

Are Outputs Of AI Models Copyrightable?

By **Heather Whitney and Evangeline Phang** (February 3, 2023, 5:55 PM EST)

Generative artificial intelligence is hot. Tools like ChatGPT, DALL-E 2 and Stable Diffusion suggest that generative AI is ready for commercialization and investors have taken note.[1]

The excitement is not limited to venture capital. In a recent M&A tech survey we performed,[2] 51% of respondents — the largest share — believe AI will offer the best M&A opportunities this year. In 2021, only 3% chose AI.

As more businesses, content creators and everyday people rely on, and feel the impact of, generative AI, wrestling with difficult questions around intellectual property rights has expanded beyond the purview of science fiction and the ivory tower to boardrooms and law firms around the world.

Recent legal actions include:

- The Jan 16 Andersen et al. v. Stability AI Ltd. class action filed in the U.S. District Court for the Northern District of California alleging popular intelligence platforms — including Stable Diffusion and Midjourney, and art-sharing website DeviantArt — are violating artists' rights;[3] and
- The Jan 16 Getty Images (US) Inc. v. Stability AI Ltd. lawsuit filed in the High Court of Justice of England and Wales,[4] raising the issue of whether the alleged use of unauthorized third-party images to train AI models constitutes copyright infringement.

This article, however, focuses on a different intellectual property issue involving AI — whether the outputs of AI models are copyrightable.

More specifically, this article explores (1) whether AI models can be the authors of their outputs for purposes of copyright protection and (2) whether use of an AI model by a human results in a copyrightable work authored by the human or, instead, results in an authorless, and thus uncopyrightable, work.

We do not address here the third issue of whether the developer who created the AI model may be considered the author of the model's outputs.



Heather Whitney



Evangeline Phang

Recent test cases have raised the issue of whether AI models can be authors, for purposes of copyright protection, or inventors, for purposes of patent protection.

The U.S. Court of Appeals for the Federal Circuit made headlines in August 2022 when it affirmed the U.S. District Court for the Eastern District of Virginia's holding in *Thaler v. Vidal* that an AI model cannot qualify as an inventor under the Patent Act — only humans can.[5]

The Federal Circuit denied the plaintiff's petition for a rehearing and rehearing en banc in October 2022.[6] The plaintiff intends to petition the U.S. Supreme Court for review, which, thanks to an extension, is now due March 19.[7]

In February 2022, the Review Board of the U.S. Copyright Office made similar headlines when it affirmed[8] the Copyright Office's refusal to register an artwork created by an AI model on the grounds that copyright protection only extends to works of human authorship.

The plaintiff, Stephen Thaler, who is the same plaintiff as in the patent case described above, appealed and on Jan. 10, 2023, submitted his motion for summary judgment.[9]

While the question of whether an AI model can be an author or inventor is important, a more pressing question in practical terms will likely be whether a human using generative AI models to create outputs can be the author of those outputs. The answer is unclear.

While in September 2022, Kris Kashtanova secured the first U.S. copyright for a graphic novel created using an AI model — specifically, Midjourney, a text-to-image AI model — in late October, the Copyright Office informed Kashtanova that it was initiating proceedings to cancel the registration, apparently on the grounds that the use of Midjourney rendered the work authorless.

In a response letter to the Copyright Office, Kashtanova's attorney argued that the AI model was simply an "assisting instrument" and that the structure, selection and juxtaposition of the various visual elements within each picture were creative choices, similar to those of a photographer.[10]

Kashtanova tweeted on Jan. 24, that the Copyright Office committed to making an official statement on the matter soon.[11]

AI Model Authorship: Originality and Standing

The progress clause — Article 1, Section 8, Clause 8 of the U.S. Constitution — states that Congress is authorized "to promote the progress of science and useful arts, by securing, for limited times to authors ... the exclusive right to their ... writings"

Against this backdrop, under the Copyright Act, copyright protection extends to original works of authorship fixed in a tangible medium of expression.

An original work of authorship must have an author. But the Copyright Act does not provide a definition of either "authorship" or "works of authorship," and does not otherwise specify that such authors must be human.

The U.S. Court of Appeals for the Ninth Circuit took the position that this omission was no accident when it stated that "the [Copyright Act] purposefully left 'works of authorship' undefined to provide for some

flexibility," in its 2014 *Garcia v. Google Inc.* decision.

Nevertheless, in the Thaler Review Board decision, the board observed that "[c]ourts interpreting the Copyright Act, including the Supreme Court, have uniformly limited copyright protection to creations of human authors."

The board's statement notwithstanding, the Supreme Court has never squarely addressed the question of whether copyright protection extends only to works of human authors. The board and lower courts have, however, read the high court's 1884 *Burrow-Giles Lithographic Co. v. Sarony* decision as precedent for that proposition.

Burrow-Giles required the court to consider both the copyrightability of photographs in general and whether the particular photo at issue — a photo of Oscar Wilde — was copyrighted.

The defendant in the case argued that it was unconstitutional for Congress to extend copyright protection to photographs because, among other things, the photograph was not the production of an author.

Photographs, according to the defendant, were merely "a reproduction on paper of the exact features of some natural object or of some person" and thus involved no author at all, according to the decision.

An aside, the view that photography is merely mechanical and lacking in any human creativity was dominant in the art world for many decades after photography was invented in the 1820s.^[12] It also presents an interesting parallel to debates about the status of works created with the help of AI today.

The *Burrow-Giles* court rejected the defendant's argument, holding that photographs are in principle copyrightable, writing:

We entertain no doubt that the Constitution is broad enough to cover an act authorizing copyright of photographs, so far as they are representatives of original intellectual conceptions of the author [which in turn requires] novelty, invention, [and] originality.

The *Burrow-Giles* court was focused on whether the photographer was the author of the photograph — the Supreme Court was not presented with the question of whether there could be a nonhuman author — as you can imagine, neither the photographer nor defendant would have been interested in making that argument.

Nevertheless, in its Thaler decision, the Review Board supported its determination that authors must be human by pointing out that "the [*Burrow-Giles*] Court referred to 'authors' as human."

The more prosaic issue of standing may ultimately pose a greater challenge to those looking to extend copyright protection to works of nonhumans.

Section 501(b) of the Copyright Act states that the "legal or beneficial owner of an exclusive right under a copyright is entitled ... to institute an action for any infringement of that particular right committed while he or she is the owner of it."

Put simply, until an author assigns or otherwise transfers copyright ownership in their work, that author has exclusive standing to sue for infringement of their work.

Courts generally do not find nonhumans — e.g., animals — to have standing unless the statute at issue expressly provides it, and the Copyright Act does not. The 2018 *Naruto v. Slater* decision, the infamous monkey selfie case, addressed this issue.

The Ninth Circuit held that *Naruto*, a macaque who had taken a photographer's camera and snapped a photo of himself, did not have standing to sue under the Copyright Act because the Copyright Act did not expressly authorize animal standing.

Can a generative AI model be an author under the Copyright Act and can its outputs be that AI model's works of authorship, if the model itself has no standing to sue for infringement of its rights?

Authorship: An Evolving Originality Requirement

In the 1991 *Feist Publications Inc. v. Rural Telephone Service Co.* decision, the Supreme Court held that to satisfy the originality requirement, a work must have been independently created by the author — i.e., not copied from another work — and must possess "at least some minimal degree of creativity."

While the *Feist* court emphasized how little creativity is required to satisfy the originality requirement — "the requisite level of creativity is extremely low; even a slight amount will suffice" — the *Feist* standard is only the most recent of the many different originality tests used by the court over the years.

Throughout the 19th century, authors were frequently depicted in romantic terms — as geniuses, highly original and singularly creative — as were their works.

Consistent with this romantic notion, a line of cases began to develop that gave the originality requirement teeth by requiring novelty or aesthetic value to satisfy it — *Burrow-Giles* falls into this category, with its requirement of "novelty, invention, [and] originality."

Indeed, this more exacting originality standard meant that in many 19th century cases, defendants were able to successfully avoid liability for infringement by arguing that the work in question lacked sufficient originality to be copyrightable.

In parallel, however, a second line of cases developed where courts essentially read the originality requirement out of the statute, requiring only that the work not be a copy of another work.

This second approach is frequently associated with former Justice Oliver Wendell Holmes' 1903 *Bleistein v. Donaldson Lithographing Co.* decision, in which he took what is now known as a position of aesthetic nondiscrimination, whereby judges avoid, or at least aspire to avoid, considering the aesthetic value of works when determining whether they meet the requirements for originality.

It was this latter view that — mostly — won the day. The *Feist* court, while setting the creativity bar low, actually reintroduced a creativity requirement that had been largely absent since the early 20th century.

This current, almost trivial, creativity requirement has interesting upshots in the generative AI context. On one hand, if you define creativity as a purely human trait, then, of course, a generative AI model cannot be creative, the triviality of the creativity requirement notwithstanding.[13]

On the other hand, we do not generally think only humans can be creative, and it is hard not to ascribe

creativity to a generative AI model that can instantly write a biblical verse in the style of the King James Bible that explains how to remove a peanut butter sandwich from a VCR.[14]

In fact, such an AI model and its outputs could be described as not just minimally creative, but incredibly so. Thus, unless you simply define away the possibility that an AI model can be creative, the works that AI models generate certainly seem to meet the originality requirement under the Copyright Act. At least, such works would be sufficiently creative if authored by a human.

Determining Human Authorship: Sole Versus Disputed Authorship

Leaving aside the question of whether the AI model that generated the peanut-butter-sandwich-removal biblical verse is an author, what about the human who instructed the AI model to generate that output? Did that person author the verse?

In cases where there is only one potential author of a work containing expression, courts find authorship when such person independently created the work — i.e., did not copy the work — and contributed at least "a modicum of creativity," as per Feist.

In other words, courts find authorship when the post-Feist originality requirements are satisfied.

The low creativity threshold established in Feist thus has interesting upshots not only for the analysis of generative AI model authorship but for the authorial status of the humans using those models as well.

Namely, the Feist standard also makes it easier for human users of AI models to assert that they, the humans, meet the originality requirement with respect to the generative AI outputs, even if the AI model, rather than the humans, is doing most of the creative work.

Certain language in the Compendium of U.S. Copyright Office Practices, which provides guidance to Copyright Office staff on applicable policies and procedures, reflects the low Feist standard, such as:

[T]he [Copyright] 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.[15]

Feist may be less useful to would-be human authors, though, if courts and the Copyright Office look to courts' originality analysis when faced with two or more humans disputing which of them is the author of a work.

In cases of disputed authorship, courts typically set the originality bar higher — you might think that courts would find joint authorship in such cases, but joint authorship only occurs if both authors intended to be co-authors, so a finding of joint authorship is typically unavailable in dispute cases.

In such cases, individuals that have provided creative contributions to a work may not be held to be the author if, as the U.S. District Court for the Southern District of New York wrote in the 1999 *Lindsay v. The Wrecked and Abandoned Vessel R.M.S. Titanic* decision, the other purported author provided much more input and overall,

exercised such a high degree of control ... such that the final product duplicates his conceptions and visions of what the [work] should look like.

If courts and the Copyright Office are disinclined to extend copyright protection to human authors of AI-generated works — especially in cases where the contribution of the human looks minimal when compared to that of the generative AI model — they may be tempted to look not at the originality line of cases for guidance but at the cases involving disputed authorship.

And more recent language added to the compendium arguably reflects this heightened standard:

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.[16]

The resolution of the dispute regarding Kashtanova's graphic novel copyright may provide much-needed guidance.

Practical Consequences for AI-Generated Works

Today, many AI artists create images and other works through the use of AI models like DALL-E 2, which create images based on the natural language description inputted by the user.

These AI model users could reasonably argue that they exercise some control over the final output and even fairly simple language inputs may be sufficient to meet the modicum of creativity requirement,[17] even if the creativity in the work is also attributed — and perhaps to a greater degree — to the generative AI model. Things get harder still, the more attenuated the relationship between a human would-be author and the work generated by the generative AI.

Looking ahead to the inevitable advancement of deep learning technology, it is not difficult to imagine a generative AI model building out a company's metaverse — i.e., currently a network of 3D virtual worlds — by automatically creating avatars and additional subworlds based on indirect and aggregated user interactions.

The creators of the AI model itself will likely never see these avatars and subworlds and the users whose interactions helped generate them will likely be completely unaware of their contribution to the generated works.

When AI technology progresses to this stage, answering who, or what, is the author of such works — and thus answering whether such works are copyrightable — will become even harder.

Uncertainty around copyrightability will likely affect companies' commercial strategies. In particular, companies may find themselves forced to reconsider what commercial and legal incentives there are, or could be, for pursuing the development of generative AI models that create potentially uncopyrightable works.

It may benefit companies that are using and improving AI technology to continuously identify and track the contributions by the company's own personnel to demonstrate a high degree of control, intention and creative influence over outputs, as well as revising the company's end user terms of service and third-party courts to include appropriate terms allocating ownership and other rights to AI-generated outputs.

Heather M. Whitney and Evangeline T. Phang are associates at Morrison Foerster LLP.

Aaron P. Rubin, a partner and chair of the technology transactions group at the firm, and Tessa Schwartz, a partner and co-chair of the transactions department at the firm, contributed to this article.

The opinions expressed are those of the author(s) and do not necessarily reflect the views of their employer, its clients, or Portfolio Media Inc., or any of its or their respective affiliates. This article is for general information purposes and is not intended to be and should not be taken as legal advice.

[1] <https://pitchbook.com/news/articles/generative-ai-venture-capital-investment>.

[2] <https://www.mofo.com/tech-ma-forecast>.

[3] <https://www.theverge.com/2023/1/16/23557098/generative-ai-art-copyright-legal-lawsuit-stable-diffusion-midjourney-deviantart>.

[4] <https://newsroom.gettyimages.com/en/getty-images/getty-images-statement>.

[5] <https://mofotech.mofo.com/topics/federal-circuit-agrees-with-the-uspto-on-inventors-only-human-after-all>.

[6] <https://www.bloomberglaw.com/product/blaw/document/XTG8Q62VD99UKBIM1PN81RAFC8/download>.

[7] <https://patentlyo.com/patent/2023/01/update-inventorship-authorship.html>.

[8] <https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf>.

[9] <https://www.law360.com/articles/1564610/attachments/0>.

[10] https://drive.google.com/file/d/1ldhn8eb9t883mm_U4CxAQQ_aANTI7UTX/view.

[11] <https://twitter.com/icreatelife/status/1617938611412033539?cxt=HHwWhoDTmYmmifQsAAAA>.

[12] <https://daily.jstor.org/when-photography-was-not-art/>.

[13] <https://hai.stanford.edu/news/what-dall-e-reveals-about-human-creativity>.

[14] <https://twitter.com/tqbf/status/1598513757805858820>.

[15] <https://www.copyright.gov/comp3/docs/compendium.pdf>.

[16] <https://www.copyright.gov/comp3/docs/compendium.pdf> (some internal quotations omitted).

[17] Again, while beyond our scope of discussion here, the author of the AI model itself also arguably exercised some control and creativity in designing the generative AI model, and thus in creating the final output as well. Whether the creator of the generative AI model should be able to assert authorship over the outputs given the proximate causation issues in the generative AI context is a subject for another article.