



Copyright Review Board  
United States Copyright Office · 101 Independence Avenue SE · Washington, DC 20559-6000

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**Re: Second Request for Reconsideration for Refusal to Register A Recent Entrance to Paradise (Correspondence ID 1-3ZPC6C3; SR # 1-7100387071)**

Dear Mr. Abbott:

The Review Board of the United States Copyright Office (“Board”) has considered Steven Thaler’s (“Thaler’s”) second request for reconsideration of the Registration Program’s refusal to register a two-dimensional artwork claim in the work titled “A Recent Entrance to Paradise” (“Work”). After reviewing the application, deposit copy, and relevant correspondence, along with the arguments in the second request for reconsideration, the Board affirms the Registration Program’s denial of registration.

**I. DESCRIPTION OF THE WORK**

The Work is a two-dimensional artwork, reproduced below:



## II. ADMINISTRATIVE RECORD

On November 3, 2018, Thaler filed an application to register a copyright claim in the Work. The author of the Work was identified as the “Creativity Machine,” with Thaler listed as the claimant alongside a transfer statement: “ownership of the machine.” In his application, Thaler left a note for the Office stating that the Work “was autonomously created by a computer algorithm running on a machine” and he was “seeking to register this computer-generated work as a work-for-hire to the owner of the Creativity Machine.” In an August 12, 2019, letter, a Copyright Office registration specialist refused to register the claim, finding that it “lacks the human authorship necessary to support a copyright claim.” Initial Letter Refusing Registration from U.S. Copyright Office to Ryan Abbott (Aug. 12, 2019).

Thaler subsequently requested that the Office reconsider its initial refusal to register the Work, arguing that “the human authorship requirement is unconstitutional and unsupported by either statute or case law.” Letter from Ryan Abbott to U.S. Copyright Office at 1 (Sept. 23, 2019) (“First Request”).<sup>1</sup> After reviewing the Work in light of the points raised in the First Request, the Office re-evaluated the claims and again concluded that the Work “lacked the required human authorship necessary to sustain a claim in copyright,” because Thaler had “provided no evidence on sufficient creative input or intervention by a human author in the Work.” Refusal of First Request for Reconsideration from U.S. Copyright Office to Ryan Abbott at 1 (March 30, 2020). The Office also stated that it would not “abandon its longstanding interpretation of the Copyright Act, Supreme Court, and lower court judicial precedent that a work meets the legal and formal requirements of copyright protection only if it is created by a human author.” *Id.* at 1–2.

Now, in a second request for reconsideration, pursuant to 37 C.F.R. § 202.5(c), Thaler renews his arguments that the Office’s human authorship requirement is unconstitutional and unsupported by case law. Letter from Ryan Abbott to U.S. Copyright Office (May 27, 2020) (“Second Request”). The Second Request repeats the same arguments from the First Request, largely advancing public policy arguments that the Office “should” register copyrights in machine-generated works because doing so would “further the underlying goals of copyright law, including the constitutional rationale for copyright protection.” Second Request at 2. In response to the Office’s citation of relevant case law addressing human authorship, Thaler asserts that “there is no binding authority that prohibits copyright for [computer-generated works],” *id.*; that copyright law already allows non-human entities to be authors under the work made for hire doctrine, *id.* at 4; and ultimately that the Copyright Office “is currently relying upon non-binding judicial opinions from the Gilded Age to answer the question of whether [computer-generated works] can be protected.” *Id.* at 7.

## III. DISCUSSION

The Board accepts as a threshold matter Thaler’s representation that the Work was autonomously created by artificial intelligence without any creative contribution from a human actor: “As a general rule, the U.S. Copyright Office accepts the facts stated in the registration

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<sup>1</sup> The top of the First Request is dated September 8, 2019, but the attorney’s signature bears a date of September 23, 2019.

materials.” U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 602.4(C) (3d ed. 2021) (“COMPENDIUM (THIRD)”). But copyright law only protects “the fruits of intellectual labor” that “are founded in the creative powers of the [human] mind.” COMPENDIUM (THIRD) § 306 (quoting *Trade-Mark Cases*, 100 U.S. 82, 94 (1879)); *see also* COMPENDIUM (THIRD) § 313.2 (the Office will not register works “produced by a machine or mere mechanical process” that operates “without any creative input or intervention from a human author” because, under the statute, “a work must be created by a human being”). So Thaler must either provide evidence that the Work is the product of human authorship or convince the Office to depart from a century of copyright jurisprudence.<sup>2</sup> He has done neither.

Thaler does not assert that the Work was created with contribution from a human author,<sup>3</sup> so the only issue before the Board is whether, as he argues, the Office’s human authorship requirement is unconstitutional and unsupported by case law. Currently, “the Office will refuse to register a claim if it determines that a human being did not create the work.” COMPENDIUM (THIRD) § 306. Under that standard, the Work is ineligible for registration. After reviewing the statutory text, judicial precedent, and longstanding Copyright Office practice, the Board again concludes that human authorship is a prerequisite to copyright protection in the United States and that the Work therefore cannot be registered.

The Copyright Act affords protection to “original works of authorship” that are fixed in a tangible medium of expression. 17 U.S.C. § 102(a). The phrase “original work of authorship” was “purposely left undefined” by Congress in order to “incorporate without change the standard of originality established by the courts under the . . . [1909] copyright statute.” H.R. REP. NO. 94-1476, at 51 (1976). The term is “very broad,” *id.* at 52, but its scope is not unlimited. Congress chose this language to encompass a smaller set of creative works than could be protected under the Constitution.<sup>4</sup> Because of this gap, the Act leaves “unquestionably other

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<sup>2</sup> Under the heading “Policy Objections,” the Second Request argues that denying copyright protection for machine-generated works will encourage individuals to “act dishonestly” and “inaccurately claim authorship for work done by machines.” Second Request at 5. The Board is unconvinced that applying existing case law will result in applicants committing fraud. The Copyright Act provides criminal penalties for anyone who “knowingly makes a false representation of a material fact in the application for copyright registration . . . or in any written statement tied in connection with the application.” 17 U.S.C. § 506(e). In addition, the Register of Copyrights has the authority to cancel any registration where the “material deposited does not constitute copyrightable subject matter” or “the claim is invalid for any other reason.” 17 U.S.C. § 410(b); *see also* COMPENDIUM (THIRD) § 1807. Applicants who mislead the Office do so at their peril.

<sup>3</sup> Because Thaler has not raised this as a basis for registration, the Board does not need to determine under what circumstances human involvement in the creation of machine-generated works would meet the statutory criteria for copyright protection. *See* COMPENDIUM (THIRD) § 313.2 (the “crucial question” of human authorship is whether a computer is “merely being an assisting instrument” or “actually conceive[s] and execute[s]” the “traditional elements of authorship in the work”) (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)).

<sup>4</sup> As the House Report explains, Congress selected the term to avoid confusion about how the scope of statutory protection compared with the scope of material the Constitution authorizes Congress to protect. H.R. REP. NO. 94-1476, at 51. Under the 1909 Copyright Act, protection accrued to “all the writings of an author,” which led to uncertainty about whether the scope of protected material under the law was “coextensive” with the “writings” of “authors” that the Constitution gives Congress the power to protect. H.R. REP. NO. 94-1476, at 51; *compare* 1909 Copyright Act, Pub. L. No. 60-349, § 4, 35 Stat. 1075, 1076 (1909) (“the works for which copyright may be secured under this Act shall include all the writings of an author”) *with* U.S. CONST. art I, § 8, cl. 8 (authorizing Congress

areas of existing subject matter that this bill does not propose to protect but that future Congresses may want to.” *Id.* at 52.<sup>5</sup>

Courts interpreting the Copyright Act, including the Supreme Court, have uniformly limited copyright protection to creations of human authors. For example, in *Burrow-Giles Lithographic Co. v. Sarony*, a copyright defendant argued that photographs could not be protected by copyright because the statute at the time protected certain types of creations of an “author or authors” and “a photograph is not a writing nor the production of an author” because it is simply “a reproduction on paper of the exact features of some natural object or of some person.” 111 U.S. 53, 56 (1884). The Court rejected this argument, holding that an author is “he to whom anything owes its origin; originator; maker; one who completes a work of science or literature” and that photographs are “representatives of original intellectual conceptions of [an] author.” *Id.* at 57–59. In the opinion, the Court referred to “authors” as human. *See id.* at 58 (describing a copyright as “the exclusive right of a man to the production of his own genius or intellect”), 60–61 (citing as “instructive” a decision from England where justices described 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).<sup>6</sup>

The Court has continued to articulate the nexus between the human mind and creative expression as a prerequisite for copyright protection. In *Mazer v. Stein*, the Court cited *Burrow-Giles* 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 *Burrow-Giles* 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). The Office is compelled to follow Supreme Court precedent, which makes human authorship an essential element of copyright protection.

In addition to the Supreme Court precedent, lower courts have repeatedly rejected attempts to extend copyright protection to non-human 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) (holding that “some element

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“[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”).

<sup>5</sup> For this reason, the Board rejects Thaler’s argument that the human authorship requirement is “unconstitutional” because registration of machine-generated works would “further the underlying goals of copyright law, including the constitutional rationale for copyright protection.” *See* Second Request at 1–2. Congress is not obligated to protect all works that may constitutionally be protected. “[I]t is generally for Congress,” not the Board, “to decide how best to pursue the Copyright Clause’s objectives.” *Eldred v. Ashcroft*, 537 U.S. 186, 212 (2003). The Board must apply the statute enacted by Congress; it cannot second-guess whether a different statutory scheme would better promote the progress of science and useful arts.

<sup>6</sup> In this case, as well as a previous case, the Court suggested that the requirement that an “author” be human is required by the Constitution. *See Burrow-Giles*, 111 U.S. at 56 (describing beneficiaries of the Constitution’s intellectual property clause as “authors,” who are one of “two classes” of “persons”); *see also Trade-Mark Cases*, 100 U.S. 82, 94 (1879) (reading the Constitution’s grant of power to Congress to protect “writings” as extending “only as such [works] as are original, and are founded in the creative powers of the mind” or are “the fruits of intellectual labor”).

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”). Similarly, 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.” *Naruto v. Slater*, 888 F.3d 418, 426 (9th Cir. 2018); *see also Kelley v. Chicago Park Dist.*, 635 F.3d 290, 304 (7th Cir. 2011) (rejecting a copyright claim in a “living garden” because “[a]uthorship is an entirely human endeavor” and “a garden owes most of its form and appearance to natural forces”) (internal citations omitted); *Satava v. Lowry*, 323 F.3d 805, 813 (9th Cir. 2003) (finding depictions of jellyfish not protected by copyright because material “first expressed by nature are the common heritage of humankind, and no artist may use copyright law to prevent others from depicting them”). These court decisions are reflected in the Office’s guidance in the *Compendium*, which provides 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.” COMPENDIUM (THIRD) § 313.2. While the Board is not aware of a United States court that has considered whether artificial intelligence can be the author for copyright purposes,<sup>7</sup> the courts have been consistent in finding that non-human expression is ineligible for copyright protection.

Federal agencies have followed the courts. In the 1970s, questions about the impact of computing technology on the copyright system led to the creation of the National Commission on New Technological Uses of Copyrighted Works (“CONTU”). CONTU’s mandate was, in part, to study “the creation of new works by the application or intervention of [] automatic systems of machine reproduction.” National Commission on New Technological Uses of Copyrighted Works, Pub. L. 93-573, § 201(b)(2), 88 Stat. 1873, 1873 (1974). After conducting its review, CONTU determined that the existing judicial construction of “original work[s] of authorship” as requiring human authorship was sufficient to enable protection for works created with the use of computers and thus “no amendment [to copyright law] is needed.” CONTU, FINAL REPORT at 1 (1978). As CONTU explained, “the eligibility of any work for protection by copyright depends not upon the device or devices used in its creation, but rather upon the presence of at least minimal human creative effort at the time the work is produced.” *Id.* at 45–46 (noting that “[t]his approach is followed by the Copyright Office today”).

The CONTU Report mirrors the views of the Copyright Office. A decade before passage of the 1976 Copyright Act, the annual report of the Register of Copyrights considered when copyright protection could vest in expressive works created with a computer. The Register concluded that human authorship was required:

The crucial question appears to be whether the “work” is basically one of human authorship, with the computer merely being an assisting instrument, or whether the traditional element of authorship in the work (literary, artistic or musical

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<sup>7</sup> It appears, however, that the Eastern District of Virginia held that artificial intelligence systems cannot claim inventorship of patents. *Thaler v. Hirshfeld*, No. 1:20-cv-903, 2021 U.S. Dist. LEXIS 167393, at \*16–18 (E.D. Va. Sep. 2, 2021) (concluding that under the Patent Act, “an ‘inventor’ must be a natural person” and upholding refusal of a patent application). Though the court’s opinion was based on construction of the Patent Act, rather than the Copyright Act, the similarity of the court’s statutory analysis to that in the copyright cases relied on by the Board supports the conclusion here.

expression or elements of selection, arrangements, etc.) were actually conceived and executed not by man but by a machine.

U.S. COPYRIGHT OFFICE, SIXTY-EIGHTH ANNUAL REPORT OF THE REGISTER OF COPYRIGHTS FOR THE FISCAL YEAR ENDING JUNE 30, 1965, at 5 (1966).

For this reason, the *Compendium of U.S. Copyright Office Practices* — the practice manual for the Office — has long mandated human authorship for registration. After enactment of the 1976 Copyright Act, the second edition of the *Compendium* was updated to reflect the Office’s understanding that human authorship is required by the law. See U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 202.02(b) (2d ed. 1984) (“COMPENDIUM (SECOND)”) (“The term ‘authorship’ implies that, for a work to be copyrightable, it must owe its origin to a human being. Materials produced solely by nature, by plants, or by animals are not copyrightable.”), available at <https://www.copyright.gov/history/comp/compendium-two.pdf>. The current *Compendium* retains this requirement and articulates its application in multiple circumstances where non-human expression raises unique challenges. See COMPENDIUM (THIRD) §§ 709.1 (automated computer translations); 803.6(B) (derivative sound recordings made by purely mechanical processes); 805.4(C) & 806.4(C) (human performance required for choreography and pantomimes); 808.8(E) (human selection of color in colorized motion pictures); 906.8 (machine produced expression in visual arts works, such as linoleum flooring); 909.3(B) (x-rays and other medical imaging); 1006.1(A) (hypertext markup language if created by a human being “rather than a website design program”). Although no *Compendium* section explicitly addresses artificial intelligence, the Board concludes that Office policy and practice makes human authorship a prerequisite for copyright protection.

The Office’s position is supported by a recent report from the U.S. Patent and Trademark Office (“USPTO”) addressing intellectual property issues raised by AI. USPTO sought public comment on whether “a work produced by an AI algorithm or process, without the involvement of a natural person . . . qualif[ies] as a work of authorship” under the Copyright Act. U.S. PATENT AND TRADEMARK OFFICE, PUBLIC VIEWS ON ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY POLICY at 19 (2020), available at [https://www.uspto.gov/sites/default/files/documents/USPTO\\_AI-Report\\_2020-10-07.pdf](https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf). In its summary of responses, USPTO noted that “the vast majority of commenters acknowledged that existing law does not permit a non-human to be an author [and] this should remain the law.” *Id.* at 20–21. The Board agrees.

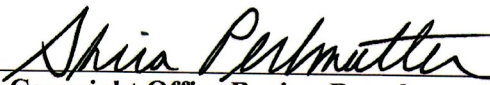
Thaler’s secondary argument, that artificial intelligence can be an author under copyright law because the work made for hire doctrine allows for “non-human, artificial persons such as companies” to be authors, is similarly unavailing. See Second Request at 3–4. First, the Work is clearly not a work made for hire as defined in the Copyright Act. A work made for hire must be either (A) prepared by “an employee” or (B) by one or more “parties” who “expressly agree in a written instrument” that the work is for-hire. 17 U.S.C. § 101 (definition of “work made for hire”). In both cases, the work is created as the result of a binding legal contract—an employment agreement or a work-for-hire agreement. The “Creativity Machine” cannot enter

into binding legal contracts and thus cannot meet this requirement.<sup>8</sup> Second, the work-for-hire doctrine only speaks to the identity of a work's owner, not whether a work is protected by copyright. As explained above, the statute requires that a work contain human authorship. In sum, the Work is not a work made for hire because it is neither a "work of authorship" nor a work created "for hire."

Much of Thaler's second request amounts to a policy argument in favor of legal protection for works produced solely by artificial intelligence. He cites to no case law or other precedent that would undermine the Office's construction of the Copyright Act. Because copyright law as codified in the 1976 Act requires human authorship, the Work cannot be registered.

#### IV. CONCLUSION

For the reasons stated herein, the Review Board of the United States Copyright Office affirms the refusal to register the copyright claim in the Work. Pursuant to 37 C.F.R. § 202.5(g), this decision constitutes final agency action in this matter.

  
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**U.S. Copyright Office Review Board**  
Shira Perlmutter, Register of Copyrights  
Suzanne Wilson, General Counsel and  
Associate Register of Copyrights  
Kimberley Isbell, Deputy Director of Policy and  
International Affairs

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<sup>8</sup> Autonomous systems are not "artificial persons" because they lack legal personhood. *See* Nadia Banteka, *Artificially Intelligent Persons*, 58 HOUS. L. REV. 537, 593 (2021) (noting the "trend" across state and federal courts that legal personhood requires "that an entity be an aggregate of individuals [who] have legal personhood," as is true for corporations); *cf. Software Solutions Partners Ltd. v. H.M. Customs & Excise*, [2007] EWHC 971 [67] (Admin) (noting that "on current authority," "automated systems" could not enter contracts because "only a person with a 'mind' can be an agent in law").