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**THE BROOKLYN LAW SCHOOL
INCUBATOR & POLICY CLINIC**
250 Joralemon Street
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January 10, 2020

Mr. Andrei Iancu
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450101

**Re: Docket No. 2019-23638
Comment Submission Pursuant to Request for Comments on Intellectual Property
Protection for Artificial Intelligence Innovation
84 FR 58141 (October 30, 2019)**

Dear Director Iancu:

This comment is submitted by Jessica Fjeld, Lecturer on Law at Harvard Law School and
Assistant Director of the Cyberlaw Clinic, and Mason Kortz, Clinical Instructor at the Cyberlaw
Clinic. The Cyberlaw Clinic is a project of the Berkman Klein Center for Internet & Society. In
the last two years, the Clinic has developed a practice in the area of artificial intelligence and
copyright. Through the Clinic, Jessica and Mason have taken on multiple clients seeking to
understand the rights and liabilities that arise when artificial intelligence is used to augment
human creativity and produce original works. Additionally, Jessica and Mason have produced
academic research on the topic of artificial intelligence, art, and copyright.

The Brooklyn Law School Incubator and Policy ("BLIP") Clinic is representing Jessica and
Mason in their submission. BLIP represents emerging tech, Internet, communications, and
startup media companies. BLIP functions as a modern technology-oriented law firm, and as such

is greatly concerned with the application of traditional intellectual property legal frameworks to clients in the technology space. In light of Jessica and Mason's experience and BLIP's expertise in representing tech-oriented clients, we are pleased to respond to the USPTO's request for comments.

As society continues to create, develop, adopt, and use new technologies to assist with the production of creative works, answering questions and issues related to copyright has become increasingly difficult.[1] For example, currently there are no clear answers for who owns the outputs of "generative" Artificial Intelligences ("AIs")[2] or the legal consequences of using copyrighted content to train and teach generative AIs.[3] The Copyright Office has attempted to provide general guidance on the copyrightability of generative AI outputs with the creation of § 313.2 of the public draft of the Compendium of U.S. Copyright Office Practices ("the Compendium").[4] The Compendium's language rejects as uncopyrightable all "works produced by a machine or mere mechanical process that operates randomly or automatically without any

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[1] *See* Copyright Law and New Technologies: A Long and Complex Relationship Library of Congress Blog, https://blogs.loc.gov/copyright/2017/05/copyright-law-and-new-technologies-a-long-and-complex-relationship/ (last visited Jan 1, 2020).

[2] *See* Jessica Fjeld & Mason Kortz, A Legal Anatomy of AI-generated Art: Part I, JOLT DIG. (Nov. 21, 2017), https://jolt.law.harvard.edu/digest/a-legal-anatomy-of-ai-generated-art-part-i (One might define a generative AI as a "computational system which, by taking on particular responsibilities, exhibit[s] behaviours that unbiased observers would deem to be creative.").

[3] *See* Request for Comments on Intellectual Property Protection for Artificial Intelligence Innovation Federal Register, https://www.federalregister.gov/documents/2019/10/30/2019-23638/request-for-comments-on-intellectual-property-protection-for-artificial-intelligence-innovation (last visited Jan 6, 2020).

[4] U.S. Copyright Office, Compendium of U.S. Copyright Office Practices § 313.2 (3d ed. 2017); U.S. Copyright Office, Public Draft of Compendium of U.S. Copyright Office Practices § 313.2 (March 15, 2019), https://www.copyright.gov/comp3/chap300/chap300-draft-3-1519.pdf ("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.'" (quoting U.S. Copyright Office, Report to the Librarian of Congress by the Register of Copyrights 5 (1966)).

creative input or intervention from a human author."[5] However, even though the Copyright Office has provided guidance on the distinction between human and computer authorship,[6] it misses a significant opportunity to provide guidance on the ownership rights for works that fall outside the scope of § 313.2.

Per § 313.2, a copyrightable work must have a human author. Currently it would appear the human author of generative AI outputs would need to be one of the following: the person who owns the works that are used as inputs to "teach" the generative AIs, the person who owns the code that would "learn" from the inputs, the person who runs the process to "train" the generative AI (which may involve curation of input works and supervision of the AI learning process), and/or the person who runs the trained generative AI to create a new work.[7] There is currently no helpful guidance on which of these individuals, or combination thereof, should be considered the author(s) of an AI-generated work.

If generative AI outputs are to be considered derivative works of their inputs,[8] and thus owned by the copyright holder of the input works, then we respectfully suggest the creation of a

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[5] Id.

[6] U.S. Copyright Office, Public Draft of Compendium of U.S. Copyright Office Practices § 313.2 (March 15, 2019), https://www.copyright.gov/comp3/chap300/chap300-draft-3-1519.pdf ("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.'" (quoting U.S. Copyright Office, Report to the Librarian of Congress by the Register of Copyrights 5 (1966)).

[7] See Jessica Fjeld & Mason Kortz, A Legal Anatomy of AI-generated Art: Part I, JOLT DIG. (Nov. 21, 2017), https://jolt.law.harvard.edu/digest/a-legal-anatomy-of-ai-generated-art-part-i.

[8] 17 U.S.C.A. § 101 (West); See Kelly M. Slavitt, Fixation of Derivative Works in A Tangible Medium: Technology Forces A Reexamination, 46 IDEA 37 (2005).

compulsory licensing scheme[9] for generative AI inputs. A compulsory licensing scheme for generative AI inputs is a sensible solution because it solves the issues of copyright infringement and output ownership. Under such a scheme, developers and users of generative AIs would be able to include copyrighted works in training data, so long as they paid a statutorily or judicially approved licensing fee for use of those works. This would provide a solution to the problem of literal infringement by including copyrighted works in training data.[10] The compulsory license could also provide for certain rights over the works created by a generative AI. For example, the license might provide the licensee the right to use content as inputs without authorization and the right to distribute and sell the outputs of the AI. By putting a license in place, this approach would solve many of the thorny issues surrounding the operation of copyright law on generative AIs. Furthermore, the automatic operation of such a license would eliminate the need for individual license agreements for each input work—a significant consideration, given that input datasets for generative AIs can contain tens of thousands of works.

A compulsory licensing scheme also accords with the purposes of copyright law. Designating the owner of the inputs as the author—and thus sole owner—of a generative AI's output could potentially disincentivize the usage, creation, and sale of generative AI outputs. One of the main goals of copyright protection is to provide an economic incentive for authors to create new

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[9] 17 U.S.C.A. § 115 (West) ("In the case of nondramatic musical works, the exclusive rights provided by clauses (1) and (3) of section 106, to make and to distribute phonorecords of such works, are subject to compulsory licensing under the conditions specified by this section."); See U.S Copyright Office, Circular 73: Compulsory License for Making and Distributing Phonorecords (What can I do with a Compulsory License?).
[10] *See* Benjamin L. W. Sobel, *Artificial Intelligence's Fair Use Crisis*, 41 Colum. J.L. & Arts 45, 61 (2017).

works.[11] Providing owners of generative AIs with the right to distribute their creations would provide an economic incentive for original authors to create additional works to be used as inputs, while providing generative AI users with an incentive to create new outputs.[12]

The CryptoKitties product on the Ethereum blockchain platform is a notable example of how an economic incentive for authors to create new content from original works used as inputs could work. CryptoKitties are unique digital images of cats that can be combined with other CryptoKitties to create new CryptoKitties.[13] CryptoKitties are an interesting product because when a new derivative kitten is created, one owner of the original kitten image is compensated, while the other owner obtains the rights to sell the derivative byproduct.[14] The CryptoKitties platform is similar to a compulsory licensing scheme because anyone on the platform can participate in creating derivative kittens once the original kitten is made publicly available.[15] For example, once a kitten is posted for breeding, anyone can combine their kitten with the posted kitten to create a derivative kitten.[16] Accordingly, the system of creating CryptoKitties is similar to the creation of derivative works under a compulsory licensing scheme.[17] The two systems are

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[11] Diane Leenheer Zimmerman, Copyrights as Incentives: Did We Just Imagine That?, 12 THEORETICAL INQUIRIES L. 29, 30 (2011).

[12] 17 U.S.C.A. § 115 (West) ("In the case of nondramatic musical works, the exclusive rights provided by clauses (1) and (3) of section 106, to make and to distribute phonorecords of such works, are subject to compulsory licensing under the conditions specified by this section."); See U.S Copyright Office, Circular 73: Compulsory License for Making and Distributing Phonorecords (What can I do with a Compulsory License?).

[13] What the heck is a CryptoKitty? Medium, https://medium.com/cryptokitties/what-the-heck-is-a-cryptokitty-4e14752e58c (last visited Jan 6, 2020).

[14] Id.

[15] Id.

[16] Id.

[17] 17 U.S.C.A. § 115 (West) ("In the case of nondramatic musical works, the exclusive rights provided by clauses (1) and (3) of section 106, to make and to distribute phonorecords of such works, are subject to compulsory licensing under the conditions specified by this section."); See U.S Copyright Office, Circular 73: Compulsory License for Making and Distributing Phonorecords (What can I do with a Compulsory License?).

comparable because compulsory license schemes also permits anyone to use publicly available content to create derivatives without forming an agreement with the original content owner.[18] Considering the success of the CryptoKitties platform,[19] it is reasonable to conclude that implementing a compulsory licensing scheme would remove the economic disincentives for generative AI users to use copyrighted inputs to create new works.

Though compulsory licensing schemes have met opposition in the past, they are generally supported because they result in increased access to a greater catalog of works.[20] Without the implementation of a compulsory license, training a generative AI on copyrighted works could constitute infringement, and the outputs of generative AIs could be considered unauthorized derivative works. A compulsory licensing scheme supports the copyrightability of generative AI outputs by creating an ecosystem that economically incentivizes the creation of additional outputs. In conclusion, if the Copyright Office determines human authorship is required for the copyrightability of generative AI outputs, it should also conclude that a compulsory licensing scheme is a reasonable solution to the generative AI issues of infringement, ownership, and copyrightability.
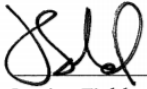
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[18] Id.

[19] This man has made more money trading cryptokitties than investing in his IRA The Verge, https://www.theverge.com/2017/12/13/16754266/cryptokitties-ethereum-ether-game-cats (last visited Jan 1, 2020); Cryptokitties Sales Hit 12 could Coin Telegraph, https://cointelegraph.com/news/cryptokitties-sales-hit-12-million-could-be-ethereums-killer-app-after-all (last visited Jan 2, 2020); CryptoKitties, Explained ... Mostly The New York Times, https://www.nytimes.com/2017/12/28/style/cryptokitties-want-a-blockchain-snuggle.html (last visited Jan 6, 2020)Cite to something saying that Crypto Kittens was a success.

[20] See Staff of H. Comm. on the Judiciary, 89th Cong., Supplementary Report of the Register of Copyrights on the General Revisions of U.S. Copyright Law-- 1965 Revision Bill, 89th Cong., 1st Sess. At 53 – 54 (Comm. Print May 1965).

Sincerely,

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