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Human Authorship Requirement Continues To Pose Difficulties for AI-Generated Works

2023 was a breakout year for generative artificial intelligence (AI), but it was a rough year for protecting the content generated using such technology.

The U.S. Copyright Office issued several rulings last year on the question of when works generated using AI technology are protected under U.S. copyright law, and so far, applicants have not been able to convince the Copyright Office that the AI-generated components of their works are protectable.

As we previously discussed in February, the Copyright Office provided its first analysis on the question of whether AI-generated works contain sufficient human authorship to be copyrightable in its *Kashtanova* ruling. It narrowly interpreted the human authorship requirement and refused registration of AI-generated images in a graphic novel, finding that text prompts (even detailed ones) were not sufficient for human authorship because the output is unpredictable and not controlled by the artist. Shortly thereafter, the Copyright Office issued guidance regarding the registration of works containing AI-generated materials, which essentially followed its *Kashtanova* ruling. While leaving open the possibility that some AI-generated works might be protectable, the guidance did not provide any examples of what sufficient human authorship might be and clearly stated that works generated by AI systems solely in response to user prompts are uncopyrightable.

The last half of the year did not fare much better for AI-generated works in the United States. This Update discusses two additional Copyright Office decisions on the issues that came out during this time, as well as the first U.S. district court decision on the underlying human authorship requirement in the context of AI. All of these decisions denied copyright protection for the AI-generated works at issue. However, as the boundaries of sufficient human authorship in the context of AI have not yet been tested in court, it is still too early to tell whether the Copyright Office's view will prevail. We will also discuss how some other countries have addressed the issue and look ahead to what we might see in 2024 on this question.

Thaler v. Perlmutter

The U.S. District Court for the District of Columbia declared that "[h]uman authorship is the *bedrock* requirement of copyright" in its August 2023 decision affirming the Copyright Office's denials of a registration for a work that did not claim *any* human authorship.

Stephen Thaler, a computer scientist and creator of an AI system he dubbed the "Creativity Machine," filed a lawsuit against the Copyright Office in response to the office's repeated denials of registration for a work titled "A Recent Entrance to Paradise" (pictured) which Thaler insisted was created autonomously by his Creativity Machine. The Copyright Office denied the application on the grounds that it lacked human authorship.

In a motion for summary judgment, Thaler argued that this denial of registration based solely on the lack of human authorship violated the Administrative Procedure Act because the refusal was contrary to law. Thaler claimed the denial was "arbitrarily capricious, an abuse of discretion, not in accordance with the law, unsupported by substantial evidence, and in excess of Defendants' statutory authority." Thaler advocates for AI to be acknowledged as the sole author and sees the Creativity Machine's productions as "works-made-for-hire."

After considering the purpose of the law and the individuals it is intended to protect, the court sided with the Copyright Office and held that artwork autonomously created by AI cannot be registered for copyright protection. They reasoned that the intention of the Copyright Act was to incentivize individuals to create works of art and that nonhumans do not need an incentive. In addition, the court highlighted that copyright protections have never been granted to any nonhuman and that the law never intended nonhumans to be entitled to protection.

The court noted that "the human authorship requirement has also been consistently recognized by the U.S. Supreme Court when called upon to interpret the copyright law," citing a Supreme Court case from the 1800s (*Burrow-Giles Lithographic Company v. Sarony*) that upheld copyright protection for photographs because photographs "represent[ed]" the "original intellectual conceptions of the author." The court also cited two cases from the Court of Appeals for the Ninth Circuit that rejected nonhumans as authors in other circumstances, including the famous monkey selfie case (*Naruto v. Slater*) (which involved a photo taken by a monkey) and a case that involved a work the parties agreed was "divinely authored" based on responses to questions that were compiled by humans (*Urantia Foundation v. Kristen Maaherra*). It is worth noting, however, that although the Ninth Circuit concluded in the Urantia case that "some element of human creativity must have occurred in order

for the Book to be copyrightable," the court ultimately found sufficient human authorship in the selection and formation of the specific questions asked (which they found materially contributed to the structure of the book and the selection and arrangement of the divine revelations contained therein). Thaler has appealed the district court decision to the D.C. Circuit.

It is important to note that the court did not blatantly ban the registration of all works created using AI or shed any light on what type and amount of human authorship is needed to be copyrightable, as Thaler specifically claimed *no* human input or intervention. Rather, he attributed authorship solely to the Creativity Machine, so this case merely confirms the basic human authorship requirement. There is still no caselaw on the question of what constitutes sufficient human authorship with respect to AI-generated works.

Théâtre D'opéra Spatial

Consistent with its decision in *Kashtanova* and subsequent guidance on registration of AI-generated works, the Copyright Office's Review Board in September 2023 rejected a request for reconsideration of the Office's refusal to register a work titled "Théâtre D'opéra Spatial" (pictured) by Jason M. Allen. This two-dimensional artwork, which won the 2022 Colorado State Fair annual fine art competition, made national news after it was revealed to have been created with the aid of Midjourney, a generative AI tool that creates images in response to user text prompts.

Like *Kashtanova*, Allen described a detailed, iterative creation process that involved inputting numerous text prompts and revisions into Midjourney, but the Board (applying the new Copyright Office guidance) determined that the Midjourney image that served as the basis of the work was not a product of human authorship despite the 100s of rounds of image generation necessary to achieve the final result. Although Allen argued this was evidence of human authorship due to the creative inputs that went into each round (e.g., "enter[ing] a series of prompts, adjust[ing] the scene, select[ing] portions to focus on, and dictat[ing] the tone of the image," etc.), the Board found this was insufficient human authorship with respect to the Midjourney-generated image because Allen's sole contribution was inputting the text prompt that created the image. The Board decision is consistent with the Office's earlier decision regarding the *Kashtanova* registration.

The Board recognized that the visual edits Allen made to the generated images could contain a sufficient amount of original authorship to be separately registered but ruled that they would need more information to know whether such edits rose to the level of copyrightability. This ruling seems to imply that, in looking at questions posed in the Copyright Office guidance (including whether the machine is merely an assisting instrument or

whether the traditional elements of authorship were conceived and executed not by man but by a machine, and whether the artist had ultimate creative control of the work), the Copyright Office is separating the AI-generated components from the final work, rather than analyzing the work as a whole.

Allen also asserted policy arguments to support his request for registration, including that denying protection of AI-generated artwork would create a void in ownership that would negatively affect artists and that by refusing to register work created through generative AI platforms, "the Office is placing a value judgment on the utility of various tools." The Board rejected these arguments and indicated that it would be the role of Congress, not the Office, to address any such matters of policy. Allen also asserted that "[r]equiring creators to list each tool and the proportion of the work created with the tool would have a burdensome effect if enforced uniformly," but the Board rejected this argument too, noting that the disclosures don't have to be detailed or specific, but only require a brief statement (e.g., "the text was generated by artificial intelligence"). Lastly, the Board also rejected Allen's assertion that the fair use doctrine should help guide the determination of what should be considered copyrightable, stating that fair use is irrelevant because it addresses use, not copyrightability.

For all the reasons listed above, the Review Board of the Copyright Office affirmed the refusal to register Allen's work.

SURYAST

In December 2023, the Copyright Office's Review Board also rejected a second request for reconsideration by Ankit Sahni of the Office's refusal to register a two-dimensional computer-generated image titled "SURYAST." The technology used to create the image was a bit different from what was addressed in the *Kashtanova* and *Allen* rulings. "SURYAST" was created by using RAGHAV, a style transfer tool, which entails "generat[ing] an image with the same 'content' as a base image but applying the 'style' of [a] chosen picture." To produce "SURYAST," Sahni provided RAGHAV with an original photograph Sahni took as the "base image," selected Van Gogh's "The Starry Night" as the "style image," and assigned an undisclosed style transfer strength value (which determined the amount of style transfer to be applied). The resulting image, shown below, is recognizable as a heavily stylized version of the original photograph.
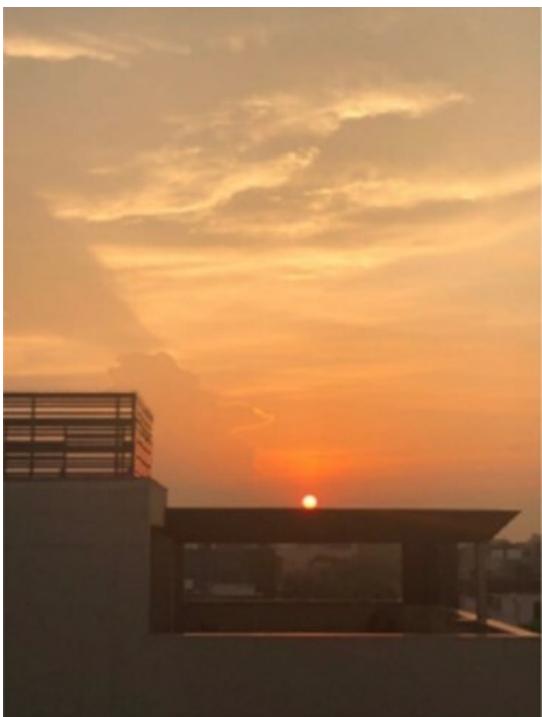
(From left to right) Sahni's original photo, "The Starry Night" by Vincent van Gogh, "SURYAST"

The Copyright Office initially rejected Sahni's registration application because the work was found to "lack the human authorship necessary to support a copyright claim." In response to Sahni's assertion that the work included some human authorship, the Copyright Office concluded that "the human authorship cannot be distinguished or separated from the final work produced by the computer program." Following Sahni's initial request for reconsideration, the Review Board reevaluated Sahni's claim and concluded that the work was not registerable "because the work deposited is a derivative work that does not contain enough original human authorship to support a registration."

In his latest request for reconsideration, Sahni made three arguments for why his application should be granted: (1) RAGHAV is merely an "assistive software tool" subject to Sahni's creative decisions (i.e., selecting his original photo, selecting "The Starry Night" as the style input, and setting the variable for the amount of style transfer); (2) the work includes human-authored elements, such as taking the original photograph and directing RAGHAV to change colors, shapes, and style in a particular manner; and (3) the Board mischaracterized the work as a derivative work because the original photograph supplied to RAGHAV was merely "an early stage of what would ultimately become" the work.

Sahni's description of RAGHAV as an assistive tool did not convince the Board. The Board concluded that RAGHAV's interpretation of Mr. Sahni's photograph in the style of another painting "is a function of how the model works and the images on which it was trained on—not specific contributions or instructions received from Mr. Sahni." The Board distinguished RAGHAV from other types of visual filters applied to photographs by noting that RAGHAV does not simply layer the style image on top of the base image but instead generates a new image. It rejected Sahni's argument that the tool merely mechanically applied the colors, shapes, and styles as directed, saying this minimized the tool's role in the creation of the final image. This conclusion is similar to the Copyright Office's *Kashtanova* decision, which characterized detailed prompts as merely providing general direction to an artist and found that images created through prompt-based image generation tools are not "controlled" by users "because it is not possible to predict what [the tool] will create ahead of time" and because "the prompt text does not dictate a specific result." Here, the Board asserted that Sahni's choices as to what image inputs and filter strength to use only constitute an unprotectable idea for the work (i.e., an altered version of his photograph in the style of "The Starry Night") and that it was the AI tool, not Sahni, that was responsible for determining how to interpolate the base and style images in accordance with the style transfer value to create the final image. Ultimately, the Board determined that Sahni exerted insufficient creative control over RAGHAV's creation of the work and refused registration.

The Board's characterization of the work as derivative is significant, because with a derivative work, the focus is only on whether the *new* elements that are added to the work contain sufficient human authorship. As a result, the Board did not consider any authorship contained in the base photo. Sahni challenged this characterization, contended that he took the photograph as a part of the process for creating the work, and referred to the original photo as "an early stage of what would ultimately become the work." He compared this to a sketch made by a painter prior to completing a painting and argued that the human authorship in both the original photograph and the work should be considered together. The Board rejected this argument without any substantive explanation other than finding that the original photograph was a separate work of authorship because it was fixed separately from the creation of "SURYAST." However, this would be true of a preliminary sketch of a painting or early drafts of a novel as well, but the Copyright Office typically does not consider the final painting or book to be a derivative work and limit registration to only the new elements added since the most recent iteration (unless the prior versions were separately published).

This ruling leaves many unanswered questions, but it is clear that the Board is taking a very narrow view regarding the protectability of any AI-generated components of a work. It is worth noting that both the [Indian Copyright Office](#) and the [Canadian Intellectual Property Office](#) have registered "SURYAST" and recognized RAGHAV Artificial Intelligence Painting App as its co-author along with its human creator, Sahni.

Li vs. Liu

In an international case highlighting the difference between the United States and certain other countries on the copyrightability of AI-generated works, the Beijing Internet Court found an AI-generated image to be copyrightable (and therefore found the defendant liable for copyright infringement) in a decision issued in November in the case of *Li v. Liu*. While the court held that a copyrightable work should reflect the intellectual input and contributions of human beings, it found that the plaintiff provided sufficient intellectual inputs throughout the image-generation process, including: (1) choosing the preferred AI tool provider (i.e., Stable Diffusion) among many alternatives to render the picture style that the plaintiff prefers; (2) inputting around 30 "Prompts" and over 120 "negative Prompts" to determine the output of the AI-generated picture; and (3) setting and resetting various technical parameters to produce, choose, and rearrange the pictures that the plaintiff favors.

The court held that, although the plaintiff did not physically draw the specific lines or fully direct the Stable Diffusion model on how to draw the lines and colors, he designed the character and the portrayal (pictured) through the prompts and arranged the final layout and composition of the picture through various tech parameters, which reflected the plaintiff's choice and arrangement. The court also pointed to the fact that after the plaintiff obtained the initial image through various prompts and parameters, he added additional prompts, adjusted the parameters, and continually refined it until he arrived at the final image. The court concluded that this entire process of adjustment and rearrangement reflected the plaintiff's aesthetic choices and personal judgment and found that the resulting image was not merely a "mechanical intellectual creation," but rather reflected Li's personal expression and was therefore protectable by copyright. This is markedly different from how the U.S. Copyright Office views the notion of human input and control over the creation process with prompt-based generative AI tools.

What's Ahead in 2024 and Beyond?

While the Copyright Office has clearly taken a narrow view of what is required to constitute sufficient human authorship in an AI-generated work, the law is still unclear, as no court has yet addressed the issue. In 2024, we could see the first cases to directly challenge the Copyright Office's interpretation of the human authorship requirement. This could come either from challenges to the Copyright Office's registration decisions, or it could arise in the context of copyright disputes involving AI-generated works (as it did in the *Li v. Liu* case) and could lead to a variety of courts ruling on this issue. Accordingly, we may see a fracturing of authority on when AI-generated works are protectable as courts across the country take up the question.

Another footnote in the "SURYAST" decision may offer hints at how we can expect disputes over the registration of AI-generated works to evolve in the United States. In Footnote 5, the Board notes that it cannot "consider the development of RAGHAV or the selection of the materials it was trained on" as the basis for registration of "SURYAST" because there is a lack of evidence on those topics in the record. Given this directive, applicants are likely to focus on the creative choices they made while training the models used to generate works in an attempt to demonstrate other forms of creative input beyond prompts.

In addition, the Copyright Office has stated that it is studying copyright issues related to AI and will use the information it receives to analyze the current state of the law, identify unresolved issues, and evaluate potential areas for congressional action. As part of this study, it issued a Notice of Inquiry in August 2023 to solicit public comments on copyright issues relating to AI, including on the issue of copyrightability. The Copyright Office published the comments it received, and we will likely hear more from the Copyright Office on the issue of copyrightability in the coming year. We could also see some proposed legislation to address the copyrightability issue, although amendments to the Copyright Act have been notoriously difficult to achieve.

Takeaways

Anyone using generative AI tools needs to be aware that there is great uncertainty as to whether they will be able to claim copyright protection in the United States for the outputs they generate. Copyright protection may, however, be more forthcoming in other jurisdictions outside of the United States. The uncertainty over how these questions will ultimately be settled also highlights the continued importance of artists and organizations documenting how AI tools are being used and how particular works were generated.

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