

**Statement of Kristelia García  
Anne Fleming Research Professor of Law  
Georgetown University Law Center**

**Before the Subcommittee on Courts, Intellectual Property, and the Internet  
Committee on the Judiciary  
U.S. House of Representatives**

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**Artificial Intelligence and Intellectual Property:  
Part III – IP Protection for AI-Assisted Inventions and Creative Works**

Chairman Issa, Ranking Member Johnson, and Members of the Subcommittee: Thank you for inviting me to testify today about the prospective copyrightability of works that are generated, in whole or in part, by artificial intelligence (AI). Specifically, you have asked me to speak to the legal and policy considerations relevant to the granting of copyright protection to works generated by, or with the assistance of, artificial intelligence, including whether the current definition of authorship needs to be changed, or if any other legislative intervention is called for at this time.

I am an Anne Fleming Research Professor of Law at Georgetown University Law Center. My scholarship and teaching focus on intellectual property (IP) law—particularly copyright law—and I have written extensively in this area. Prior to becoming a law professor, I practiced law at firms in New York and Los Angeles, and spent several years working at a major record label, with a focus on music licensing. In addition to my permanent appointment at Georgetown, I am currently of counsel at Lex Lumina PLLC, where I consult on copyright matters, especially those relating to the music industry.<sup>1</sup> These experiences have afforded me an in-depth understanding of not only what copyright law is, and how it works, but also of how it uniquely affects artists, intermediaries, and the public.

In some ways, generative AI is merely the next in a long line of so-called “disruptive” technologies that have presented challenges for copyright law and the copyright industries. In at least one important aspect, however, generative AI presents an all-new challenge: Instead of going only to the question of copying—as we’ve seen, for example, with the DVR and streaming technologies—generative AI’s ability to produce novel works also raises a new question about the copyrightability of those works.

I will focus my testimony today on three primary areas. First, I will consider the case of works considered to be wholly or substantially generated by AI, by which I refer to works produced with little to no human intervention. These works do not merit copyright protection, as detailed in Part I below.

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<sup>1</sup> My testimony today reflects my own views, and not the views of any institution or organization with which I am, or have been, affiliated.

Next, I will consider the case of works that can be said to be only partially generated using AI, by which I refer to works in which there is a substantive amount of human intervention in, and contribution to, the resulting work. Partially AI-generated works may merit copyright protection if the level of human intervention and contribution are sufficient to meet the statutory requirements detailed in Part II below, where I will consider the suitability of each of several possible assignments of authorship: (i) to the AI itself; (ii) to the user of the AI; (iii) to the programmer(s) of the AI; (iv) jointly to the user and either of the AI itself, or the programmer of the AI; or (v) to no one (i.e., to the public domain).<sup>2</sup>

Finally, and most importantly for your purposes, I will submit that current copyright doctrine and case law provide sufficient guidance on the question of copyrightability for both wholly and partially AI-generated works, and that there is no call for legislative action at this time.

## I. Works Wholly or Substantially Generated by AI Do Not Merit Copyright Protection

When a work is produced with little to no user intervention—for example, a user prompts DALL•E to produce an image of “a cat in a tub,” without more—we have a work considered to be “wholly or substantially generated” by AI. Each of the U.S. Constitution, the copyright statute, and the relevant case law contemplate a human author, and as such, counsel against the granting of copyright protection to a wholly or substantially AI-generated work. Instead, these works should be dedicated to the public domain.

### AI Cannot Be Incentivized to Create

The policy goal of our copyright regime is to incentivize private creation for the benefit of the public.<sup>3</sup> It does so by affording to copyright owners a series of exclusive rights,<sup>4</sup> which they can in turn utilize to sell or license their creative works.<sup>5</sup> Because AI (as currently

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<sup>2</sup> I borrow these five allocation possibilities from Professor Pamela Samuelson’s prescient work, *Allocating Ownership Rights in Computer-Generated Works*, 47 U. PITT. L. REV. 1185 (1986).

<sup>3</sup> See, e.g., *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985) (“By establishing a marketable right to the use of one’s expression, copyright supplies the economic incentive to create and disseminate ideas.”).

<sup>4</sup> 17 U.S.C. §106(1)–(6) give copyright owners the exclusive rights of reproduction, production of derivative works, distribution, public performance (including, where applicable, by digital audio transmission), and public display.

<sup>5</sup> The financial incentivization goal of copyright is emphasized in the case law: In *Mazer v. Stein*, the Supreme Court suggested that “[t]he economic philosophy behind the clause empowering Congress to grant . . . copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare . . .” 347 U.S. 201, 219 (1954). Similarly, in *Twentieth Century Music Corp. v. Aiken*, the Supreme Court asserted that “[t]he immediate effect of our copyright law is to secure a fair return for an ‘authors’ creative labor. But the ultimate aim is, by this incentive, to stimulate [the creation of works] for the general public good.” 422 U.S. 151, 156 (1975).

conceived) cannot be incentivized to create works, nor to cause works to be created, it is not the proper recipient of copyright’s protections.<sup>6</sup>

### AI Does Not Meet the Statutory Definition of an “Author”

It is fitting that we are referring today to “AI-generated works,” and not to “AI-authored works,” since AI does not meet the statutory definition of an “author” under the Copyright Act.<sup>7</sup> The authority to establish a system of protection for authors comes from the U.S. Constitution, which gives Congress the power “[t]o promote the Progress of Science and the useful Arts, by securing for limited Times to *Authors* and Inventors the exclusive Right to their respective Writings and Discoveries.”<sup>8</sup> Section 102(a) of the Copyright Act reserves copyright for “original works of *authorship*,”<sup>9</sup> and Section 201(a) vests initial copyright ownership in “the *author* or *authors* of the work.”<sup>10</sup> In an early case considering the author of a photograph, the Supreme Court explained that in order to obtain copyright protection, a work must reflect the “original intellectual conceptions of the author,” and went on to define an author as “he [sic] to whom anything owes its origin; originator; maker; one who completes a work of science or literature.”<sup>11</sup> Because only humans are considered capable of “original intellectual conceptions,” non-human creators have thus far been held ineligible for copyright protection.<sup>12</sup>

In the context of generative AI specifically, the Copyright Office has aligned its initial registration determinations thus far with this position, refusing to register copyright claims in works wholly or substantively generated by AI.<sup>13</sup> Guidance issued by the Copyright Office

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<sup>6</sup> See, e.g., Bruce E. Boyden, *Emergent Works*, 39 COLUM. J.L. & ARTS 377, 378 & 391 (2016)(proposing, in the context of emergent works—defined as “works that consist largely of creative elements that have emerged unbidden from the operation of the program”—that “there is no good reason to assign initial ownership rights over such works to anyone. No one needs to be incentivized to produce the output of the program; it is a simple matter to generate works once the program is set up. Nor is there any additional need to incentivize the creation of the program, since that incentive is provided by the copyright in the program as a literary work, and access to the program can be controlled by license and by property rights over the server it runs on. Contractual restrictions attaching to the use of the program itself are likely all the programmer would need to prevent competitors from using the program to generate songs for resale in a competing service.”)

<sup>7</sup> The Copyright Act of 1976 (as amended), 17 U.S.C. §101 et. seq. [hereinafter, the “Copyright Act”]

<sup>8</sup> U.S. Const. Art. I, Sec. 8, Cl. 8 (emphasis added).

<sup>9</sup> 17 U.S.C. §102(a)(emphasis added).

<sup>10</sup> 17 U.S.C. §201(a)(emphasis added).

<sup>11</sup> *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 57-59.

<sup>12</sup> See, e.g., *Naruto v. Slater*, 888 F.3d 418 (9th Cir. 2018)(finding that a monkey who took selfies with a camera lacked standing to sue under the Copyright Act).

<sup>13</sup> As of the date of this writing, the Copyright Office has refused four applications to register works found to involve insufficient human intervention. In February 2022, Thaler’s painting, *A Recent Entrance to Paradise*, was rejected for not containing sufficient contribution from a human author. See U.S. Copyright Office Review Board, *Second Request for Reconsideration for Refusal to Register A Recent Entrance to Paradise* (Feb.14, 2022). In February 2023, the previously granted registration for Kashtanova’s graphic novel *Zarya of the Dawn* was revised to require Kashnatova to specifically exclude the AI-generated images (leaving Kashtanova as the author of the text only). See U.S. Copyright Office Review Board, *Cancellation Decision re: Zarya of the Dawn (VAu001480196)* (Feb. 21, 2023). In September 2023, the application to register

in March 2023 confirms that “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.”<sup>14</sup>

It has been suggested that copyright’s “work made for hire” doctrine might be expanded to accommodate the assignment of authorship to an AI.<sup>15</sup> As currently drafted, works wholly or substantially generated by AI do not meet the statutory definition of a “work made for hire”: Section 101 of the Copyright Act requires a work made for hire to either (1) be prepared by an employee in the scope of their employment, or (2) be specially commissioned, in writing, and to belong to one of a handful of enumerated categories.<sup>16</sup> Works generated by AI fit neither of these definitions. Even if this definition could be amended to accommodate AI authors, policy counsels against it. Where a copyright is granted to an intermediary under copyright’s “work made for hire” doctrine, the policy justification is that the intermediary’s financial backing—for example, the monetary advance granted by a record label to a recording artist—*causes* the artist to create. AI can no more cause creation than it can be incentivized to create itself.

It has further been suggested, albeit more tentatively, that AI authorship might be recognized under a modified definition of “derivative work,”<sup>17</sup> which would merit copyright protection for wholly or substantially AI-generated works under Section 103 of the Copyright Act.<sup>18</sup> As currently drafted, a work wholly or substantially generated by AI does not meet the statutory definition of a “derivative work” in at least three ways: First, Section 106(2) reserves the right to create derivative works exclusively to the copyright owner on the underlying work.<sup>19</sup> This means that in order to receive copyright protection, a derivative work must be authorized by the owner of the copyright on the underlying work. Given the

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Allen’s painting, *Théâtre D’opéra Spatial*, winner of the 2022 Colorado State Fair’s annual fine art competition, was rejected as submitted, with the request that Allen resubmit an application explicitly disclaiming all of the AI-generated portions of the work. See U.S. Copyright Office Review Board, *Second Request for Reconsideration for Refusal to Register Théâtre D’opéra Spatial* (Sept. 5, 2023). Finally, in December 2023, the Copyright Office rejected an application to register a work titled SURYAST as jointly authored by Sahni, a human, and RAGHAV, an AI, because the Office found that Sahni’s “human authorship cannot be distinguished or separated from the final work produced by the computer program.” See U.S. Copyright Office Review Board, *Second Request for Reconsideration for Refusal to Register SURYAST* (Dec. 11, 2023).

<sup>14</sup> U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 37 CFR PART 202 at 2 (Mar. 16, 2023).

<sup>15</sup> See, e.g., Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 5, 25-27 (identifying the work made for hire doctrine—if modified—as a potential means of recognizing AI authorship)

<sup>16</sup> 17 U.S.C. §101 enumerates the following categories for possible protection under the work made for hire doctrine: a collective work, a part of a motion picture or other audiovisual work, a translation, a supplementary work, a compilation, an instructional text, a test, answer material for a test, and an atlas.

<sup>17</sup> See Bridy, *supra* note 14 (raising the idea of expanding the definition of “derivative work” to accommodate AI authorship, while acknowledging the normative undesirability of doing so).

<sup>18</sup> 17 U.S.C. §103.

<sup>19</sup> 17 U.S.C. §106(2)(granting the copyright owner an exclusive right “to prepare derivative works based upon the copyrighted work.”)

way that AI models are currently trained—on billions of (largely, where not wholly) unlicensed works—such authorization is highly unlikely.<sup>20</sup>

Second, Section 103(b) requires that a derivative work, if it is to be protected, must itself also be an original work of authorship.<sup>21</sup> In a 1976 case considering the copyrightability of a near-slavish reproduction of a coin bank statuette, the Second Circuit upheld the lower court’s denial of protection, noting that “to claim the more limited protection given to a [derivative] work of art... the [derivative work] must contain ‘an original contribution not present in the underlying work of art[.]’”<sup>22</sup> Works wholly or substantially generated by AI are not independently copyrightable for the reasons discussed above, and so do not satisfy this requirement.

Third, Section 103(a) defines a derivative work as one that utilizes “preexisting material in which copyright subsists.”<sup>23</sup> While current AI models are routinely trained on copyrighted materials, the nature of machine learning is such that it is not possible to point to a specific work or works from which a particular output derived, and so a work wholly or substantially AI-generated could not be said to have utilized an identifiable preexisting work.

### **Copyright’s Idea-Expression Doctrine Excludes Even Human Authors from Owning a Copyright on a Work Wholly or Substantially Generated by AI**

It is tempting to try to circumvent the “AI is not a human” problem by assigning the copyright in a wholly or substantially AI-generated work to the user of the AI; that is, to the human who gave the AI only a simple prompt, but because such a prompt is merely an idea, this proposal also fails on doctrinal grounds. Section 102(b) of the Copyright Act emphasizes that “[i]n no case does copyright protection for an original work of authorship extend to any idea[.]”<sup>24</sup> This means that copyright protects only *expressions*, and *not* ideas. A simple prompt—“picture of a cat in a tub”—without more, sees the human user providing merely the idea behind the work (a wholly unprotectible contribution), and not the expression. For this same reason, assigning joint authorship to both a user and an AI makes little sense in the case of a wholly or substantively AI-generated work, where the former is ineligible for copyright on an idea, and the latter is ineligible for copyright as a non-human.

### **AI Is Not A Legal Person**

Even if we could overcome the doctrinal improbability described above, assigning a copyright to an AI raises both legal and practical questions about who would be considered

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<sup>20</sup> This may change with the evolution of companies like [Fairly Trained](#), which certify AI companies that license all of the copyrighted works that they train on.

<sup>21</sup> 17 U.S.C. §103(b)(holding that the copyright in the derivative work is “independent of, and does not affect or enlarge the scope, duration, ownership, or subsistence of, any copyright protection in the preexisting material.”)

<sup>22</sup> *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486, 491 (1976).

<sup>23</sup> 17 U.S.C. §103(a).

<sup>24</sup> 17 U.S.C. §102(b).

“responsible” for the copyrighted work. Because AI lacks legal personhood, it is unclear who, if anyone, would be charged with enforcing the copyright—or, indeed, be enforced against, were the wholly or substantially AI-generated work found to infringe another copyrighted work.

### **Works Wholly or Substantially Generated by AI Should Be Dedicated to the Public Domain**

The determination that best complies with current doctrine and case law is to assign no copyright in works wholly or substantially generated by AI. These works would go directly into the public domain, where they could be freely used as raw material for the creation of new works, in alignment with copyright’s goals of incentivizing creation for the public benefit.<sup>25</sup>

## **II. Works Partially Generated by AI May Merit Copyright Protection**

A human may utilize AI to create a work in which they actively intervene and contribute. For example, a user could prompt DALL•E to produce an image of “a cat in a tub,” followed by various iterations and fine tuning, such as “make the cat black,” and “add bubbles spilling out of the tub,” and “put the tub in outer space.” The user might then use the resulting image as inspiration for a line drawing, which they then paste into the lower left-hand corner of a large mural that they are hand painting. In such a case, we have a work considered to be “partially generated” by AI. Where a sufficient degree of human intervention and contribution can be shown, works partially generated by AI may be entitled to copyright protection as discussed below. Works partially generated by AI that do not entail sufficient human intervention and contribution should instead be dedicated to the public domain.

### **Granting a Copyright in a Work Partially Generated by AI to the User of the AI**

If a copyright is to be granted to a work partially generated by AI, the most likely candidate for assignment is the user of the AI. Where a human utilizes AI more like an aid to creation than as a substitute for it, they may be entitled to copyright protection provided the resulting work reflects the human author’s “original intellectual conception.”<sup>26</sup>

Such a copyright may be considered “thin;” that is, it may cover only the aspects of the work that are directly and significantly attributable to the human author, and may

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<sup>25</sup> There is a surprising near-consensus in the academy for the denial of copyright protection altogether for wholly and substantively AI-generated works is strong; *see, e.g.*, Matt Blaszczyk, *Impossibility of Emergent Works’ Protection in U.S. and EU Copyright Law*, 25 N.C.J. L. & TECH. 1, 5 (2023)(arguing that “copyright cannot provide protection to AI-generated works as a matter of normative coherence of the law”); and Haochen Sun, *Redesigning Copyright Protection in the Era of Artificial Intelligence*, 107 IOWA L. REV. 1213, 1217 (2022)(arguing that “AI works generated solely by autonomous AI systems should be placed in the public domain without copyright protection.”)

<sup>26</sup> *See* Burrow-Giles, *supra* note 6.

exclude those aspects wholly or substantially attributable to the AI. This presumption is reflected in the Copyright Office’s most recent guidance, where it acknowledges the existence of “works submitted for registration that contain human authorship combined with uncopyrightable material, including material generated by or with the assistance of technology,” and indicates that in the case of such works, the registration determination “will depend on the circumstances, particularly how the AI tool operates and how it was used to create the final work. This is necessarily a case-by-case inquiry.”<sup>27</sup> In practice, it appears that the registrability of partially AI-generated works may turn on the human author’s willingness to disclaim the portions of the work attributable to the AI.<sup>28</sup> For example, in its decision to cancel the registration for Kashtanova’s graphic novel *Zarya of the Dawn*, the Copyright Office notes that “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.”<sup>29</sup> While case-by-case line drawing may sound tedious, it is in fact how all copyright registration decisions are currently made.

### **Granting a Copyright in a Work Partially Generated by AI to a Party Other Than the User**

The assignment of a copyright in a work partially generated by AI to a party other than the user is inadvisable:

Ownership in a work partially generated by AI should not be allocated to the AI itself for the reasons discussed in Part I above.

Assigning a copyright to the programmer(s) of an AI is also ill-advised. First, the Copyright Act already offers computer programmers protection of their code,<sup>30</sup> such that additional protection on the outputs of those programs could be viewed as unnecessary or duplicative. Second, the programmers of an AI have other (potentially better) incentives outside of copyright. For example, they can sell the AI itself, license the use thereof, or sell its outputs.<sup>31</sup>

From a doctrinal standpoint, the allocation of some sort of joint authorship between the user and either the AI itself, or the AI’s programmers, also fails. The Copyright Act defines a “joint work” as “a work prepared by two or more authors with the intention that

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<sup>27</sup> See *Copyright Registration Guidance*, supra note 14 at 3-4.

<sup>28</sup> NB: Not all commentators agree with this approach; see, e.g., Edward Lee, *Prompting Progress: Authorship in the Age of AI*, 76 FLA. L. REV. (forthcoming 2024)(critiquing the Copyright Office’s approach to authorship as overly narrow).

<sup>29</sup> See U.S. Copyright Office Review Board, *Cancellation Decision re: Zarya of the Dawn*, supra note 12 at 1.

<sup>30</sup> For better or for worse, machine-readable computer programs gained copyright protection in 1980. Pub. L. No. 96-517, 94 Stat. 3007 (1980).

<sup>31</sup> ChatGPT, for example, is already selling monthly subscriptions to use its AI tools. <https://chat.openai.com/#pricing>.

their contributions be merged into inseparable or interdependent parts of a unitary whole.”<sup>32</sup> With respect to joint authorship either between the user and the AI, or between the user and the AI’s programmers, the requisite intent would be difficult, where not impossible, to establish. In addition, case law in this area describes a successful co-author as one who is “the originator or the person who causes something to come into being,” “the person with creative control,” or “the inventive or master mind of the [work].”<sup>33</sup> Neither the AI nor the AI’s programmers fit this definition, and so cannot be held to be co-authors. Finally, and although the issue is unsettled in the case law, it’s worth mentioning that some courts additionally require each co-author of a work to have made an independently copyrightable contribution,<sup>34</sup> something AI cannot do for the reasons elaborated in Part I.

### III. The Question of Copyrightability for AI-Generated Works Does Not Call for Legislative Intervention at This Time

In sum, I see no call for legislative action at this time, where the copyrightability issues currently presented by AI-generated works can be competently handled via a combination of statutory interpretation and federal litigation.

As discussed above, the Copyright Office’s current approach to determining copyrightability of works partially generated by AI necessarily involves some tricky line drawing—we can imagine, for example, the difficulty in determining even rough percentages of work attributable to each of the human user and the AI—but at the same time, there is nothing revolutionary nor disruptive about the case-by-case approach to copyright registration.<sup>35</sup> To date, the Copyright Office has only had the opportunity to consider four registration determinations for works involving AI-generated works.<sup>36</sup> As more registration applications come in, and more determinations are made, we will have more guidance as to where the lines may be drawn.

Courts have also proven adept at interpreting and applying copyright law in the context of novel technologies. Among other examples, the courts have thus far successfully fielded challenges to copyright law posed by time-shifting of television programming,<sup>37</sup> peer-

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<sup>32</sup> 17 U.S.C. §101.

<sup>33</sup> *Jefri Aal Muhammed v. Spike Lee*, 202 F.3d 1227, 1232-33 (9th Cir. 1999).

<sup>34</sup> *See, e.g., Ashton-Tate Corp. v. Ross*, 916 F.2d 516, 521 (9th Cir. 1990) (noting that the district court’s finding that “because [defendant] only contributed ideas to the [plaintiff’s work], which by themselves are not protectable, the program is not a ‘joint work’” is “not entirely settled, but is consistent with the direction our circuit has taken.”)

<sup>35</sup> Indeed, all copyright registration decisions are made on a case-by-case basis; *see* Copyright Office, COMPENDIUM (THIRD) at Ch. 300.

<sup>36</sup> *See supra* note 12.

<sup>37</sup> *See, e.g., Cartoon Network LP, LLLP v. CSC Holdings, Inc.*, 536 F.3d 121 (2nd Cir. 2008) (finding no infringement stemming from de minimus copying for the purposes of providing DVR services).



to-peer file sharing,<sup>38</sup> digitization of books,<sup>39</sup> and APIs.<sup>40</sup> None of these “disruptive” technologies necessitated a new categorical rule, and AI doesn’t either.

#### IV. Concluding Thoughts

While no statutory amendments are called for at this time, the question of copyrightability for AI-generated works raises some interesting implications for copyright policy going forward. As discussed, the U.S. copyright regime assumes a need for incentivization in order to ensure creation for public consumption. As AI technology continues to advance, and continues to be adopted by an ever-broader range of users, we are likely to see a significant increase in the number of works for which copyright is irrelevant. While this should prompt us to reconsider what copyright is for and what work it is doing, I do not see a bifurcated system—with some works incentivized by copyright, and other works incentivized by other means—as necessarily a cause for concern.<sup>41</sup>

I appreciate the committee’s attention to, and its continued interest in, generative AI—with all of the prospective challenges, concerns, and benefits, that it brings.

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<sup>38</sup> See, e.g., *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005)(finding infringement on the part of a P2P software distributed with the object of promoting infringement).

<sup>39</sup> See, e.g., *Authors Guild v. Google, Inc.*, 804 F.3d 202 (2nd Cir. 2015)(finding Google’s digitization of millions of books to be fair use).

<sup>40</sup> See, e.g., *Google LLC v. Oracle America, Inc.*, 141 S.Ct. 1183 (2021)(finding Google’s use of Oracle’s API packages to be fair use).

<sup>41</sup> For more on how generative AI challenges some of copyright’s tenets, see Mark A. Lemley, *How Generative AI Turns Copyright Upside Down* (on file with witness, and forthcoming in the COLUM. SCI. & TECH. L. REV. 2024).