INTELLECTUAL PROPERTY AND GENERATIVE AI

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By: Justin Taylor and Geoffrey Lottenberg

As artificial intelligence (AI) continues to advance, new questions arise about how copyright and patent laws will apply to new content created by AI. Generative AI programs, such as Open AI's ChatGPT and DALL-E 2, create new images, texts, audio, and other content ("outputs") based on textual prompts provided by a user ("inputs"). Generative AI programs take the inputs entered by the user and create a new work based on those inputs and the variety of data sets used to train the AI. AI "training" generally involves exposing the AI to large quantities of existing works.

Are AI Outputs Protected by Copyright?
The issue of copyright protection for AI outputs will likely be determined in part by the concept of authorship. The Copyright Act gives copyright protection to "original works of authorship." The Copyright Act does not define who or what an author must be, but the U.S. Copyright Office only affords copyright protection to works created by human beings. Courts have long denied copyright protection to works created by nonhumans, and AI is now being categorized as nonhuman for copyright purposes.

In September 2022, writer Kristina Kashtanova registered a copyright for a graphic novel. However, the U.S. Copyright Office later initiated a cancellation proceeding against Kashtanova's copyright because she did not disclose that the images in her graphic novel were created by a generative AI called Midjourney. Kashtanova argued that she "authored" the images via "a creative, iterative process" involving "multiple rounds of composition, selection, arrangement, cropping, and editing for each image," comparing her use of AI to a tool akin to how a photographer uses a camera as a tool. The Copyright Office rejected this argument, believing that Midjourney was not a tool under Kashtanova's control, but instead that the manner in which Midjouney created images was ultimately unpredictable. The Office compared Kashtanova's use of the AI to a client hiring an artist, with her inputs seen as mere suggestions to the "artist" rather than orders. Regarding Kashtanova's time and effort with AI to create the images, courts have generally rejected "sweat of the brow" as a basis to support copyright protection for uncopyrightable works because effort has "no bearing on whether a work possesses the minimum creative spark required by the Copyright Act and the Constitution."

The Copyright Office also rejected Kashtanova's argument that the images she edited should be afforded copyright protection. Uncopyrightable works have been granted copyright protection via editing, but only when the edits were determined to involve a "sufficient amount of original authorship." Overall, the Office found Kashtanova's edits to be too insignificant to reach the level of creativity needed to afford the final product copyright perfection. The Copyright Office ultimately decided that the images in Kashtanova's graphic novel were uncopyrightable.

Although the Copyright Office is resistant to grant copyright protection to works generated by AI, the Office does not have final word on U.S. copyright law. Applicants can challenge the decisions of the Copyright Office in U.S. district court, but until those challenges are brought, the answer to whether AI generated works can be protected by U.S. copyright laws remains uncertain.

Can an AI be an Inventor?
It is well established that U.S. patent law only allows human beings, or "natural persons," to be listed as

inventors on patents. Last year, this notion was affirmed again in *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022). In that case, Stephen Thaler filed two patent applications with an AI named DABUS listed as the sole inventor. He claimed that DABUS autonomously conceived both inventions. The USPTO rejected both of Thaler's applications, deeming them incomplete because a machine cannot be an inventor and that only natural persons can be inventors. Thaler challenged the decision in district court, which affirmed the USPTO's decision, and Thaler finally appealed to the United States Court of Appeals. The Court relied on past case law and statutory interpretation for their ruling, specifically the Patent Act.

The Patent Act expressly states that inventors must be "individuals." The Patent Act does not define "individual," but the Supreme Court has held that, when used in statutes, the word "individual" refers to human beings unless there is "some indication Congress intended" a different reading. The Court found that nothing in the Patent Act shows that Congress intended to deviate from the ordinary meaning of "individual," but instead found that the Patent Act further emphasizes that "individuals" means human beings. The Court affirmed the USPTO's determination, solidifying the standard that only human beings can be listed as inventors on patents. The Court also made it clear that this decision does not answer the question of whether inventions made by human beings with the assistance of AI are eligible for patent protection.

Conclusion
Although current U.S. intellectual property law seems well equipped to handle most AI related issues, generative artificial intelligence is becoming more sophisticated every day. AI's constant progression will eventually require intellectual property law to adapt in order to prevent the damage, or hinderance, of intellectual property in the United States.

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