United States Copyright Office

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February 21, 2023

Van Lindberg
Taylor English Duma LLP
21750 Hardy Oak Boulevard #102
San Antonio, TX 78258

Previous Correspondence ID: 1-5GB561K

Re: Zarya of the Dawn (Registration # VAu001480196)

Dear Mr. Lindberg:

The United States Copyright Office has reviewed your letter dated November 21, 2022, responding to our letter to your client, Kristina Kashtanova, seeking additional information concerning the authorship of her work titled *Zarya of the Dawn* (the "Work"). Ms. Kashtanova had previously applied for and obtained a copyright registration for the Work, Registration # VAu001480196. We appreciate the information provided in your letter, including your description of the operation of the Midjourney's artificial intelligence ("AI") technology and how it was used by your client to create the Work.

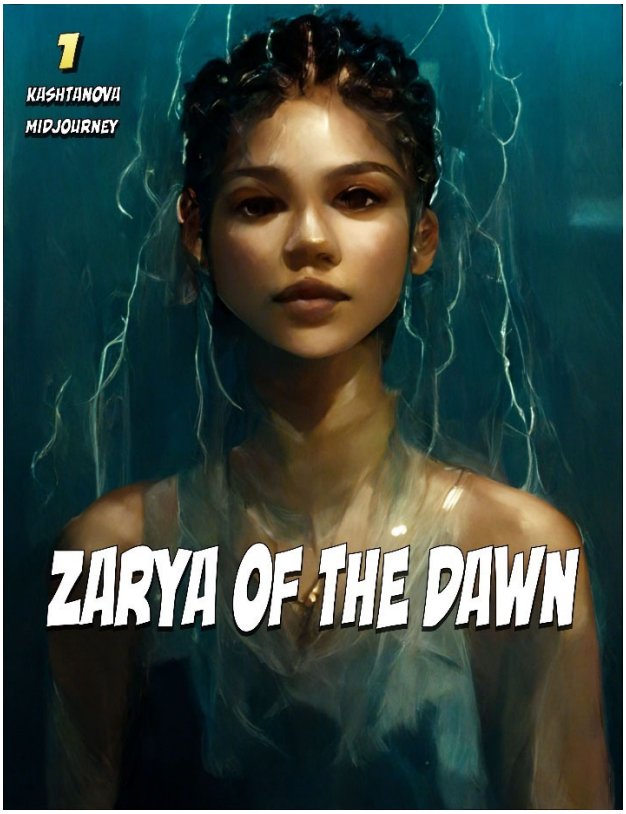
The Office has completed its review of the Work's original registration application and deposit copy, as well as the relevant correspondence in the administrative record.[1] We conclude that Ms. Kashtanova is the author of the Work's text as well as the selection, coordination, and arrangement of the Work's written and visual elements. That authorship is protected by copyright. However, as discussed below, 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.

The Office's reissuance of the registration certificate will not change its effective date—the new registration will have the same effective date as the original: September 15, 2022. The public record will be updated to cross-reference the cancellation and the new registration, and it will briefly explain that the cancelled registration was replaced with the new, more limited registration.

[1] The Office has only considered correspondence from Ms. Kashtanova and her counsel in its analysis. While the Office received unsolicited communications from third parties commenting on the Office's decision, those communications were not considered in connection with this letter.

I. DESCRIPTION OF THE WORK

As described in the application and accompanying deposit materials provided by Ms. Kashtanova, the Work is a "comic book" consisting of eighteen pages, one of which is a cover. The cover page consists of an image of a young woman, the Work's title, and the words "Kashtanova" and "Midjourney." The remaining pages consist of mixed text and visual material. A reproduction of the cover page and the second page are provided below:



II. SUMMARY OF ADMINISTRATIVE RECORD

On September 15, 2022, Ms. Kashtanova submitted an application for the Work and copies of each page of the Work as the deposit copy. In her application, Ms. Kashtanova listed the author of the Work as "Kristina Kashtanova" and stated that she had created a "[c]omic book." The application did not disclose that she used artificial intelligence to create any part of the Work, nor did she disclaim any portion of the Work.[2] The Office reviewed the application on the same day and registered the Work as registration number VAu001480196.

Shortly after registering the Work, the Office became aware of statements on social media attributed to Ms. Kashtanova that she had created the comic book using Midjourney artificial intelligence. Because the application had not disclosed the use of artificial intelligence,

[2] As we explained in our previous letter, while the word "Midjourney" appears on the cover page of the Work, there is no indication of the intent or meaning of the word on the cover. Letter from U.S. Copyright Office to Kristina Kashtanova at 2 (Oct. 28, 2022).

the Office determined that the application was incorrect, or at a minimum, substantively incomplete. In a letter dated October 28, 2022, the Office notified Ms. Kashtanova that it intended to cancel the registration unless she provided additional information in writing showing why the registration should not be cancelled.[3] Letter from U.S. Copyright Office to Kristina Kashtanova (Oct. 28, 2022).

On November 21, 2022, the Office received a timely response from Ms. Kashtanova's attorney, Mr. Van Lindberg. Letter from Van Lindberg, Taylor English Duma LLP, to U.S. Copyright Office (Nov. 21, 2022) ("Kashtanova Letter"). The letter describes Ms. Kashtanova's creation of the Work, including specific information about her use of Midjourney. Mr. Lindberg argues that the Work's registration should not be cancelled because (1) Ms. Kashtanova authored every aspect of the work, with Midjourney serving merely as an assistive tool, and, (2) alternatively, portions of the work are registrable because the text was authored by Ms. Kashtanova and the Work is a copyrightable compilation due to her creative selection, coordination, and arrangement of the text and images.

III. DISCUSSION

A. Legal Standards

Before turning to our analysis of the Work, we summarize here the legal principles that guide that analysis. The Copyright Act defines the scope of copyright protection. Under the Act, a work may be registered if it qualifies as an "original work[] of authorship fixed in any tangible medium of expression." 17 U.S.C. § 102(a). The Supreme Court has explained that the term "original" in this context consists of two components: independent creation and sufficient creativity. *See Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991). First, the work must have been independently created by the author. *Id.* Second, the work must possess sufficient creativity. *Id.* Only a modicum of creativity is necessary, but the Supreme Court has ruled that some works—such as the alphabetized telephone directory at issue in *Feist*—fail to meet even this low threshold. *Id.* The Court observed that "[a]s a constitutional matter, copyright protects only those constituent elements of a work that possess more than a *de minimis* quantum of creativity." *Id.* at 363. It found that there can be no copyright in a work in which "the creative spark is utterly lacking or so trivial as to be virtually nonexistent." *Id.* at 359.

Courts interpreting the phrase "works of authorship" have uniformly limited it to the creations of human authors. For example, in *Burrow-Giles Lithographic Co. v. Sarony*, the Supreme Court held that photographs were protected by copyright because they were "representatives of original intellectual conceptions of the author," defining authors as "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature." 111 U.S. 53, 57–59 (1884). In doing so, the Court rejected the argument that a photograph was merely "a reproduction on paper of the exact features of some natural object or of some person" made by a machine. *Id.* at 56. But the Court explained that if photography was

[3] Under 37 C.F.R. § 201.7(c)(4), if the Office becomes aware that an issued registration does not satisfy the statutory requirements for copyright "or that information essential to registration has been omitted entirely from the application or is questionable," the Office will correspond with the copyright claimant "in an attempt to secure the required information . . . or to clarify the information previously given on the application." If the claimant does not reply in 30 days, the Office will cancel the registration. *Id.*

a "merely mechanical" process, "with no place for novelty, invention or originality" by the human photographer, then "in such case a copyright is no protection." *Id.* at 59.[4]

In cases where non-human authorship is claimed, appellate courts have found that copyright does not protect the alleged creations. For example, the Ninth Circuit held that a book containing words "'authored' by non-human spiritual beings" can only gain copyright protection if there is "human selection and arrangement of the revelations." *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997). The *Urantia* court held that "some element of human creativity must have occurred in order for the Book to be copyrightable" because "it is not creations of divine beings that the copyright laws were intended to protect." *Id.*

The Office's registration practices follow and reflect these court decisions. The Office collects its understanding of the law in the *Compendium of U.S. Copyright Office Practices (Third Edition)*, which provides standards for examining and registering copyrighted works. Following the cases described above, the *Compendium* explains that the Office "will refuse to register a claim if it determines that a human being did not create the work." U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 313.2 (3d ed. 2021) ("COMPENDIUM (THIRD)") (providing examples of works lacking human authorship such as "a photograph taken by a monkey" and "an application for a song naming the Holy Spirit as the author of the work").[5]

Having considered the requirements for copyright protection, the Office turns to the elements of the Work as described in your letter.

B. The Work's Text

The Office agrees that the text of the Work is protected by copyright. Your letter states that "the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program." Kashtanova Letter at 2. Based on this statement, the Office finds that the text is the product of human authorship. Moreover, the Office finds that the text in the Work contains more than the "modicum of creativity" required for protection under *Feist*. *See* 499 U.S. at 346. For this reason, the text of the Work is registrable.[6]

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[4] This echoed the Court's decision five years earlier in the *Trade-Mark Cases*, which noted that "the writings which are to be protected [under the Copyright Clause] are the fruits of intellectual labor, embodied in the form of books, prints, engravings and the like." 100 U.S. 82, 94 (1879). The Court's later cases have similarly articulated a nexus between human expression and copyright. In *Mazer v. Stein*, the Court cited *Sarony* for the proposition that a work "must be original, that is, the author's tangible expression of his ideas." 347 U.S. 201, 214 (1954). And in *Goldstein v. California*, the Court again cited *Sarony* for the proposition that "[w]hile an 'author' may be viewed as an individual who writes an original composition, the term, in its constitutional sense, has been construed to mean an 'originator,' 'he to whom anything owes its origin.'" 412 U.S. 546, 561 (1973).

[5] The Office has refused to register a visual work created autonomously by an AI. *See* U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of A Recent Entrance to Paradise* (Feb. 14, 2022), https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf.

[6] The Work is described as "an adaption of Kashtanova's original story about Zarya." Kashtanova Letter at 3–4. This would make the Work a derivative of the original story and require that the Work contain separate textual authorship from the story that is itself sufficiently creative for copyright protection. *See* COMPENDIUM (THIRD)

C. The Selection and Arrangement of Images and Text

The Office also agrees that the selection and arrangement of the images and text in the Work are protectable as a compilation. Copyright protects "the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged" in a sufficiently creative way. 17 U.S.C. § 101 (definition of "compilation"); *see also* COMPENDIUM (THIRD) § 312.1 (providing examples of copyrightable compilations). Ms. Kashtanova states that she "selected, refined, cropped, positioned, framed, and arranged" the images in the Work to create the story told within its pages. Kashtanova Letter at 13; *see also id.* at 4 (arguing that "Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole."). Based on the representation that the selection and arrangement of the images in the Work was done entirely by Ms. Kashtanova, the Office concludes that it is the product of human authorship. Further, the Office finds that the compilation of these images and text throughout the Work contains sufficient creativity under *Feist* to be protected by copyright. Specifically, the Office finds the Work is the product of creative choices with respect to the selection of the images that make up the Work and the placement and arrangement of the images and text on each of the Work's pages. Copyright therefore protects Ms. Kashtanova's authorship of the overall selection, coordination, and arrangement of the text and visual elements that make up the Work.

D. The Individual Images

Turning to the individual images in the Work, the Office must consider the impact of Ms. Kashtanova's use of Midjourney's artificial intelligence technology in its copyrightability analysis. The majority of the Kashtanova Letter focuses on how Ms. Kashtanova used Midjourney to create these images. Before addressing the question of whether the images are copyrightable, the Office describes its understanding of Midjourney and how it works. The Office's understanding is based on the letter's description of the artificial intelligence service,[7] the Office's own knowledge, and Midjourney's public documentation, of which the Office takes administrative notice.[8]

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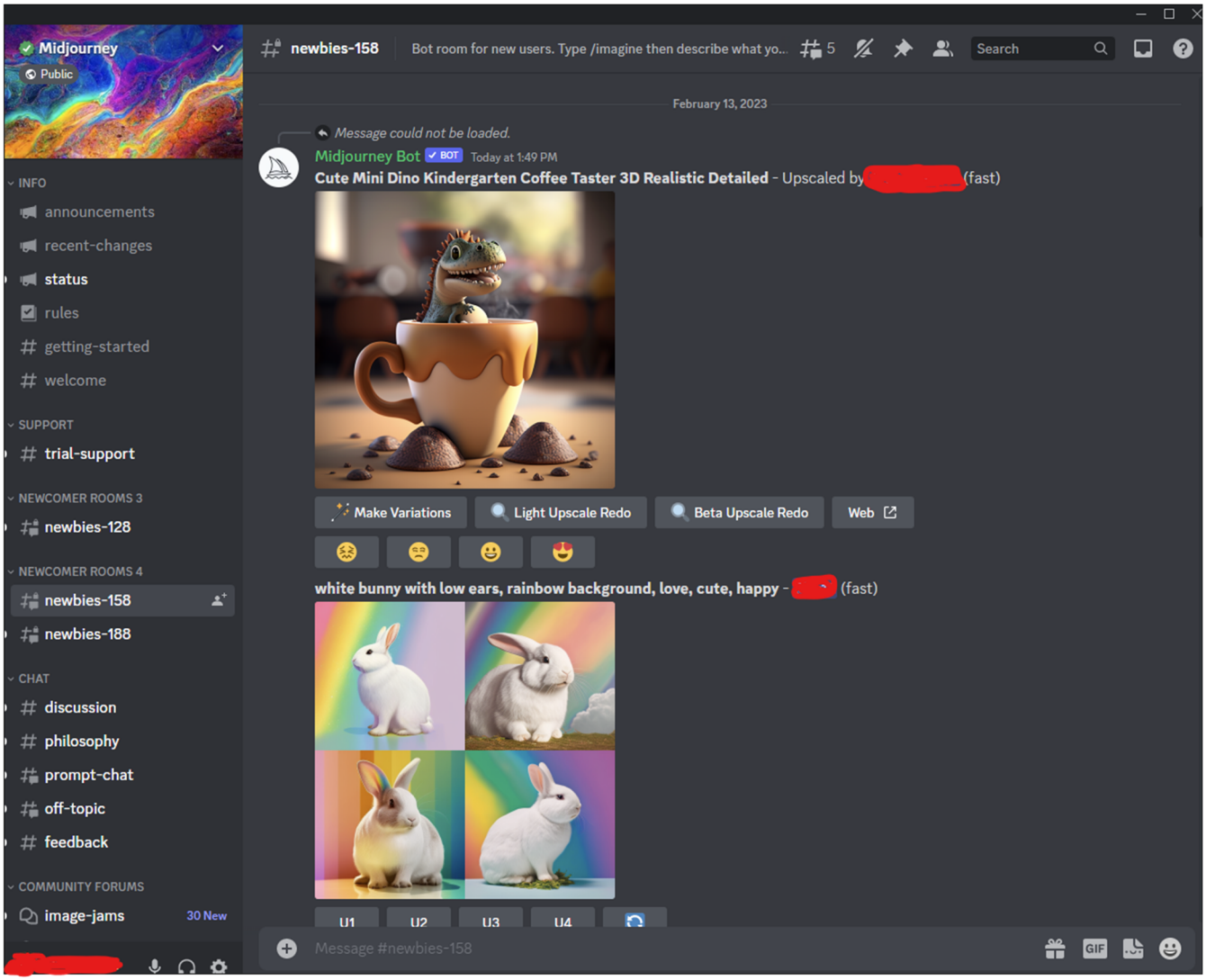
§§ 507.1, 507.2 (discussing derivative works). Ms. Kashtanova has provided a narrative passage in her letter, *see* Kashtanova Letter at 3–4, but it is unclear whether the passage is an excerpt of the short story or the story in full. In any event, the story was not submitted as part of the deposit for the Work, so the Office does not need to address it in connection with this application.

[7] Midjourney is a subscription service that allows users to pay to generate images, with subscription plans corresponding to the computational time it uses to generate images. *See Fast and Relax Mode*, MIDJOURNEY, https://docs.midjourney.com/docs/fast-relax ("Midjourney uses powerful Graphics Processing Units (GPUs) to interpret and process each prompt. When you purchase a subscription to Midjourney, you are purchasing time on these GPUs."); *Subscription Plans*, MIDJOURNEY, https://docs.midjourney.com/docs/plans (providing information about different subscription plans). Unless stated otherwise, all websites were last visited on February 17, 2023.

[8] "Ordinarily, the Office does not conduct investigations or make findings of fact to confirm the truth of any statement made in an application." COMPENDIUM (THIRD) § 602.4(C). But the Office "may take administrative notice of facts or matters that are known by the Office or the general public," and the Office may use that knowledge to evaluate an application that appears to be based on inaccurate or incomplete information. *Id.*

1. How Midjourney Works

Midjourney offers an artificial intelligence technology capable of generating images in response to text provided by a user. Midjourney operates on top of an unaffiliated third-party communication service called Discord, which is made up of individual servers operated by its users.[9] In order to use Midjourney, users must first join the Midjourney Discord server, which contains public "channels" where users can enter text.[10] Midjourney primarily operates through an automated account on these channels that reads user-entered text and generates images based on it. An example of a public channel depicting the use of Midjourney by individuals to generate images is provided below:



[9] Discord is a communication service that allows users to create "servers" that contain individual "channels" for text or voice communication. *See* Librarian, *Beginner's Guide to Discord*, DISCORD, https://support.discord.com/hc/en-us/articles/360045138571-Beginner-s-Guide-to-Discord.

[10] *See Quick Start*, MIDJOURNEY, https://docs.midjourney.com/docs/quick-start (explaining that the first step for using Midjourney is to "go directly to the Midjourney Discord").

Users operate Midjourney through "prompts," which are text commands entered in one of Midjourney's channels. As Midjourney explains, prompts must start with the text "/imagine" and contain text describing what Midjourney should generate.[11] Users also have the option to include (1) a URL of one or more images to influence the generated output, or (2) parameters directing Midjourney to generate an image in a particular aspect ratio or providing other functional directions.[12]

After a user provides Midjourney with a prompt, the technology will generate four images in response. The images are provided in a grid, and buttons underneath the grid allow users to request that Midjourney provide a higher-resolution version of an image (*e.g.*, U1, U2, U3, U4), create new variations of an image (*e.g.*, V1, V2, V3, V4), or to generate four new images from scratch (see light blue circular icon at far right below). For example, entering the prompt "/imagine cute baby dinosaur shakespeare writing play purple" resulted in the following response from Midjourney:

It is relevant here that, by its own description, Midjourney does not interpret prompts as specific instructions to create a particular expressive result. Because Midjourney "does not understand grammar, sentence structure, or words like humans," it instead converts words and phrases "into smaller pieces, called tokens, that can be compared to its training data and then used to generate an image." *Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts. Generation involves Midjourney starting with "a field of visual noise, like television static, [used] as a starting point to generate the initial image grids" and then using an algorithm to refine

[11] *See id.*; *see also Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts.
[12] For a list of parameters, see *Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list.

that static into human-recognizable images. *Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.[13]

The process by which a Midjourney user obtains an ultimate satisfactory image through the tool is not the same as that of a human artist, writer, or photographer. As noted above, the initial prompt by a user generates four different images based on Midjourney's training data. While additional prompts applied to one of these initial images can influence the subsequent images, the process is not controlled by the user because it is not possible to predict what Midjourney will create ahead of time. *See, e.g.*, Kashtanova Letter at 8 (describing the process of "provid[ing] the Midjourney service with [] prompts and inputs" so that it will "render[] another iteration" of the input "Raya as a hologram").

2. Application of Copyright Law to Midjourney Images

Based on the record before it, the Office concludes that the images generated by Midjourney contained within the Work are not original works of authorship protected by copyright. *See* COMPENDIUM (THIRD) § 313.2 (explaining that "the 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"). Though she claims to have "guided" the structure and content of each image, the process described in the Kashtanova Letter makes clear that it was Midjourney—not Kashtanova—that originated the "traditional elements of authorship" in the images.

Ms. Kashtanova claims that each image was created using "a similar creative process." Kashtanova Letter at 5. Summarized here, this process consisted of a series of steps employing Midjourney. First, she entered a text prompt to Midjourney, which she describes as "the core creative input" for the image. *Id.* at 7–8 (providing example of first generated image in response to prompt "dark skin hands holding an old photograph --ar 16:9").[14] Next, "Kashtanova then picked one or more of these output images to further develop." *Id.* at 8. She then "tweaked or changed the prompt as well as the other inputs provided to Midjourney" to generate new intermediate images, and ultimately the final image. *Id.* Ms. Kashtanova does not claim she created any visual material herself—she uses passive voice in describing the final image as "created, developed, refined, and relocated" and as containing elements from intermediate images "brought together into a cohesive whole." *Id.* at 7. To obtain the final image, she describes a process of trial-and-error, in which she provided "hundreds or thousands of descriptive prompts" to Midjourney until the "hundreds of iterations [created] as perfect a rendition of her vision as possible." *Id.* at 9–10.

[13] While Midjourney starts with a randomly chosen number, called a "seed," as the "starting point" for an image grid, users can use a parameter to specify a particular seed for the image-generation process. *See Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.

[14] As described above, the text "--ar 16:9" is a "parameter," or command, instructing Midjourney to generate an image in a 16:9 aspect ratio. *See Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list (adding "--aspect, or --ar" to a prompt instructs Midjourney to "[c]hange the aspect ratio of a generation"). *See also* Kashtanova Letter at 8 ("This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio").

Rather than a tool that Ms. Kashtanova controlled and guided to reach her desired image, Midjourney generates images in an unpredictable way. Accordingly, Midjourney users are not the "authors" for copyright purposes of the images the technology generates. As the Supreme Court has explained, the "author" of a copyrighted work is the one "who has actually formed the picture," the one who acts as "the inventive or master mind." *Burrow-Giles*, 111 U.S. at 61. A person who provides text prompts to Midjourney does not "actually form" the generated images and is not the "master mind" behind them. Instead, as explained above, Midjourney begins the image generation process with a field of visual "noise," which is refined based on tokens created from user prompts that relate to Midjourney's training database. The information in the prompt may "influence" generated image, but prompt text does not dictate a specific result. *See Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts (explaining that short text prompts cause "each word [to have] a more powerful influence" and that images including in a prompt may "influence the style and content of the finished result"). Because of the significant distance between what a user may direct Midjourney to create and the visual material Midjourney actually produces, Midjourney users lack sufficient control over generated images to be treated as the "master mind" behind them.

The fact that Midjourney's specific output cannot be predicted by users makes Midjourney different for copyright purposes than other tools used by artists. *See* Kashtanova Letter at 11 (arguing that the process of using Midjourney is similar to using other "computer-based tools" such as Adobe Photoshop). Like the photographer in *Burrow-Giles*, when artists use editing or other assistive tools, they select what visual material to modify, choose which tools to use and what changes to make, and take specific steps to control the final image such that it amounts to the artist's "own original mental conception, to which [they] gave visible form."[15] *Burrow-Giles*, 111 U.S. at 60 (explaining that the photographer's creative choices made the photograph "the product of [his] intellectual invention"). Users of Midjourney do not have comparable control over the initial image generated, or any final image. It is therefore understandable that users like Ms. Kashtanova may take "over a year from conception to creation" of images matching what the user had in mind because they may need to generate "hundreds of intermediate images." Kashtanova Letter at 3, 9.

Nor does the Office agree that Ms. Kashtanova's use of textual prompts permits copyright protection of resulting images because the images are the visual representation of "creative, human-authored prompts."[16] *Id.* at 10. Because Midjourney starts with randomly generated noise that evolves into a final image, there is no guarantee that a particular prompt will

[15] For this reason, the cases cited by Ms. Kashtanova regarding Photoshop do not alter our conclusion. *See* Kashtanova Letter at 11 n.13. Both cases involved situations where the artist had made deliberate, intentional edits to an image using Photoshop. In *Etrailer Corp. v. Onyx Enters., Int'l Corp.*, the court credited the plaintiff's statement that she used Photoshop to "smooth, crop, saturate, and burn" photographs of trailer accessories. Case No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916, at *4 (E.D. Mo. Feb. 7, 2018) (rejecting motion to dismiss that photographs were not protected by copyright). And in *Payton v. Defend, Inc.*, the court found a triable issue on copyrightability where the plaintiff used Photoshop to create a shirt design containing a silhouette of an AR-15 rifle based on a preexisting "picture of a model AR-15 Airsoft gun." No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358, at *9 (D. Haw. Dec. 19, 2017).

[16] While Ms. Kashtanova suggests that her text prompts are copyrightable because they are similar to poems, she did not submit them in the application and is not seeking to register the text prompts themselves, either separately or as part of the Work. *See* Kashtanova Letter at 9–10. Accordingly, the Office has not addressed the question of copyrightability of prompts here.

generate any particular visual output. Instead, prompts function closer to suggestions than orders, similar to the situation of a client who hires an artist to create an image with general directions as to its contents. If Ms. Kashtanova had commissioned a visual artist to produce an image containing "a holographic elderly white woman named Raya," where "[R]aya is having curly hair and she is inside a spaceship," with directions that the image have a similar mood or style to a "Star Trek spaceship," "a hologram," an "octane render," "unreal engine," and be "cinematic" and "hyper detailed," Ms. Kashtanova would not be the author of that image. *See id.* at 8 (text of prompt provided to Midjourney). Absent the legal requirements for the work to qualify as a work made for hire,[17] the author would be the visual artist who received those instructions and determined how best to express them. And if Ms. Kashtanova were to enter those terms into an image search engine, she could not claim the images returned in response to her search were "authored" by her, no matter how similar they were to her artistic vision.

The Office does not question Ms. Kashtanova's contention that she expended significant time and effort working with Midjourney. But that effort does not make her the "author" of Midjourney images under copyright law. Courts have rejected the argument that "sweat of the brow" can be a basis for copyright protection in otherwise unprotectable material.[18] The Office "will not consider the amount of time, effort, or expense required to create the work" because they "have no bearing on whether a work possesses the minimum creative spark required by the Copyright Act and the Constitution." COMPENDIUM (THIRD) § 310.7.

The Office's determination here is based on the specific facts provided about Ms. Kashtanova's use of Midjourney to create the Work's images. It is possible that other AI offerings that can generate expressive material operate differently than Midjourney does. However, on the administrative record before the Office, Ms. Kashtanova is not the author for copyright purpose of the individual images generated by Midjourney.

3. Images Edited by Ms. Kashtanova

Finally, Ms. Kashtanova suggests that she personally edited some of the images created by Midjourney. Her letter points to two specific images contained in the Work. While the Office accepts the statement that the changes were made directly by Ms. Kashtanova, it cannot definitively conclude that the editing alterations are sufficiently creative to be entitled to copyright.

First, Ms. Kashtanova explains that she "modif[ied] the rendering of Zarya's lips and mouth" in an image on page 2 of the Work. Kashtanova Letter at 12.

[17] *See* 17 U.S.C. § 101 (definition of "work made for hire").
[18] Copyright protection cannot serve "a reward for the hard work that went into" creating an otherwise unprotectable work, because otherwise "sweat of the brow" would permit copyright to extend further than the author's original contributions. *Feist*, 499 U.S. at 352–53.

Detail before Photoshop *Detail after Photoshop*

The changes to Zarya's mouth, particularly her upper lip, are too minor and imperceptible to supply the necessary creativity for copyright protection. The Office will register works that contain otherwise unprotectable material that has been edited, modified, or otherwise revised by a human author, but only if the new work contains a "sufficient amount of original authorship" to itself qualify for copyright protection. COMPENDIUM (THIRD) § 313.6(D). Ms. Kashtanova's changes to this image fall short of this standard. *Contra Eden Toys, Inc. v. Florelee Undergarment Co*., 697 F.2d 27, 34–35 (2d Cir. 1982) (revised drawing of Paddington Bear qualified as a derivative work based on the changed proportions of the character's hat, the elimination of individualized fingers and toes, and the overall smoothing of lines that gave the drawing a "different, cleaner 'look'").

Second, Ms. Kashtanova points to an image on page 12 of the Work depicting an old woman with her eyes closed. She describes this work as created "using both the Midjourney service and Photoshop together," with edits in Photoshop made to "show[] aging of the face, smoothing of gradients[,] and modifications of lines and shapes." Kashtanova Letter at 11. The image as it appears in the Work is displayed below:

Based on Ms. Kashtanova's description, the Office cannot determine what expression in the image was contributed through her use of Photoshop as opposed to generated by Midjourney. She suggests that Photoshop was used to modify an intermediate image by Midjourney to "show[] aging of the face," but it is unclear whether she manually edited the youthful face in a previous intermediate image, created a composite image using a previously generated image of an older woman, or did something else. To the extent that Ms. Kashtanova made substantive edits to an intermediate image generated by Midjourney, those edits could provide human authorship and would not be excluded from the new registration certificate.

IV. CONCLUSION

For the reasons explained above, the Office concludes that the registration certificate for *Zarya of the Dawn*, number VAu001480196 was issued based on inaccurate and incomplete information. Had the Office known the information now provided by Ms. Kashtanova, it would have narrowed the claim to exclude material generated by artificial intelligence technology. In light of the new information, the Office will cancel the previous registration pursuant to 37 C.F.R, § 201.7(c)(4) and replace it with a new registration covering the original authorship that Ms. Kashtanova contributed to this work, namely, the "text" and the "selection, coordination, and arrangement of text created by the author and artwork generated by artificial intelligence." Because these contributions predominantly contain textual material, they will be reregistered as an unpublished literary work.[19] The new registration will explicitly exclude "artwork generated by artificial intelligence."

The public record will reflect this decision. First, the record for the cancelled registration will indicate that the cancellation was due to a failure to exclude non-human authorship contained in the work. Second, the record will reflect that a new, more limited registration for this work has been issued in Class TXu and will include a cross-reference to that new registration. Third, the new registration will include a cross-reference to the cancelled registration in the "Prior Registration Cancelled" field. Finally, the Office will add the following annotation to the new certificate: "Reason for Reregistration: VAU001480196 cancelled pursuant to 37 CFR 201.7(c)(4) for failure to exclude non-human authorship." The new registration will have the same effective date as the cancelled registration: September 15, 2022.

The Office will cancel the original certificate of registration and issue a new certificate reflecting these changes and mail it to Ms. Kashtanova under separate cover.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of the Office of Registration Policy & Practice

[19] To be clear, this reclassification is made solely for purposes of registration. It "has no significance with respect to the subject matter of copyright or the exclusive rights" in this work. 17 U.S.C. 408(c)(1).

Enclosures:
U.S. Copyright Office Letter (Oct. 28, 2022)
Kris Kashtanova Letter (Nov. 21, 2022)

United States Copyright Office
Library of Congress · 101 Independence Avenue SE · Washington DC 20559-6000 · www.copyright.gov

October 28, 2022

Kristina Kashtanova
347 West 57th Street, Apt 4B
New York, NY 10019

Correspondence ID: 1-5GB561K

RE: Zarya Of The Dawn

Dear Ms. Kashtanova:

We are writing you regarding the copyright registration that you obtained for the work titled *Zarya Of The Dawn* (the "Work") on September 15, 2022 (Registration # VAu001480196). The application you submitted for the Work identified yourself as the sole author and did not disclaim any portions of the Work. The only information available to the Registration Specialist during examination was what you provided in the application and the deposit copy of the Work. Based on this information, the U.S. Copyright Office (the "Office") registered the Work and issued a certification of registration that reflected you as the sole author.

Soon after the Work was registered, the Office was contacted by a reporter in response to public statements you made regarding the creation of the Work. You stated that an artificial intelligence tool was used to create some or all of the content in the Work. This information was not provided to the Office in your application. Based on these comments, we have preliminarily concluded that the information in your application was incorrect or, at a minimum, substantively incomplete. Pursuant to 37 C.F.R. § 201.7(c)(4), by this letter, we are initiating cancellation of U.S. Copyright Office Registration VAu001480196 because by your own admission, you are not the sole author of the entire work and, at a minimum, the claim should have been limited to exclude non-human authorship. You have thirty days to respond in writing to show cause why this registration should not be cancelled.

Copyright's Human Authorship Requirement

The U.S. Copyright Office will register an original work of authorship only if the work was created by a human being. *U.S. Copyright Office, Compendium of U.S. Copyright Office Practices* § 306 (3d ed. 2021). The copyright law only protects "the fruits of intellectual labor" that "are founded in the creative powers of the mind." *Trade-Mark Cases*, 100 U.S. 82, 94 (1879). Because copyright law is limited to "original intellectual conceptions of the author," the Office will refuse to register a claim if it determines that a human being did not create the work. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884). *See also* 17 U.S.C. § 102(a); *Compendium (Third)* § 306.

Consistent with the law, the Office will not knowingly register works produced by a machine or mere mechanical process that operates randomly or automatically without sufficient creative input or intervention from a human author. *See* 17 U.S.C. § 102(b) (The Copyright Act prohibits copyright protection for "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."); *Compendium (Third)* § 313.2. The Office recently discussed its requirement of human authorship in a written decision affirming the denial of an application for a 2D visual work claimed to be solely created by an artificial intelligence machine. *See* Copyright Review Board Letter to Ryan Abbott, dated February 14, 2022 (available at https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf).

The Application for Registration of the Work

Upon submission of your application, you signed a certification confirming that all of the statements in the application are true to the best of your knowledge.[1] In the space for "author," you identified yourself. Because the "limitation of claim" and "Note to C.O." spaces on the application were left blank and there was no cover letter explaining how the work was created, the Registration Specialist examining the application had no reason to conclude that you were not the sole author of the entire work as stated on your application). Nothing in the deposit copy of the Work contradicted this conclusion. The material deposited for registration consists of eighteen (18) individual files containing .jpg images. Each of the images contain text and graphical material. While the word "Midjourney" appears on the cover page of the work, there is no indication of the intent or meaning of the word on the cover. Based on the information submitted, the Registration Specialist appropriately approved the registration without correspondence or annotation per Copyright Office practices. The effective date of this registration is September 15, 2022.

After the registration was approved, the Office became aware of public statements and online articles in which you discuss the creation of *Zarya Of The Dawn*.[2] After reviewing these statements, the Office now understands that "Midjourney" is an artificial intelligence tool you used to create some or all of the material contained in the work. In those public statements, you claim that your reliance on this artificial intelligence tool was clearly disclosed in your application. However, the word "Midjourney" appears only once within eighteen (18) individual files of material submitted to the Office for registration. This cryptic inclusion of the name of the tool was by no means an obvious or clear indication that you may not have created some or all of the material included in this work—contrary to the information you provided in your application. Had you included such a clear statement in an appropriate space on the application, the Registration Specialist would have corresponded with you to determine if this work was created by a human author, and if so, to clarify the appropriate scope of your claim. The fact that the

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[1] 37 C.F.R. § 202.3(c)(3)(iii). Knowingly making a false representation of a material fact in an application for copyright registration, or in any written statement filed in connection with the application, is a crime that is punishable under 17 U.S.C. § 506(e).

[2] *See* Kris.Kashtanova, Instagram, (September 22, 2022), Kris Kashtanova on Instagram: "I got Copyright from the Copyright Office of the USA on my Ai-generated graphic novel. I was open how it was made and put Midjourney on…"; *Artist Claims First U.S. Copyright for Graphic Novel Featuring AI Art,* Gizmodo, Kyle Barr (September 26, 2021, 1:15 PM) https://gizmodo.com/ai-art-shutterstock-getty-fur-infinity-1849574917; *SO IT IS POSSIBLE—Artist receives first known US copyright registration for latent diffusion AI art,* Ars Technica, Benj Edwards (September 22, 2022, 5:38 PM) https://arstechnica.com/information-technology/2022/09/artist-receives-first-known-us-copyright-registration-for-generative-ai-art/.

word "Midjourney" appears on the cover page of a Work does not constitute notice to the Office that an AI tool created some or all of the Work.

Cancellation

The Copyright Office may cancel a completed registration where it is clear that no registration should have been made because the work does not constitute copyrightable subject matter or fails to satisfy the other legal and formal requirements for obtaining a registration. 37 C.F.R. § 201.7(b)(1). The Copyright Office will cancel a completed registration where it is clear that no registration should have been made because "information essential to registration has been omitted entirely from the application or is questionable." 37 C.F.R. § 201.7(c)(4).

In such instances, the Copyright Office will notify the copyright claimant named on the original registration in writing of the proposed cancellation, and the claimant will be given thirty (30) days from the date of this communication, to show cause in writing why the registration should not be cancelled. *Id*. If the claimant fails to respond within the thirty (30) day period, or if after considering the claimant's response, the Copyright Office determines that the registration was made in error and not in accordance with the law, the registration will be cancelled. *Id*.

Conclusion

After carefully reviewing your numerous public statements describing the facts surrounding the creation of the Work registered under VAu001480196, the Office finds that the Work should not have been registered because it cannot be determined that it contains enough original human authorship to sustain a claim to copyright.

Should you choose to respond as provided in 37 C.F.R. § 201.7(c)(4), your response must be received no later than thirty (30) days from the date of this message. If you choose to respond, you should explain in detail exactly how the Work was created, including your reliance on pre-existing photographs, artificial intelligence tools, or any other material incorporated into the work, which you did not author.

Please email your response as an attachment to *registrationprogramoffice@copyright.gov*.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

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21 November 2022

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

Sent via email to registrationprogramoffice@copyright.gov

RE: Response under 37 C.F.R. § 201.7(c)(4) to the correspondence of Oct 28, 2022
RE: Registration of Zarya of the Dawn, Reg. No. VAu001480196
(Correspondence ID: 1-5GB561K)

Dear Mr. Kasunic:

We are writing in response to your correspondence of October 28, 2022 as counsel to Kristina Kashtanova. Kashtanova was recently granted copyright registration no. VAu001480196 for her work “Zarya of the Dawn” (the “Work”).

Subsequent to Kashtanova’s successful registration of the Work, the Office initiated cancellation of her registration on the basis that “the information in [her] application was incorrect or, at a minimum, substantively incomplete” due to Kashtanova’s use of an artificial intelligence generative tool (“the Midjourney service”) as part of her creative process. The concern of the Office appears to be that the Work does not have human authorship, or alternatively that Kashtanova’s claim of authorship was not limited to exclude elements with potential non-human authorship.

We are writing to affirm Kashtanova’s authorship of the entirety of the Work, despite her use of Midjourney’s image generation service as part of her creative process.

In this letter, we will describe the creative process that Kashtanova used to author every element of the Work. Accordingly, Kashtanova had no reason to recite any limitations of the claim or to provide notes to the Office, for the same reason that photographers do not

typically recite that they "used a camera" to create an image and authors do not disclaim portions of an image that they used Adobe Photoshop to create or modify.

We note that Kashtanova previously replied to your letter, providing some details of her creative work. That reply, however, was made without benefit of counsel and did not address all the issues raised. This letter supersedes any previous replies and constitutes Kashtanova's full response.[1]

Copyright Status of the Text

Before describing the creative process resulting in the images in the Work, we note that the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program. As such, we assume that there is no dispute about the human authorship or copyrightability of the textual elements of the Work.

Legal Basis for Registration

The Copyright Office has recognized and registered works generated with the help of machines since *Burrow-Giles Lithographic Co. v. Sarony*.[2] In *Burrow-Giles*, the Supreme Court says that authorship "involves originating, making, producing, as the inventive or master mind, the thing which is to be protected," and "the author is the [person] who really represents, creates, or gives effect to the idea, fancy, or imagination."[3]

As stated in the *Compendium of U.S. Copyright Office Practices* (3d ed. 2021), the Office will not register works produced by a machine or mere mechanical intervention from a human author. 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."[4]

As described below, Kashtanova engaged in a creative, iterative process which she describes as "working with the computer to get closer and closer to what I wanted to express." This process included multiple rounds of composition, selection, arrangement, cropping, and editing for each image in the Work. Her efforts make her the author of the Work, including authorship of each image in the Work. The computer programs she used,

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[1] We are also aware that one or more third parties also reached out to comment on your letter. No other parties represent Kashtanova and no other communications should be considered part of her response.
[2] 111 U.S. 53, 4 S. Ct. 298 (1884).
[3] *Id.* at 61, 283, internal citations and quotation marks omitted.
[4] *Compendium of U.S. Copyright Office Practices* (3d ed. 2021) at § 313.2, quoting U.S. Copyright Office, Report to the Librarian of Congress by the Register of Copyrights 5 (1966), emphasis added.

including the Midjourney image creation service, were but “an assisting instrument” to Kashtanova.

The Press Accounts Oversimplify Kashtanova’s Creative Process

Per your correspondence of October 28, we understand that the Office reviewed various press accounts describing the creation of the Work. Those accounts oversimplified Kashtanova’s process and improperly characterized the role of the Midjourney service for dramatic effect. Even without detailing all the steps taken by Kashtanova, the fact that the Work took over a year from conception to creation makes it clear that it was not an unguided, “push-button” process. Developing each individual image took hours; finalizing each individual page took a day or more.

The Work Embodies the Original Conception of Kashtanova

The initial inspiration for the Work came in September 2021. As described by Kashtanova:

> I was taking self-portraits and creating different worlds using Cinema4D and Photoshop. I lost my best friend in August and my grandmother (Raya) in February. At that time, I didn't know I would experience more loss, but it felt that the year was painfully difficult. Photography wasn't bringing any income, and I tried to learn 3D and get a job in that area (unsuccessfully). Those worlds were my escape, and it was less about visuals and more about writing.

The loss of Kashtanova’s grandmother had a powerful influence on her, so she set out to create a story exploring her grief through the perspective of a girl who is transported to a new world and has to discover where she is from the clues around her:

> There was a postcard in my pocket with a beautiful view that said: “Zarya, lead me on a journey. Rusty”
>
> I assumed Zarya was me. I didn’t remember who Rusty was. Later that day I found Raya, my interworld ship, and I also discovered that I could travel through the worlds and I could adjust to any of them without any additional equipment. My only strength is adaptability. I get tired a lot and often need a nap. I can’t fly or jump. Some days I find it hard to leave my ship and explore. So I’m pretty ordinary, I don’t have superpowers.
>
> Every world I have visited so far was uninhabited. Today’s world looked familiar even though I haven’t been here before. It was Zaraya. A world of everlasting dawn. It wasn’t until I stood on the rock looking at its sun that froze above the horizon when I realized it was the same view as I had on my postcard. Rusty saw this view, whoever this Rusty was! I felt deeply connected to this entity I knew nothing about, and a longing to find

> someone in those worlds. I stood there for a long time and imagined how one day I'll tell Rusty about my adventures.

The Work at issue in this registration is an adaptation of Kashtanova's original story about Zarya. It is designed to communicate–through words *and* pictures–the experience of a girl who wakes up in an abandoned world with no memory and only a postcard in her pocket, traveling around different worlds to find clues about what happened to the Earth.

The Work, Including the Images, is Registrable as a Compilation Under the Copyright Act

There are no tools, of any sort, that can take the original conception of Kashtanova and, un-guided by humans, create the type of immersive and integrated story that exists in the Work. Each picture communicates an essential element of the story, supporting and expanding upon the text written by Kashtanova.

Our position is that every element of the Work reflects Kashtanova's authorship. But if we were to assume for the sake of argument that some individual images didn't meet the legal standard, the Work would still be copyrightable as a compilation under § 101 of the Copyright Act.[5] The Copyright Act defines a compilation as "a work formed by the collection and assembling of preexisting materials *or of data* that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."[6] This definition does not require that the materials used to create a compilation be themselves copyrightable. Even under the most limited interpretation, the Midjourney-associated images used in the Work are "data." Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole.

The Structure and Content of Each Image was Guided by Kashtanova

In addition to the copyrightability of the Work as a whole, each individual picture is itself the result of a creative process that yields a copyrightable work. Kashtanova could extract any single image from the Work and submit it to the Office and correctly assert her authorship of that image.

Unlike the "autonomously generated" picture known as "A Recent Entrance to Paradise,"[7] all the images in the Work were *designed* by Kashtanova. The visual structure of each image, the selection of the poses and points of view, and the juxtaposition of the various visual elements within each picture were consciously chosen. These creative selections are similar to a photographer's selection of a subject, a time of day, and the angle and framing of an image. In this aspect, Kashtanova's process in using the Midjourney tool to create the images in the Work was essentially similar to the artistic process of

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[5] 17 U.S.C. § 101 *et. seq.*
[6] *Id*. at 101, emphasis added.
[7] https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf

photographers - and, as detailed below, was more intensive and creative than the effort that goes into many photographs. Even a photographer's most basic selection process has been found sufficient to make an image copyrightable.[8] The same reasoning and result should apply to the images in Kashtanova's Work.

The Creative Process Resulting in Each Image

Each image in the Work went through a similar creative process. We will describe the process with regard to a few particular images as examples, but each and every image in the Work was created in a similar fashion.

Image: Zarya Holding a Postcard

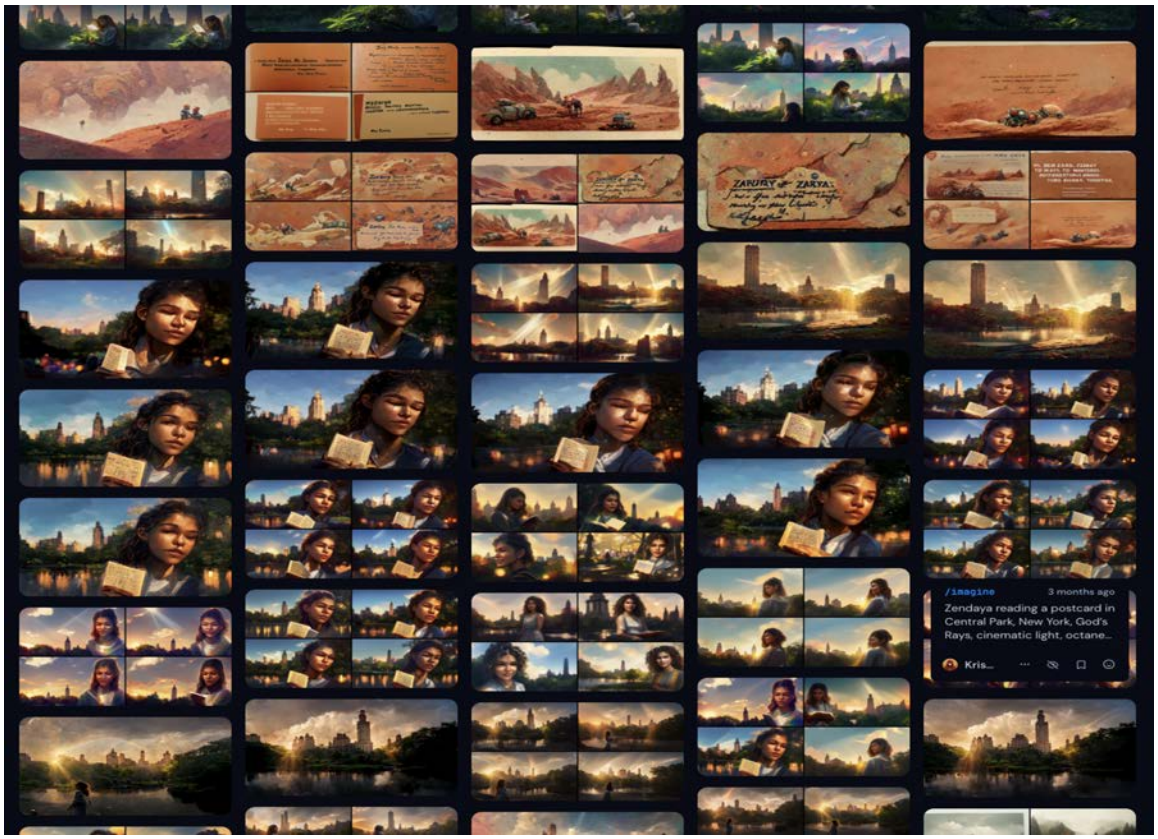
This image, "Zarya Holding a Postcard," is one of the most important images in the Work. It is contained within the first pages of the story and is used to establish Zarya's character and the setting for the story. This was the final image resulting from Kashtanova's creative process before it was cropped and placed in context in the Work.

The first version of "Zarya Holding a Postcard"–shown to the right–was much less refined. So how did Kashtanova develop this initial image into the final version shown above? She went through an extensive iterative process involving hundreds of versions as shown below.

Screenshot #1 of intermediate versions of "Zarya Holding a Postcard":

[8] *see Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 23 S. Ct. 298 (1903).

Screenshot #2 of intermediate versions of “Zarya Holding a Postcard”:



Screenshot #3 of intermediate versions of “Zarya Holding a Postcard”:

Looking at the intermediate versions of “Zarya Holding a Postcard” gives some insight into the thought process involved in creating the final image. Different elements of the final image are created, developed, refined, and relocated. The final image includes multiple elements from different generations of intermediate images all brought together into a cohesive whole. The evolution of the image under the direction of Kashtanova, and her selection, arrangement, compositing, and visual juxtaposition of various image elements all show how her authorial intent guided her use of the Midjourney tool.

Prompt Engineering and Copyrightable Expression

Further insight into Kashtanova’s authorship can be seen through an analysis of Kashtanova’s “prompts.” Midjourney’s image creation service can take various types of inputs:

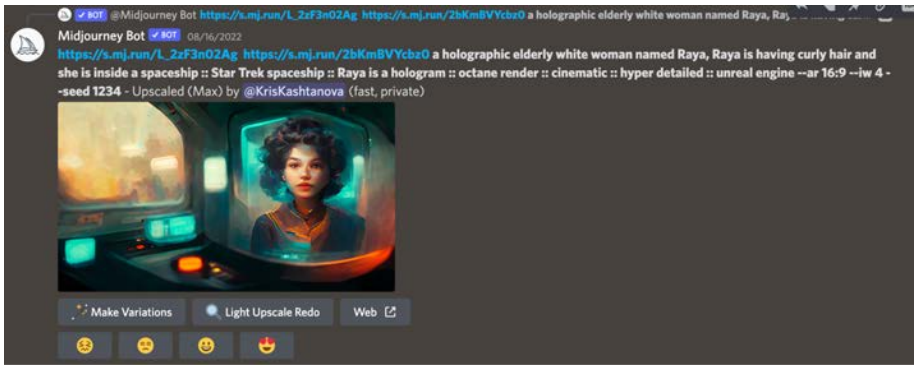
- A “prompt,” a English description of a scene or objects in a scene
- One or more pre-existing images including aspects of the layout, textures, or “feel” desired by the artist
- “Masks” that isolate portions of an input image to allow or disallow generation in defined portions of the input image
- Options that constrain various aspects of the generative process (such as size and aspect ratio)
- Options that modify the generative process, making the final images more refined, or closer/farther from a chosen input

These inputs are the tools by which an author, such as Kashtanova, guides the Midjourney service’s generation of images consistent with the author’s creative vision.[9] For example, the text prompt corresponding to the very first version of “Zarya Holding a Postcard” can be seen in the included image. It reads: “dark skin hands holding an old photograph –ar 16:9”.

[9] This letter does not address the use of the “mask” input type because it was not used by Kashtanova in creation of her Work.

This input, while simple, contains the core creative input that went into *this initial version* of the "Zarya Holding a Postcard" image. Kashtanova specified a subject ("hands"), an object ("a … photograph"), and descriptive context ("dark skin," "holding," and "old.") This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio. Responsive to her inputs, the service generated four output images based upon Kashtanova's inputs. Kashtanova then picked one or more of these output images to further develop. Subsequent iterations tweaked or changed the prompt as well as the other inputs provided to Midjourney.

For another example, this screenshot shows some of the inputs for an intermediate version of the image "Raya as a Hologram."



The inputs for this intermediate image included two images previously developed by Kashtanova, each identified by a URL:

The prompt includes a description of a scene ("a holographic elderly white woman named Raya, raya is having curly hair and she is inside a spaceship") as well as some mood and style-related directions ("Star Trek spaceship," "Raya is a hologram," "octane render," "cinematic," "hyper detailed," "unreal engine"). The inputs also include constraints on the output ("--ar 16:9" and "--iw 4") as well as a technical option modifying the generative path taken by the service ("-seed 1234"). After Kashtanova provided the Midjourney service with her prompt and inputs, including the multiple previously-authored intermediate images of different subjects, the tool rendered another iteration of the "Raya as a Hologram" image.

The Supreme Court has said that only "a modicum of creativity" is necessary to make a work copyrightable.[10] As shown in the screenshot evidence above, each one of the

[10] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 342, 111 S. Ct. 1282, 1286 (1991).

images, including each intermediate image above, is the result of Kashtanova's creative input by means of the prompts and inputs provided to the Midjourney service. Kashtanova visibly guided the creation of each image in accord with her artistic vision.

When further considering the Work at issue here, the creative input associated with each image in the final Work is multiplied. *Each* of the hundreds of intermediate images used to produce a final image required the composition of inputs and prompts, followed by one or more selections to use in the next iteration. The Copyright Act does not dictate that an author's creative input be provided in a particular form or that an artist use a particular tool.[11] So long as the creative output is fixed into a tangible medium of expression, any tool that allows the author's creative expression to "be perceived, reproduced, or otherwise communicated" is eligible for copyright. This includes works created by using the Midjourney service.

The Creative Inputs to the Midjourney Service Show Human Authorship

As described above, each iteration of each image is the result of a unique set of inputs composed by Kashtanova. These inputs include hundreds or thousands of descriptive prompts. For example, one prompt written by Kashtanova reads as follows:

sci-fi scene future empty New York,
Zendaya leaving gates of Central Park
and walking towards an empty city,
no people, tall trees,
New York Skyline forest punk,
crepuscular rays, epic scene,
hyper realistic, photo realistic,
overgrowth,
cinematic atmosphere, ethereal lighting.

Kashtanova paired this poetic scene description with an intermediate image, previously created by Kashtanova, that captured some aspects of her vision for the final work (shown to the right).

This example image is not unusual or unique in having Kashtanova's

[11] "Copyright protection subsists ... in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. 102(a) (1994).

authorial input. The Midjourney service does not generate images randomly. It takes creative, human-authored prompts and inputs and renders them in another form. Each and every image included in the Work was rendered in similar fashion in response to inputs provided by Kashtanova. All the images used in the Work are simply alternative representations of the creative input provided to the Midjourney service by the author.

We believe that had Kashtanova applied to register this set of inputs alone, the Office would have recognized the creative input and human authorship inherent in the composed text and selected image. Likewise with almost all of Kashtanova's prompts. Although many of the prompts are short, some are much longer, up to hundreds of words in length. However, length and complexity are not requirements for copyrightability. Many poems are short–and just like a poem, each Midjourney prompt was crafted by Kashtanova to succinctly paint a word picture of a particular scene. If Kashtanova's scene description and input image selection are themselves creative and copyrightable, then the alternative rendering of those inputs generated by the Midjourney service should be equally copyrightable.

Further, each final image in the Work was not the result of a single creative input. Kashtanova painstakingly shaped each set of inputs and prompts over hundreds of iterations to create as perfect a rendition of her vision as possible.

The Cropping, Juxtaposition, and Framing of the Images Shows Human Authorship

After writing all the text for the story and generating hundreds of potential images, Kashtanova's work on each image was not done. She selected which images to use and sequenced and arranged them into a unique and personal Work, like a collage. Further, every image in the final Work was cropped, framed, and placed to better convey the story and feel Kashtanova had in mind.

Even in the final arrangement and cropping of the images, Kashtanova's authorship shines through. Using again the example of the image "Zarya Holding a Postcard," Kashtanova made the decision to closely crop the image, obscuring part of Zarya's face and almost entirely removing the city background she had painstakingly developed. Her crop changed the horizontally-oriented source image into a vertically-oriented image, which she placed at the lower right hand corner of the page. She did this to create a sense of expectation, movement, and intrigue.

This imposition of meaning and expectation on the image demonstrates Kashtanova's "creative spark,"[12]

[12] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345, 111 S. Ct. 1282, 1287 (1991).

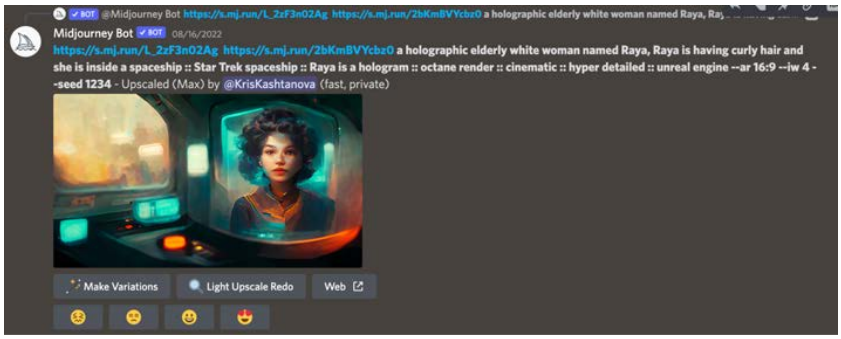
the minimal amount of originality needed to make this image her own. Kashtanova used tools to perform this cropping, juxtaposition, and arrangement–in this case a tool called "Comic Life 3"–but no tool could independently imbue it with emotional meaning as Kashtanova did.

Use of Computer Tools is Already Allowed by the Copyright Office

The use of computer-based tools is already allowed by the Office. The refinement process illustrated above is similar to the processes used in other images registered by the Office every day. Artists use programs such as Adobe Photoshop as part of an iterative process to refine images to match their expressive intent. These final works are recognized by courts and by the Office as having human authorship in spite of the use of Photoshop as a tool for generating and refining the image.[13] Kashtanova's use of the Midjourney service is no different.

In fact, at times the Midjourney service was not enough and Kashtanova used Photoshop to perform the type of creative refinement typical of the process for similar works.

For example, page 12 of the Work includes an image based on Kashtanova's grandmother. This image was developed using both the Midjourney service and Photoshop together.



As with other images from the Work, Kashtanova used the Midjourney service to iteratively create and refine the image. She then used Photoshop to alter the image into its final form (as shown to the right). This final form shows aging of the face, smoothing of gradients and modification of lines and shapes, and cropping for effect. Once Kashtanova had all of the images necessary for a page, she used the previously-mentioned "Comic Life 3" to crop and place the images into her desired arrangement.

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[13] In contrast, some courts have found that *using* a tool like Photoshop to make any adjustment to an input is sufficient to meet the legal standards for copyrightability. *See, e.g., Etrailer Corp. v. Onyx Enters., Int'l Corp.,* No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916 (E.D. Mo. Feb. 7, 2018), *Payton v. Defend, Inc.,* No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358 (D. Haw. Dec. 19, 2017).

Similarly, Kashtanova used Photoshop to refine the image “Zarya Holding a Postcard” discussed earlier, by modifying the rendering of Zarya’s lips and mouth:

Detail before Photoshop *Detail after Photoshop*

Kashtanova used the Midjourney service, Photoshop, and Comic Life 3 to create this image and place it in the Work–but she could have created the exact same image using similar tools already included in Photoshop. There is a plugin called “Stability” that embeds AI-powered image generation functionality directly into Photoshop.[14] Similar AI-powered content generation tools (such as Adobe’s “Context-Aware Fill”[15]) have been available in Photoshop for years. The cropping and placement functions could have been performed entirely in Photoshop, but Kashtanova–like many other artists today–was experimenting with the new generative tools to explore their capabilities. Kashtanova’s choice to use one tool over another should have no bearing on the copyrightability of her creative output. If this image would have been copyrightable had she used only Photoshop, it should be equally copyrightable using tools such as the Midjourney service and Comic Life 3.

Kashtanova’s Registration Should Be Affirmed

The question raised in the correspondence of October 28th was whether the Work provided to the Office for registration was the result of human authorship or was the result of a purely mechanical or autonomous computer process.

Our response is that the Work, “Zarya of the Dawn,” is wholly the result of Kashtanova’s authorship and input. Each and every part of the Work was guided by her creative input and reflects her authorship. In the language of *Burrow-Giles,* Kashtanova was the

[14] https://exchange.adobe.com/apps/cc/114117da/stable-diffusion
[15] https://helpx.adobe.com/photoshop/how-to/fills-masks-sensei.html

mastermind, "the one who really represents, creates, or gives effect to the idea, fancy, or imagination."[16]

While Kashtanova used the Midjourney service to assist her in creating some of the images in the Work, the use of that tool does not diminish the the human mind that conceived, created, selected, refined, cropped, positioned, framed, and arranged all the different elements of the Work into a story that reflects Kashtanova's personal experience and artistic vision. As such, the Work is the result of human authorship and Kashtanova's registration should be affirmed.

As shown by the recent attempt to register the purely AI-generated work "A Recent Entrance to Paradise," it is possible for AI-powered systems to autonomously create aesthetically pleasing pictures. This response cannot comment on how the work "A Recent Entrance to Paradise" was autonomously generated. But having a computer program spontaneously generate an aesthetically pleasing picture is similar to finding an aesthetically pleasing piece of driftwood or a beautiful geode. Given the current status of the law regarding human authorship, the decision to refuse registration of "A Recent Entrance to Paradise" was correct. That said, the law and policy of the Office should not focus on the specific tools authors use, but how those tools can be used to create works that meet the legal standards for copyrightability.

In contrast to the system that created "A Recent Entrance to Paradise," every use of the Midjourney service requires human input, guidance, and selection. Accordingly, the use of the Midjourney service is completely consistent with Copyright Office rules, the text of the Copyright Act, and article 1, clause 8 of the constitution.

Accordingly, we ask that the Office's prior decision to register Kashtanova's Work "Zarya of the Dawn" be affirmed.

Sincerely,

Van Lindberg
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[16] *Burrow-Giles*, 111 U.S. at 61, 4 S. Ct. at 283.