issue was key to the conclusion that the new type of work fell within the bounds of copyright.

Copyright has never stretched so far, however, as to protect works generated by new forms of technology operating absent any guiding human hand, as plaintiff urges here. Human authorship is a bedrock requirement of copyright.

That principle follows from the plain text of the Copyright Act. The current incarnation of the copyright law, the Copyright Act of 1976, provides copyright protection to "original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 102(a). The "fixing" of the work in the tangible medium must be done "by or under the authority of the author." *Id.* § 101. In order to be eligible for copyright, then, a work must have an "author."

To be sure, as plaintiff points out, the critical word "author" is not defined in the Copyright Act. *See* Pl.'s Mem. at 24. "Author," in its relevant sense, means "one that is the source of some form of intellectual or creative work," "[t]he creator of an artistic work; a painter, photographer, filmmaker, etc." *Author*, MERRIAM-WEBSTER UNABRIDGED DICTIONARY, https://unabridged.merriam-webster.com/unabridged/author (last visited Aug. 18, 2023); *Author*, OXFORD ENGLISH DICTIONARY, https://www.oed.com/dictionary/author_n (last visited Aug. 10, 2023). By its plain text, the 1976 Act thus requires a copyrightable work to have an originator with the capacity for intellectual, creative, or artistic labor. Must that originator be a human being to claim copyright protection? The answer is yes.[2]

The 1976 Act's "authorship" requirement as presumptively being *human* rests on centuries of settled understanding. The Constitution enables the enactment of copyright and patent law by granting Congress the authority to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective

[2] The issue of whether non-human sentient beings may be covered by "person" in the Copyright Act is only "fun conjecture for academics," Justin Hughes, *Restating Copyright Law's Originality Requirement*, 44 COLUMBIA J. L. & ARTS 383, 408–09 (2021), though useful in illuminating the purposes and limits of copyright protection as AI is increasingly employed. Nonetheless, delving into this debate is an unnecessary detour since "[t]he day sentient refugees from some intergalactic war arrive on Earth and are granted asylum in Iceland, copyright law will be the least of our problems." *Id*. at 408.

writings and discoveries." U.S. Const. art. 1, cl. 8. As James Madison explained, "[t]he utility of this power will scarcely be questioned," for "[t]he public good fully coincides in both cases [of copyright and patent] with the claims of individuals." THE FEDERALIST NO. 43 (James Madison). At the founding, both copyright and patent were conceived of as forms of property that the government was established to protect, and it was understood that recognizing exclusive rights in that property would further the public good by incentivizing individuals to create and invent. The act of human creation—and how to best encourage human individuals to engage in that creation, and thereby promote science and the useful arts—was thus central to American copyright from its very inception. Non-human actors need no incentivization with the promise of exclusive rights under United States law, and copyright was therefore not designed to reach them.

The understanding that "authorship" is synonymous with human creation has persisted even as the copyright law has otherwise evolved. The immediate precursor to the modern copyright law—the Copyright Act of 1909—explicitly provided that only a "person" could "secure copyright for his work" under the Act. Act of Mar. 4, 1909, ch. 320, §§ 9, 10, 35 Stat. 1075, 1077. Copyright under the 1909 Act was thus unambiguously limited to the works of human creators. There is absolutely no indication that Congress intended to effect any change to this longstanding requirement with the modern incarnation of the copyright law. To the contrary, the relevant congressional report indicates that in enacting the 1976 Act, Congress intended to incorporate the "original work of authorship" standard "without change" from the previous 1909 Act. *See* H.R. REP. NO. 94-1476, at 51 (1976).

The human authorship requirement has also been consistently recognized by the Supreme Court when called upon to interpret the copyright law. As already noted, in *Sarony*, the Court's

recognition of the copyrightability of a photograph rested on the fact that the human creator, not the camera, conceived of and designed the image and then used the camera to capture the image. *See Sarony*, 111 U.S. at 60. The photograph was "the product of [the photographer's] intellectual invention," and given "the nature of authorship," was deemed "an original work of art . . . of which [the photographer] is the author." *Id.* at 60–61. Similarly, in *Mazer v. Stein*, the Court delineated a prerequisite for copyrightability to be that a work "must be original, that is, the author's tangible expression of his ideas." 347 U.S. 201, 214 (1954). *Goldstein v. California*, too, defines "author" as "an 'originator,' 'he to whom anything owes its origin,'" 412 U.S. at 561 (quoting *Sarony*, 111 U.S. at 58). In all these cases, authorship centers on acts of human creativity.

Accordingly, courts have uniformly declined to recognize copyright in works created absent any human involvement, even when, for example, the claimed author was divine. The Ninth Circuit, when confronted with a book "claimed to embody the words of celestial beings rather than human beings," concluded that "some element of human creativity must have occurred in order for the Book to be copyrightable," for "it is not creations of divine beings that the copyright laws were intended to protect." *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 958–59 (9th Cir. 1997) (finding that because the "members of the Contact Commission chose and formulated the specific questions asked" of the celestial beings, and then "select[ed] and arrange[d]" the resultant "revelations," the Urantia Book was "at least partially the product of human creativity" and thus protected by copyright); *see also Penguin Books U.S.A., Inc. v. New Christian Church of Full Endeavor*, 96-cv-4126 (RWS), 2000 WL 1028634, at *2, 10–11 (S.D.N.Y. July 25, 2000) (finding a valid copyright where a woman had "filled nearly thirty stenographic notebooks with words she believed were dictated to her" by a "'Voice' which

would speak to her whenever she was prepared to listen," and who had worked with two human co-collaborators to revise and edit those notes into a book, a process which involved enough creativity to support human authorship); *Oliver v. St. Germain Found.*, 41 F. Supp. 296, 297, 299 (S.D. Cal. 1941) (finding no copyright infringement where plaintiff claimed to have transcribed "letters" dictated to him by a spirit named Phylos the Thibetan, and defendant copied the same "spiritual world messages for recordation and use by the living" but was not charged with infringing plaintiff's "style or arrangement" of those messages). Similarly, in *Kelley v. Chicago Park District*, the Seventh Circuit refused to "recognize[] copyright" in a cultivated garden, as doing so would "press[] too hard on the[] basic principle[]" that "[a]uthors of copyrightable works must be human." 635 F.3d 290, 304–06 (7th Cir. 2011). The garden "ow[ed] [its] form to the forces of nature," even if a human had originated the plan for the "initial arrangement of the plants," and as such lay outside the bounds of copyright. *Id.* at 304. Finally, in *Naruto v. Slater*, the Ninth Circuit held that a crested macaque could not sue under the Copyright Act for the alleged infringement of photographs this monkey had taken of himself, for "all animals, since they are not human" lacked statutory standing under the Act. 888 F.3d 418, 420 (9th Cir. 2018). While resolving the case on standing grounds, rather than the copyrightability of the monkey's work, the *Naruto* Court nonetheless had to consider whom the Copyright Act was designed to protect and, as with those courts confronted with the nature of authorship, concluded that only humans had standing, explaining that the terms used to describe who has rights under the Act, like "'children,' 'grandchildren,' 'legitimate,' 'widow,' and 'widower[,]' all imply humanity and necessarily exclude animals." *Id.* at 426. Plaintiff can point to no case in which a court has recognized copyright in a work originating with a non-human.

Undoubtedly, we are approaching new frontiers in copyright as artists put AI in their toolbox to be used in the generation of new visual and other artistic works. The increased attenuation of human creativity from the actual generation of the final work will prompt challenging questions regarding how much human input is necessary to qualify the user of an AI system as an "author" of a generated work, the scope of the protection obtained over the resultant image, how to assess the originality of AI-generated works where the systems may have been trained on unknown pre-existing works, how copyright might best be used to incentivize creative works involving AI, and more. *See, e.g.*, Letter from Senators Thom Tillis and Chris Coons to Kathi Vidal, Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office, and Shira Perlmutter, Register of Copyrights and Director of the U.S. Copyright Office (Oct. 27, 2022), https://www.copyright.gov/laws/hearings/Letter-to-USPTO-USCO-on-National-Commission-on-AI-1.pdf (requesting that the United States Patent and Trademark Office and the United States Copyright Office "jointly establish a national commission on AI" to assess, among other topics, how intellectual property law may best "incentivize future AI related innovations and creations").

This case, however, is not nearly so complex. While plaintiff attempts to transform the issue presented here, by asserting new facts that he "provided instructions and directed his AI to create the Work," that "the AI is entirely controlled by [him]," and that "the AI only operates at [his] direction," Pl.'s Mem. at 36–37—implying that he played a controlling role in generating the work—these statements directly contradict the administrative record. Judicial review of a final agency action under the APA is limited to the administrative record, because "[i]t is black-letter administrative law that in an [APA] case, a reviewing court should have before it neither more nor less information than did the agency when it made its decision." *CTS Corp.*, 759 F.3d

at 64 (internal quotation marks and citation omitted). Here, plaintiff informed the Register that the work was "[c]reated autonomously by machine," and that his claim to the copyright was only based on the fact of his "[o]wnership of the machine." Application at 2. The Register therefore made her decision based on the fact the application presented that plaintiff played no role in using the AI to generate the work, which plaintiff never attempted to correct. *See* First Request for Reconsideration at 2 ("It is correct that the present submission lacks traditional human authorship—it was autonomously generated by an AI."); Second Request for Reconsideration at 2 (same). Plaintiff's effort to update and modify the facts for judicial review on an APA claim is too late. On the record designed by plaintiff from the outset of his application for copyright registration, this case presents only the question of whether a work generated autonomously by a computer system is eligible for copyright. In the absence of any human involvement in the creation of the work, the clear and straightforward answer is the one given by the Register: No.

Given that the work at issue did not give rise to a valid copyright upon its creation, plaintiff's myriad theories for how ownership of such a copyright could have passed to him need not be further addressed. Common law doctrines of property transfer cannot be implicated where no property right exists to transfer in the first instance. The work-for-hire provisions of the Copyright Act, too, presuppose that an interest exists to be claimed. *See* 17 U.S.C § 201(b) ("In the case of a work made for hire, the employer . . . owns all of the rights comprised in the copyright.").[3] Here, the image autonomously generated by plaintiff's computer system was

[3] In any event, plaintiff's attempts to cast the work as a work-for-hire must fail as both definitions of a "work made for hire" available under the Copyright Act require that the individual who prepares the work is a human being. The first definition provides that "a 'work made for hire' is . . . a work prepared by an *employee* within the scope of *his or her* employment," while the second qualifies certain eligible works "*if the parties expressly agree in a written instrument signed by them* that the work shall be considered a work made for hire." 17 U.S.C. § 101 (emphasis added). The use of personal pronouns in the first definition clearly contemplates only human beings as eligible "employees," while the second necessitates a meeting of the minds and exchange of signatures in a valid contract not possible with a non-human entity.

never eligible for copyright, so none of the doctrines invoked by plaintiff conjure up a copyright over which ownership may be claimed.

IV. CONCLUSION

For the foregoing reasons, defendants are correct that the Copyright Office acted properly in denying copyright registration for a work created absent any human involvement. Plaintiff's motion for summary judgment is therefore denied and defendants' cross-motion for summary judgment is granted.

An Order consistent with this Memorandum Opinion will be entered contemporaneously.

Date: August 18, 2023

_____

BERYL A. HOWELL
United States District Judge

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

PAUL TREMBLAY, an individual and MONA AWAD, an individual,

Individual and Representative Plaintiffs,

v.

OPENAI, INC., a Delaware nonprofit corporation; OPENAI, L.P., a Delaware limited partnership; OPENAI OPCO, L.L.C., a Delaware limited liability corporation; OPENAI GP, L.L.C., a Delaware limited liability company; OPENAI STARTUP FUND GP I, L.L.C., a Delaware limited liability company; OPENAI STARTUP FUND I, L.P., a Delaware limited partnership; and OPENAI STARTUP FUND MANAGEMENT, LLC, a Delaware limited liability company,

Defendants.

Case No.

COMPLAINT

CLASS ACTION

DEMAND FOR JURY TRIAL

Plaintiffs Paul Tremblay and Mona Awad ("Plaintiffs"), on behalf of themselves and all others similarly situated, bring this Class Action Complaint (the "Complaint") against Defendants OpenAI, Inc., OpenAI, L.P., OpenAI OpCo, L.L.C., OpenAI GP, L.L.C., OpenAI Startup Fund I, L.P., OpenAI Startup Fund GP I, L.L.C. and OpenAI Startup Fund Management, LLC for direct copyright infringement, vicarious copyright infringement, violations of section 1202(b) of the Digital Millenium Copyright Act, unjust enrichment, violations of the California and common law unfair competition laws, and negligence. Plaintiffs seek to recover injunctive relief and damages as a result and consequence of Defendants' unlawful conduct.

I. OVERVIEW

1. ChatGPT is a software product created, maintained, and sold by OpenAI.

2. ChatGPT is powered by two AI software programs called GPT-3.5 and GPT-4, also known as *large language models*. Rather than being programmed in the traditional way, a large language model is "trained" by copying massive amounts of text and extracting expressive information from it. This body of text is called the *training dataset*. Once a large language model has copied and ingested the text in its training dataset, it is able to emit convincingly naturalistic text outputs in response to user prompts.

3. A large language model's output is therefore entirely and uniquely reliant on the material in its training dataset. Every time it assembles a text output, the model relies on the information it extracted from its training dataset.

4. Plaintiffs and Class members are authors of books. Plaintiffs and Class members have registered copyrights in the books they published. Plaintiffs and Class members did not consent to the use of their copyrighted books as training material for ChatGPT. Nonetheless, their copyrighted materials were ingested and used to train ChatGPT.

5. Indeed, when ChatGPT is prompted, ChatGPT generates summaries of Plaintiffs' copyrighted works—something only possible if ChatGPT was trained on Plaintiffs' copyrighted works.

6. Defendants, by and through the use of ChatGPT, benefit commercial and profit richly from the use of Plaintiffs' and Class members' copyrighted materials.

II. JURISDICTION AND VENUE

7. This Court has subject matter jurisdiction under 28 U.S.C. § 1331 because this case arises under the Copyright Act (17 U.S.C. § 501) and the Digital Millenium Copyright Act (17 U.S.C. § 1202).

8. Jurisdiction and venue is proper in this judicial district under 28 U.S.C. § 1391(c)(2) because defendant OpenAI, Inc. is headquartered in this district, and thus a substantial part of the events giving rise to the claim occurred in this district; and because a substantial part of the events giving rise to Plaintiffs' claims occurred in this District, and a substantial portion of the affected interstate trade and commerce was carried out in this District. Each Defendant has transacted business, maintained substantial contacts, and/or committed overt acts in furtherance of the illegal scheme and conspiracy throughout the United States, including in this District. Defendants' conduct has had the intended and foreseeable effect of causing injury to persons residing in, located in, or doing business throughout the United States, including in this District.

9. Under Civil Local Rule 3.2(c) and (e), assignment of this case to the San Francisco Division is proper because defendant OpenAI, Inc. is headquartered in San Francisco, a substantial amount part of the events giving rise to Plaintiffs' claims and the interstate trade and commerce involved and affected by Defendants' conduct giving rise to the claims herein occurred in this Division.

III. PARTIES

A. Plaintiffs

10. Plaintiff Paul Tremblay is a writer who lives in Massachusetts. Plaintiff Tremblay owns registered copyrights in several books, including *The Cabin at the End of the World*. This book contains the copyright-management information customarily included in published books, including the name of the author and the year of publication.

11. Plaintiff Mona Awad is a writer who lives in Massachusetts. Plaintiff Awad owns registered copyrights in several books, including *13 Ways of Looking at a Fat Girl* and *Bunny*. These books contain the copyright-management information customarily included in published books, including the name of the author and the year of publication.

12. A nonexhaustive list of registered copyrights owned by Plaintiffs is included as **Exhibit A**.

B. Defendants

13. Defendant OpenAI, Inc. is a Delaware nonprofit corporation with its principal place of business located at 3180 18th St, San Francisco, CA 94110.

14. Defendant OpenAI, L.P. is a Delaware limited partnership with its principal place of business located at 3180 18th St, San Francisco, CA 94110. OpenAI, L.P. is a wholly owned subsidiary of OpenAI Inc. that is operated for profit. OpenAI, Inc. controls OpenAI, L.P. directly and through the other OpenAI entities.

15. Defendant OpenAI OpCo, L.L.C. is a Delaware limited liability company with its principal place of business located at 3180 18th Street, San Francisco, CA 94110. OpenAI OpCo, L.L.C. is a wholly owned subsidiary of OpenAI, Inc. that is operated for profit. OpenAI, Inc. controls OpenAI OpCo, L.L.C. directly and through the other OpenAI entities.

16. Defendant OpenAI GP, L.L.C. ("OpenAI GP") is a Delaware limited liability company with its principal place of business located at 3180 18th Street, San Francisco, CA 94110. OpenAI GP is the general partner of OpenAI, L.P. OpenAI GP manages and operates the day-to-day business and affairs of OpenAI, L.P. OpenAI GP was aware of the unlawful conduct alleged herein and exercised control over OpenAI, L.P. throughout the Class Period. OpenAI, Inc. directly controls OpenAI GP.

17. Defendant OpenAI Startup Fund I, L.P. ("OpenAI Startup Fund I") is a Delaware limited partnership with its principal place of business located at 3180 18th Street, San Francisco, CA 94110. OpenAI Startup Fund I was instrumental in the foundation of OpenAI, L.P., including the creation of its business strategy and providing initial funding. OpenAI Startup Fund I was aware of the unlawful conduct alleged herein and exercised control over OpenAI, L.P. throughout the Class Period.

18. Defendant OpenAI Startup Fund GP I, L.L.C. ("OpenAI Startup Fund GP I") is a Delaware limited liability company with its principal place of business located at 3180 18th Street, San Francisco, CA 94110. OpenAI Startup Fund GP I is the general partner of OpenAI Startup Fund I. OpenAI Startup Fund GP I is a party to the unlawful conduct alleged herein. OpenAI Startup Fund GP I manages and operates the day-to-day business and affairs of OpenAI Startup Fund I.

19. Defendant OpenAI Startup Fund Management, LLC ("OpenAI Startup Fund Management") is a Delaware limited liability company with its principal place of business located at 3180 18th Street, San Francisco, CA 94110. OpenAI Startup Fund Management is a party to the unlawful conduct alleged herein. OpenAI Startup Fund Management was aware of the unlawful conduct alleged herein and exercised control over OpenAI, L.P. throughout the Class Period.

IV. AGENTS AND CO-CONSPIRATORS

20. The unlawful acts alleged against the Defendants in this class action complaint were authorized, ordered, or performed by the Defendants' respective officers, agents, employees, representatives, or shareholders while actively engaged in the management, direction, or control of the Defendants' businesses or affairs. The Defendants' agents operated under the explicit and apparent authority of their principals. Each Defendant, and its subsidiaries, affiliates, and agents operated as a single unified entity.

21. Various persons and/or firms not named as Defendants may have participated as co-conspirators in the violations alleged herein and may have performed acts and made statements in furtherance thereof. Each acted as the principal, agent, or joint venture of, or for other Defendants with respect to the acts, violations, and common course of conduct alleged herein.

V. FACTUAL ALLEGATIONS

22. OpenAI creates and sells artificial-intelligence software products. *Artificial intelligence* is commonly abbreviated "AI." AI software is designed to algorithmically simulate human reasoning or inference, often using statistical methods.

23. Certain AI products created and sold by OpenAI are known as *large language models.* A large language model (or "LLM" for short) is AI software designed to parse and emit natural language. Though a large language model is a software program, it is not created the way most software programs are—that is, by human software engineers writing code. Rather, a large language model is "trained" by copying massive amounts of text from various sources and feeding these copies into the model. This corpus of input material is called the *training dataset*. During training, the large language model copies each piece of text in the training dataset and extracts expressive information from it. The large language model progressively adjusts its output to more closely resemble the sequences of words copied from

the training dataset. Once the large language model has copied and ingested all this text, it is able to emit convincing simulations of natural written language as it appears in the training dataset.

24. Much of the material in OpenAI's training datasets, however, comes from copyrighted works—including books written by Plaintiffs—that were copied by OpenAI without consent, without credit, and without compensation.

25. Authors, including Plaintiffs, publish books with certain copyright management information. This information includes the book's title, the ISBN number or copyright number, the author's name, the copyright holder's name, and terms and conditions of use. Most commonly, this information is found on the back of the book's title page and is customarily included in all books, regardless of genre.

26. OpenAI has released a series of large language models, including GPT-1 (released June 2018), GPT-2 (February 2019), GPT-3 (May 2020), GPT-3.5 (March 2022), and most recently GPT-4 (March 2023). "GPT" is an abbreviation for "generative pre-trained transformer," where *pre-trained* refers to the use of textual material for training, *generative* refers to the model's ability to emit text, and *transformer* refers to the underlying training algorithm. Together, OpenAI's large language models will be referred to as the "OpenAI Language Models."

27. Many kinds of material have been used to train large language models. Books, however, have always been a key ingredient in training datasets for large language models because books offer the best examples of high-quality longform writing.

28. For instance, in its June 2018 paper introducing GPT-1 (called "Improving Language Understanding by Generative Pre-Training"), OpenAI revealed that it trained GPT-1 on BookCorpus, a collection of "over 7,000 unique unpublished books from a variety of genres including Adventure, Fantasy, and Romance." OpenAI confirmed why a dataset of books was so valuable: "Crucially, it contains long stretches of contiguous text, which allows the generative model to learn to condition on long-range information." Hundreds of large language models have been trained on BookCorpus, including those made by OpenAI, Google, Amazon, and others.

29. BookCorpus, however, is a controversial dataset. It was assembled in 2015 by a team of AI researchers for the purpose of training language models. They copied the books from a website

called Smashwords.com that hosts unpublished novels that are available to readers at no cost. Those novels, however, are largely under copyright. They were copied into the BookCorpus dataset without consent, credit, or compensation to the authors.

30. OpenAI also copied many books while training GPT-3. In the July 2020 paper introducing GPT-3 (called "Language Models are Few-Shot Learners"), OpenAI disclosed that 15% of the enormous GPT-3 training dataset came from "two internet-based books corpora" that OpenAI simply called "Books1" and "Books2".

31. Tellingly, OpenAI has never revealed what books are part of the Books1 and Books2 datasets. Though there are some clues. First, OpenAI admitted these are "internet-based books corpora". Second, both Books1 and Books2 are apparently much larger than BookCorpus. Based on numbers given in OpenAI's paper about GPT-3, Books1 is apparently about nine times larger; Books2 is about 42 times larger. Since BookCorpus contained about 7,000 titles, this suggests Books1 would contain about 63,000 titles; Books2 would contain about 294,000 titles.

32. But there are only a handful of "internet-based books corpora" that would be able to deliver this much material.

33. As noted in Paragraph 31, *supra*, the OpenAI Books1 dataset can be estimated to contain about 63,000 titles. Project Gutenberg is an online archive of e-books whose copyright has expired. In September 2020, Project Gutenberg claimed to have "over 60,000" titles. Project Gutenberg has long been popular for training AI systems due to the lack of copyright. In 2018, a team of AI researchers created the "Standardized Project Gutenberg Corpus", which contained "more than 50,000 books". On information and belief, the OpenAI Books1 dataset is based on either the Standardized Project Gutenberg Corpus or Project Gutenberg itself, because of the roughly similar sizes of the two datasets.

34. As noted in Paragraph 31, *supra*, the OpenAI Books2 dataset can be estimated to contain about 294,000 titles. The only "internet-based books corpora" that have ever offered that much material are notorious "shadow library" websites like Library Genesis (aka LibGen), Z-Library (aka B-ok), Sci-Hub, and Bibliotik. The books aggregated by these websites have also been available in bulk via torrent systems. These flagrantly illegal shadow libraries have long been of interest to the AI-training community: for instance, an AI training dataset published in December 2020 by EleutherAI called

"Books3" includes a recreation of the Bibliotik collection and contains nearly 200,000 books. On information and belief, the OpenAI Books2 dataset includes books copied from these "shadow libraries", because those are the most sources of trainable books most similar in nature and size to OpenAI's description of Books2.

35. In March 2023, OpenAI's paper introducing GPT-4 contained no information about its dataset at all: OpenAI claimed that "[g]iven both the competitive landscape and the safety implications of large-scale models like GPT-4, this report contains no further details about . . . dataset construction." Later in the paper, OpenAI concedes it did "filter[ ] our dataset . . . to specifically reduce the quantity of inappropriate erotic text content."

A. Interrogating the OpenAI Language Models using ChatGPT

36. ChatGPT is a language model created and sold by OpenAI. As its name suggests, ChatGPT is designed to offer a conversational style of interaction with a user. OpenAI offers ChatGPT through a web interface to individual users for $20 per month. Through the web interface, users can choose to use two versions of ChatGPT: one based on the GPT-3.5 model, and one based on the newer GPT-4 model.

37. OpenAI also offers ChatGPT to software developers through an application-programming interface (or "API"). The API allows developers to write programs that exchange data with ChatGPT. Access to ChatGPT via the API is billed on the basis of usage.

38. Regardless of how accessed—either through the web interface or through the API—ChatGPT allows users to enter text prompts, which ChatGPT then attempts to respond to in a natural way, i.e., ChatGPT can generate answers in a coherent and fluent way that closely mimics human language. If a user prompts ChatGPT with a question, ChatGPT will answer. If a user prompts ChatGPT with a command, ChatGPT will obey. If a user prompts ChatGPT to summarize a copyrighted book, it will do so.

39. ChatGPT's output, like other LLMs, relies on the data upon which it is trained to generate new content. LLMs generate output based on patterns and connections drawn from the training data. For example, if an LLM is prompted to generate a writing in the style of a certain author,

the LLM would generate content based on patterns and connections it learned from analysis of that author's work within its training data.

40. On information and belief, the reason ChatGPT can accurately summarize a certain copyrighted book is because that book was copied by OpenAI and ingested by the underlying OpenAI Language Model (either GPT-3.5 or GPT-4) as part of its training data.

41. When ChatGPT was prompted to summarize books written by each of the Plaintiffs, it generated very accurate summaries. These summaries are attached as **Exhibit B**. The summaries get some details wrong. These details are highlighted in the summaries. This is expected, since a large language model mixes together expressive material derived from many sources. Still, the rest of the summaries are accurate, which means that ChatGPT retains knowledge of particular works in the training dataset and is able to output similar textual content. At no point did ChatGPT reproduce any of the copyright management information Plaintiffs included with their published works.

VI. CLASS ALLEGATIONS

A. Class Definition

42. Plaintiffs bring this action for damages and injunctive relief as a class action under Federal Rules of Civil Procedure 23(a), 23(b)(2), and 23(b)(3), on behalf of the following Class:

> **All persons or entities domiciled in the United States that own a United States copyright in any work that was used as training data for the OpenAI Language Models during the Class Period.**

43. This Class definition excludes:

a. any of the Defendants named herein;

b. any of the Defendants' co-conspirators;

c. any of Defendants' parent companies, subsidiaries, and affiliates;

d. any of Defendants' officers, directors, management, employees, subsidiaries, affiliates, or agents;

e. all governmental entities; and

f. the judges and chambers staff in this case, as well as any members of their immediate families.

B. Numerosity

44. Plaintiffs do not know the exact number of members in the Class. This information is in the exclusive control of Defendants. On information and belief, there are at least thousands of members in the Class geographically dispersed throughout the United States. Therefore, joinder of all members of the Class in the prosecution of this action is impracticable.

C. Typicality

45. Plaintiffs' claims are typical of the claims of other members of the Class because Plaintiffs and all members of the Class were damaged by the same wrongful conduct of Defendants as alleged herein, and the relief sought herein is common to all members of the Class.

D. Adequacy

46. Plaintiffs will fairly and adequately represent the interests of the members of the Class because the Plaintiffs have experienced the same harms as the members of the Class and have no conflicts with any other members of the Class. Furthermore, Plaintiffs have retained sophisticated and competent counsel who are experienced in prosecuting federal and state class actions, as well as other complex litigation.

E. Commonality and Predominance

47. Numerous questions of law or fact common to each Class arise from Defendants' conduct:

a. whether Defendants violated the copyrights of Plaintiffs and the Class when they downloaded copies of Plaintiff's copyrighted books and used them to train ChatGPT;

b. whether ChatGPT itself is an infringing derivative work based on Plaintiffs' copyrighted books;

c. whether the text outputs of ChatGPT are infringing derivative works based on Plaintiffs' copyrighted books;

d. whether Defendants violated the DMCA by removing copyright-management information (CMI) from Plaintiffs' copyrighted books.

e. Whether Defendants were unjustly enriched by the unlawful conduct alleged herein.

f. Whether Defendants' conduct alleged herein constitutes Unfair Competition under

California Business and Professions Code section 17200 *et seq*.

g. Whether Defendants' conduct alleged herein constitutes unfair competition under the common law.

h. Whether this Court should enjoin Defendants from engaging in the unlawful conduct alleged herein. And what the scope of that injunction would be.

i. Whether any affirmative defense excuses Defendants' conduct.

j. Whether any statutes of limitation limits Plaintiffs' and the Class's potential for recovery.

48. These and other questions of law and fact are common to the Class predominate over any questions affecting the members of the Class individually.

F. Other Class Considerations

49. Defendants have acted on grounds generally applicable to the Class. This class action is superior to alternatives, if any, for the fair and efficient adjudication of this controversy. Prosecuting the claims pleaded herein as a class action will eliminate the possibility of repetitive litigation. There will be no material difficulty in the management of this action as a class action. Further, final injunctive relief is appropriate with respect to the Class as a whole.

50. The prosecution of separate actions by individual Class members would create the risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Defendants.

VII. CLAIMS FOR RELIEF

COUNT I
Direct Copyright Infringement
17 U.S.C. § 106
On Behalf of Plaintiffs and the Class

51. Plaintiffs incorporate by reference the preceding factual allegations.

52. As the owners of the registered copyrights in books used to train the OpenAI Language Models, Plaintiffs hold the exclusive rights to those texts under 17 U.S.C. § 106.

53. Plaintiffs never authorized OpenAI to make copies of their books, make derivative works, publicly display copies (or derivative works), or distribute copies (or derivative works). All those rights belong exclusively to Plaintiffs under copyright law.

54. On information and belief, to train the OpenAI Language Models, OpenAI relied on harvesting mass quantities of textual material from the public internet, including Plaintiffs' books, which are available in digital formats.

55. OpenAI made copies of Plaintiffs' books during the training process of the OpenAI Language Models without Plaintiffs' permission. Specifically, OpenAI copied at least Plaintiff Tremblay's book *The Cabin at the End of the World*; and Plaintiff Awad's books *13 Ways of Looking at a Fat Girl* and *Bunny*. Together, these books are referred to as the **Infringed Works**.

56. Because the OpenAI Language Models cannot function without the expressive information extracted from Plaintiffs' works (and others) and retained inside them, the OpenAI Language Models are themselves infringing derivative works, made without Plaintiffs' permission and in violation of their exclusive rights under the Copyright Act.

57. Plaintiffs have been injured by OpenAI's acts of direct copyright infringement. Plaintiffs are entitled to statutory damages, actual damages, restitution of profits, and other remedies provided by law.

COUNT 2
Vicarious Copyright Infringement
17 U.S.C. § 106
On Behalf of Plaintiffs and the Class

58. Plaintiffs incorporate by reference the preceding factual allegations.

59. Because the output of the OpenAI Language Models is based on expressive information extracted from Plaintiffs' works (and others), every output of the OpenAI Language Models is an infringing derivative work, made without Plaintiffs' permission and in violation of their exclusive rights under the Copyright Act.

60. OpenAI has the right and ability to control the output of the OpenAI Language Models. OpenAI has benefited financially from the infringing output of the OpenAI Language Models. Therefore, every output from the OpenAI Language Models constitutes an act of vicarious copyright infringement.

61. Plaintiffs have been injured by OpenAI's acts of vicarious copyright infringement. Plaintiffs are entitled to statutory damages, actual damages, restitution of profits, and other remedies provided by law.

COUNT 3
Digital Millenium Copyright Act—Removal of Copyright Management Information
17 U.S.C. § 1202(b)
On Behalf of Plaintiffs and the Class

62. Plaintiffs incorporate by reference the preceding factual allegations.

63. Plaintiffs included one or more forms of copyright-management information ("CMI") in each of the Plaintiffs' Infringed Works, including: copyright notice, title and other identifying information, the name or other identifying information about the owners of each book, terms and conditions of use, and identifying numbers or symbols referring to CMI.

64. Without the authority of Plaintiffs and the Class, OpenAI copied the Plaintiffs' Infringed Works and used them as training data for the OpenAI Language Models. By design, the training process does not preserve any CMI. Therefore, OpenAI intentionally removed CMI from the Plaintiffs' Infringed Works in violation of 17 U.S.C. § 1202(b)(1).

65. Without the authority of Plaintiffs and the Class, Defendants created derivative works based on Plaintiffs' Infringed Works. By distributing these works without their CMI, OpenAI violated 17 U.S.C. § 1202(b)(3).

66. OpenAI knew or had reasonable grounds to know that this removal of CMI would facilitate copyright infringement by concealing the fact that every output from the OpenAI Language Models is an infringing derivative work, synthesized entirely from expressive information found in the training data.

67. Plaintiffs have been injured by OpenAI's removal of CMI. Plaintiffs are entitled to statutory damages, actual damages, restitution of profits, and other remedies provided by law.

COUNT 4
Unfair Competition
Cal. Bus. & Prof. Code §§ 17200, *et seq.*
On Behalf of Plaintiffs and the Class

68. Plaintiffs incorporate by reference the preceding factual allegations.

69. Defendants have engaged in unlawful business practices, including violating Plaintiffs' rights under the DMCA, and using Plaintiffs' Infringed Works to train ChatGPT without Plaintiffs' or the Class's authorization.

70. The unlawful business practices described herein violate California Business and Professions Code section 17200 *et seq*. (the "UCL") because that conduct is otherwise unlawful by violating the DMCA.

71. The unlawful business practices described herein violate the UCL because they are unfair, immoral, unethical, oppressive, unscrupulous or injurious to consumers, because, among other reasons, Defendants used Plaintiffs' protected works to train ChatGPT for Defendants' own commercial profit without Plaintiffs' and the Class's authorization. Defendants further knowingly designed ChatGPT to output portions or summaries of Plaintiffs' copyrighted works without attribution, and they unfairly profit from and take credit for developing a commercial product based on unattributed reproductions of those stolen writing and ideas.

72. The unlawful business practices described herein violate the UCL because consumers are likely to be deceived. Defendants knowingly and secretively trained ChatGPT on unauthorized copies of Plaintiffs' copyright-protected work. Further Defendants deceptively designed ChatGPT to output without any CMI or other credit to Plaintiffs and Class members whose Infringed Works comprise ChatGPT's training dataset. Defendants deceptively marketed their product in a manner that fails to attribute the success of their product to the copyright-protected work on which it is based.

COUNT 5
Negligence
On Behalf of Plaintiffs and the Class

73. Plaintiffs incorporate by reference the preceding factual allegations.

74. Defendants owed a duty of care toward Plaintiffs and the Class based upon Defendants' relationship to them. This duty is based upon Defendants' obligations, custom and practice, right to control information in its possession, exercise of control over the information in its possession, authority to control the information in its possession, and the commission of affirmative acts that result in said harms and losses. Additionally, this duty is based on the requirements of California Civil Code

section 1714, requiring all "persons," including Defendants, to act in a reasonable manner toward others.

75. Defendants breached their duties by negligently, carelessly, and recklessly collecting, maintaining and controlling Plaintiffs' and Class members' Infringed Works and engineering, designing, maintaining and controlling systems—including ChatGPT—which are trained on Plaintiffs' and Class members' Infringed Works without their authorization.

76. Defendants owed Plaintiffs and Class members a duty of care to maintain Plaintiffs' Infringed Works once collected and ingested for training ChatGPT.

77. Defendants also owed Plaintiffs and Class members a duty of care to not use the Infringed Works in a way that would foreseeably cause Plaintiffs and Class members injury, for instance, by using the Infringed Works to train ChatGPT.

78. Defendants breached their duties by, *inter alia*, using Plaintiffs' Infringed Works to train ChatGPT.

COUNT 6
Unjust Enrichment
On Behalf of Plaintiffs and the Class

79. Plaintiffs incorporate by reference the preceding factual allegations.

80. Plaintiffs and the Class have invested substantial time and energy in creating the Infringed Works.

81. Defendants have unjustly utilized access to the Infringed Materials to train ChatGPT.

82. Plaintiffs did not consent to the unauthorized use of the Infringed Materials to train ChatGPT.

83. By using Plaintiffs' Infringed Works to train ChatGPT, Plaintiffs and the Class were deprived of the benefits of their work, including monetary damages.

84. Defendants derived profit and other benefits from the use of the Infringed Materials to train ChatGPT.

85. It would be unjust for Defendants to retain those benefits.

86. The conduct of Defendants is causing and, unless enjoined and restrained by this Court,

will continue to cause Plaintiffs and the Class great and irreparable injury that cannot fully be compensated or measured in money.

VIII. DEMAND FOR JUDGMENT

WHEREFORE, Plaintiffs request that the Court enter judgment on their behalf and on behalf of the Class defined herein, by ordering:

a) This action may proceed as a class action, with Plaintiffs serving as Class Representatives, and with Plaintiffs' counsel as Class Counsel.

b) Judgment in favor of Plaintiffs and the Class and against Defendants.

c) An award of statutory and other damages under 17 U.S.C. § 504 for violations of the copyrights of Plaintiffs and the Class by Defendants.

d) Permanent injunctive relief, including but not limited to changes to ChatGPT to ensure that all applicable information set forth in 17 U.S.C. § 1203(b)(1) is included when appropriate.

e) An order of costs and allowable attorney's fees under 17 U.S.C. § 1203(b)(4)–(5).

f) An award of statutory damages under 17 U.S.C. § 1203(b)(3) and 17 U.S.C. § 1203(c)(3), or in the alternative, an award of actual damages and any additional profits under 17 U.S.C. § 1203(c)(2) (including tripling damages under 17 U.S.C. § 1203(c)(4) if applicable).

g) Pre- and post-judgment interest on the damages awarded to Plaintiffs and the Class, and that such interest be awarded at the highest legal rate from and after the date this class action complaint is first served on Defendants.

h) Defendants are to be jointly and severally responsible financially for the costs and expenses of a Court approved notice program through post and media designed to give immediate notification to the Class.

i) Further relief for Plaintiffs and the Class as may be just and proper.

IX. JURY TRIAL DEMANDED

Under Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by jury of all the claims asserted in this Complaint so triable.

Dated: June 28, 2023

By: /s/ *Joseph R. Saveri*
Joseph R. Saveri

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