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NOTES

ARTIFICIAL INTELLIGENCE IN THE FASHION INDUSTRY

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NOTES

ARTIFICIAL INTELLIGENCE IN THE FASHION INDUSTRY

Aubrie McEwen*

ABSTRACT

Artificial intelligence driven image generation technology has the potential to revolutionize industries that rely heavily on the visual arts. Prominent among these fields is the fashion industry, which has recently seen a shift in design and marketing strategies, that emphasizes more frequent designer turnover and invokes archived motifs. This change has left the door open for AI technology to fill a gap that would transform the cost and accessibility of designer clothing—a gap that is unable to be filled under the United States' current intellectual property regimes, specifically copyright. In this Note, the deficiencies in past analogous copyright justifications and previously proposed ownership solutions are examined and a proxy rights-holder register for AI machines is proposed as an enduring solution to the rapid advancement of AI capabilities.

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INTRODUCTION

The issue of artificial intelligence (AI) authorship and invention (collectively referred to in this Note as "Creatorship") is beginning to rear its head in nearly all realms of intellectual property (IP) law. However, some fields, such as fashion, may soon be facing more complications than ever. This is because fashion, in many ways, must already meet stringent standards to qualify for certain types of intellectual property protection,[1] and AI Creatorship is further exacerbating this issue.[2]

I. FASHION AND AI

AI advancement and integration into the commercial realm is moving rapidly, yet the law is conspicuously lagging. A report released by the U.S. Patent and Trademark Office (USPTO) in October of 2020 stated that the majority of public comments from stakeholders "suggested that current AI could neither invent nor author without human intervention."[3] Further, the outgoing director in 2021, Andrei Iancu, made a statement that the public "does not think any changes need to be made now at the higher, systemic level that would be specific for AI."[4] But is this true? This Note investigates the capabilities of current artificial intelligence systems and argues, through the lens of practical application of AI technology in the fashion industry, that it is necessary for U.S. intellectual property law, particularly copyright, to take expedient steps to arrange the vestment of copyright ownership in AI designs and products. This Note further proposes that the most harmonious solution to this issue is U.S. copyright law recognizing a severance of authorship from ownership for AI-generated works. First, this Note will explore industry characteristics and recent developments in fashion and AI, then it will outline the issues with copyrightability and previously offered solutions, and finally it will propose a simple and novel solution to this pressing problem.

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[1] *See* Caen A. Dennis, *AI-Generated Fashion Designs: Who or What Owns the Goods?*, 30 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 593, 597–601 (2020); Michael K. Friedland, Lauren Keller Katzenellenbogen & Melissa Chen, *Choosing the Right IP to Protect Fashion Goods*, A.B.A. (Mar. 30, 2022), https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2021-22/march-april/choosing-right-ip-protect-fashion-goods.

[2] Dennis, *supra* note 1, at 595.

[3] Michael M. Rosen, *AI Invents—But Should It Get Patents, Too?*, ISSUES IN SCI. & TECH. (Aug. 26, 2021), https://issues.org/artificial-intelligence-patents-innovation-rosen/#:~:text=And%20in%202019%2C%20the%20German,because%20of%20current%20patent%20law.

[4] *Id.*

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A. Fashion Industry

In many ways, there is no field that employs the visual arts so critically and *en masse* as fashion. The fashion industry in the United States grossed over 350 billion dollars in 2024 and landed America as the top spending country internationally on apparel.[5] As such an expansive field, a fashion house's continued success relies on protection and exclusivity of their products.[6] Such protection and exclusivity is provided in part by intellectual property law. One article of clothing could have elements that are subject to any combination of copyright, trademark, trade dress, and patent protections.[7] For the purpose of AI image generation in the clothing design process, this Note will focus on copyright law.[8]

The success of a fashion house also relies on the presence of well-oiled business machinery to maintain the brand's profitability. To understand the pricing of garments, one must consider the vast investment that brands put into the design process. Pricing is broken down by tiers, where higher-tier luxury brands enjoy higher profit margins due to their market's loyalty and brand focus.[9] For luxury brands, the designer of the fashion house can make or break the success of their brand.[10] Recently, luxury brands have often opted to switch designers more

[5] P. Smith, *Revenue of the Apparel Market Worldwide by Country in 2023*, STATISTICA (Feb. 9, 2024), https://www.statista.com/forecasts/758683/revenue-of-the-apparel-market-worldwide-by-country.

[6] Tugba Sabanoglu, *Sales Losses from Counterfeit Goods Worldwide in 2020, by Retail Sector*, STATISTICA (July 27, 2022), https://www.statista.com/statistics/1117921/sales-losses-due-to-fake-good-by-industry-worldwide (estimating the global losses from counterfeit goods to be over twenty-eight billion U.S. dollars in 2020).

[7] *See* Friedland et al., *supra* note 1.

[8] Copyright is often best suited for protection of artwork on clothing (such as screen-printed designs, embroidery design, and patterns on fabric) and design of jewelry. *Id.* This makes copyright particularly relevant in the context of high fashion clothing brands, as many have signature fabric which many of their pieces are made from, such as Louis Vuitton, Gucci, and Dior. *See, e.g.*, *Louis Vuitton Monogram*, LOUIS VUITTON, https://us.louisvuitton.com/eng-us/recommendations/louis-vuitton-monogram (last visited Apr. 20, 2024). Similarly, brands such as Prada have signature motifs in their accessories and jewelry (seen in the Prada "Symbole" bag line). *See Bags Highlights*, PRADA, https://www.prada.com/us/en/womens/essentials/prada-symbole/c/10106US (last visited Apr. 20, 2024).

[9] *Fashion Pricing: 3 Ways to Price Your Clothing Line*, INTUIT QUICKBOOKS: QUICKBOOKS BLOG (Oct. 2, 2015), https://quickbooks.intuit.com/r/growing-a-business/3-ways-to-price-your-fashion-line-for-profit.

[10] *See* Kati Chitrakorn, *At Fashion Houses, a New Designer's Impact Takes Time*, VOGUE BUS. (Mar. 4, 2020), https://www.voguebusiness.com/fashion/when-a-new-creative-director-leaves-their-mark-mugler-burberry-celine-gucci.

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frequently to keep their image fresh and the public engaged.[11] Switching designers has the ability to not only reinvigorate the direction and image of a brand, but also financially change the game.[12] Saint Laurent, for example, enjoyed consecutive years of double-digit growth under the guidance of Hedi Slimane, a newly placed designer.[13] Sales roughly tripled in Slimane's four years with Saint Laurent.[14] Such success comes at a cost; Hedi Slimane's contract with Saint Laurent included a clause that guaranteed that Slimane would be paid at least 10 million euros annually (almost 11 million U.S. dollars).[15]

Because of the high cost of switching designers, the possibility of using AI to serve this purpose could have monumental effects in the field. On the other hand, design generation without protection is unworkable for brands attempting to maintain their reputation and financial viability. As evidence of this, worldwide losses resulting from counterfeit goods in 2020 were estimated to be over 28 billion dollars.[16] At the same time, recent developments in AI have made the possibility of AI designers a reality, heightening the need for the law to come to an expedient solution to avoid roadblocks to protection and progress.

B. What Is AI Image Generation and How Does It Work?

AI spent decades learning to recognize images; the next step was image generation.[17] Generally, AI image generation "uses two neural networks; one that creates an image and another one that judges, based on real-life examples of the target image or text, how close the image is to the real thing."[18] The generated image

[11] *Id.*

[12] *Id.*

[13] *Id.*

[14] Amy De Klerk, *Hedi Slimane Wins More than £8 Million in Lawsuit with Saint Laurent*, HARPER'S BAZAAR (Apr. 6, 2018), https://www.harpersbazaar.com/uk/fashion/fashion-news/a19698398/hedi-slimane-wins-lawsuit-with-saint-laurent.

[15] *Id.*

[16] Sabanoglu, *supra* note 6.

[17] Bernard Marr, *Artificial Intelligence Can Now Generate Amazing Images—What does this Mean for Humans?*, FORBES (Apr. 15, 2019, 12:23 AM), https://www.forbes.com/sites/bernardmarr/2019/04/15/artificial-intelligence-can-now-generate-amazing-images-what-does-the-mean-for-humans/?sh=471b4fb50771; Mike Wolfe, *The Emerging World of AI Generated Images*, MEDIUM: TOWARDS DATA SCI. (Sept. 5, 2022), https://towardsdatascience.com/the-emerging-world-of-ai-generated-images-48228c697ee9.

[18] Marr, *supra* note 17.

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then gets scored for accuracy.[19] Next, the scoring information is sent back to the AI system where the system learns from the returned information to generate an altered image to go through scoring again.[20] This process repeats until the AI determines that the generated image sufficiently matches the "control" image.[21]

While what is described above is a common basic process, individual AI systems can operate differently, in both their method and their requirements from the human user. Because some AI can train itself, the data available to the AI will play a critical role in how the AI learns to generate the images it later creates.[22] Some AI systems learn only from information given to them by programmers or users, while others are able to use web scraping to pull from innumerable images available on the Internet.[23] AI generators can operate with images or just words as source materials,[24] and different systems require varying degrees of input from the user. For example, the user of some AI systems can input not only the source materials but also set to what degree the "source" materials should influence the AI's work or set a theme for the output.[25] In sum, even if the systems utilize a similar base process, the operation of AI systems can vary greatly from one system to another.[26]

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[19] *Id.*

[20] *Id.*

[21] *Id.*

[22] *See* Wolfe, *supra* note 17 (discussing how AI's Generative Adversarial Networks create a database of knowledge and "learn" about style and content from pre-existing art and images).

[23] Wolfe, *supra* note 17. Complaints have begun to surface regarding the training process of AI and whether this process infringes on copyright holders' rights. *See* Rachel Metz, *Dall-E 3 Is So Good It's Stoking an Artist Revolt Against AI Scraping*, BLOOMBERG (Nov. 3, 2023, 7:00 AM), https://www.bloomberg.com/news/articles/2023-11-03/dall-e-3-is-so-good-it-s-stoking-an-artist-revolt-against-ai-scraping; *see also* Complaint at 2, N.Y. Times Co. v. Microsoft Corp., Case 1:23-cv-11195 (filed Dec. 27, 2023), https://nytco-assets.nytimes.com/2023/12/NYT_Complaint_Dec2023.pdf; Andersen v. Stability AI Ltd., 2023 WL 7132064 (D.N.D. Cal. 2023); Kadrey v. Meta Platforms, Inc., No. 23-cv-03417-VC (D.N.D. Cal. 2023) (citing *Andersen*, 2023 WL 7132064, at *7–8), https://casetext.com/case/kadrey-v-meta-platforms-inc.

[24] *Compare Introducing ChatGPT*, OPENAI BLOG (Nov. 30, 2022), https://openai.com/blog/chatgpt, *with DALL-E 2*, OPENAI, https://openai.com/dall-e-2 (last visited Apr. 21, 2024).

[25] *See* Wombo Studios, Inc., WOMBO Dream–AI Art Tool (version 4.5.4) [Mobile application], Retrieved from: https://apps.apple.com/us/app/dream-by-wombo-ai-art-tool/id1586366816.

[26] This difference in operation further complicates potential infringement suits, as the facts of one case are not necessarily readily applicable to another case that utilizes a differently functioning AI. *See infra* Part III.

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Monumental strides have been taken in recent months in AI image generation and are revolutionizing visual arts fields such as fashion. As of late, all eyes in this field have been on DALL-E, a "machine-learning model created by OpenAI to produce images from language descriptions."[27] At the most basic level, this technology takes phrases or images as input and uses them to produce realistic images.[28] The first iteration of DALL-E, called DALL-E 1, was released on January 5, 2021.[29] In the release report by OpenAI, fashion and interior design are presented as examples of how this technology can be implemented.[30] This technology has since become far more powerful and relevant. Its second iteration, DALL-E 2, was released in early April 2022.[31] This updated version had more than three times the parameters (and, therefore, power) to back it up.[32] This results in higher resolution and more accurate images than the first iteration of DALL-E was able to create,[33] making it a much more viable option for licensing and utilization. Further, DALL-E 3 was released to users in October 2023, boasting "significant improvements" over DALL-E 2.[34] The lighthearted video accompaniment to DALL-E 3's release offered a glimpse of the potential of DALL-E for developing and merchandising designs, with a notably less jovial disclaimer lurking in the text below the video: "DALL-E 3 is designed to decline requests that ask for an image in the style of a living artist. Creators can now also opt their images out from training

[27] Brittney Grimes, *What is DALL-E? How it Works and How the System Generates AI Art*, INTERESTING ENG'G (Nov. 3, 2022, 4:11 AM), https://interestingengineering.com/innovation/what-is-dall-e-how-it-works-and-how-the-system-generates-ai-art.

[28] *See* Wolfe, *supra* note 17.

[29] Aditya Ramesh, Mikhail Pavlov, Gabriel Goh & Scott Gray, *DALL-E: Creating Images from Text*, OPENAI (Jan. 5, 2021), https://openai.com/blog/dall-e.

[30] *Id.*

[31] Grimes, *supra* note 27.

[32] *Id.*

[33] *Id.*

[34] *DALL-E 3*, OPENAI, https://openai.com/dall-e-3 (last visited Mar. 22, 2024). Such improvements include increased detail and the ability to revise an image with further textual input by the human user. *Id.*

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of our future image generation models."[35] Such a disclaimer hints at the intellectual property issues boiling just below the surface of this technology.

C. The Intersection of AI and Fashion

Today, AI technology has been adapted to countless fields, with fashion being no exception. While this technology is reaching into the world of fashion in numerous ways, prominent among these are: utilizing AI models for virtual fashion shows,[36] virtual fitting rooms and customization for online shoppers,[37] AI system use by popular companies such as StitchFix and thredUP that hand-pick clothes to fit customers' styles,[38] sales prediction,[39] warehouse management,[40] and designs.[41] Huge strides have taken the capabilities of AI design technology to a new level, with artists and other visual media creators taking notice and experimenting with the new technology.[42]

The development of image generation AI like DALL-E is changing the game of fashion design. Since the release of DALL-E's Application Programming Interface (API) in 2022, this technology has been implemented in CALA, an inaugural program for designing clothing and fulfilling consumer orders.[43] CALA is the first live, public, third-party application of DALL-E's API.[44] This technology is

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[35] *Id.* It is unclear whether "artist" includes brands and fashion designers. Further, despite this assurance by OpenAI, it is still relatively easy to get around these protections to mimic the style of another. *See* Metz, *supra* note 23.

[36] Bernard Marr, *Three AI and Tech Trends That Will Transform the Fashion Industry*, FORBES (Mar. 26, 2021, 1:25 AM), https://www.forbes.com/sites/bernardmarr/2021/03/26/three-ai-and-tech-trends-that-will-transform-fashion-industry/?sh=320bc822746c.

[37] *See id.*

[38] *See* Americana Chen, *5 Ways AI is Transforming the Fashion Industry for Sustainability*, MEDIUM: TOWARDS DATA SCI. (Dec. 29, 2021), https://towardsdatascience.com/5-ways-ai-is-transforming-the-fashion-industry-for-sustainability-bfd3bb1fc00a; *see also* Marr, *supra* note 36.

[39] *See* Chen, *supra* note 38.

[40] *Id.*

[41] *See* Matthew S. Smith, *AI-Generated Fashion Is Next Wave of DIY Design*, IEEE SPECTRUM (Oct. 29, 2022), https://spectrum.ieee.org/dall-e-fashion-design.

[42] *Id.*; Marr, *supra* note 17.

[43] Smith, *supra* note 41.

[44] *Id.*

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capable of generating clothing designs from textual description inputs by the user.[45] The user can also select input designs for the AI to learn from,[46] which can be used synonymously to how human designers create new clothing lines based on inspiration from the brand's past collections.[47] The development of DALL-E, CALA, and countless future utilizations of this image/design-generation technology are the perfect illustration of the tension in the market to make this technology economically feasible. In fact, the first AI Fashion Week was held in April 2023, with the winners illustrating the creative (and monetary) power of this technology; two of the three winners who used AI to design their collections had no fashion background, yet their pieces are, as of this Note, sold at designer prices.[48]

II. COMPLICATIONS WITH COPYRIGHTABILITY OF AI-GENERATED DESIGNS

A. Thaler *as an Illustration*

The United States's current position on AI-generated works is practically illustrated through the efforts of Dr. Stephen Thaler and the Artificial Inventor Project. Dr. Thaler is an inventor and developer of artificial intelligence systems, with his crowning jewel being DABUS, an "AI paradigm" capable of "conceiv[ing] new inventions and art forms."[49] DABUS stands for "Device for the Autonomous Bootstrapping of Unified Sentience," with sentience being the key phrase.[50] As Dr. Thaler explains it, DABUS's capabilities differ from the typical parametric optimizations common to AI that differentiate "real" from "fake," and instead functions on links between countless artificial neural networks and simulated

[45] Ramesh et al., *supra* note 29.

[46] *See id.*

[47] Emily Farra, *How Dior, Balenciaga, and More Labels Are Finding Inspiration in the Past*, VOGUE: RUNWAY (May 24, 2017), https://www.vogue.com/article/fashion-designers-looking-to-past-archives-inspiration-dior-balenciaga.

[48] Marc Bain, *These New Fashion Collections Were Designed by AI*, CNN (Nov. 7, 2023, 9:29 AM), https://www.cnn.com/style/revolve-collection-ai-fashion-week-clothes/index.html. The garments from the winning collections range in price from $228 to $1,598. *Id.* These garments are in a price range typically below top fashion houses such as Prada or Balenciaga, but above more accessible luxury brands like Michael Kors and Calvin Klein.

[49] *Stephen L. Thaler, Ph.D.*, IMAGINATION ENGINES INC., https://imagination-engines.com/founder.html (last visited Apr. 21, 2024).

[50] *Thaler v. Comm'r of Patents* [2021] FCA 879 (Austl.).

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emotions.[51] With these capabilities, Dr. Thaler claims that DABUS is uniquely able to create "whole new concepts."[52] This level of independence distinguishes DABUS from AI systems that require a higher degree of human input or intervention (such as DALL-E) and represents a significant complication to many proposed solutions to the issue of AI-generated IP protections.

Together, Dr. Thaler and his self-titled "Creation Machine" form one half of the equation that constitutes the legal project titled the Artificial Inventorship Project (AIP).[53] The other half of the equation is a dedicated legal team of over twenty attorneys that bring cases on Thaler's behalf internationally.[54] The object of AIP is to "promote dialogue about the social, economic, and legal impact of frontier technologies such as AI and to generate stakeholder guidance on the protectability of AI-generated output."[55]

AIP has faced disappointing denials in its recent U.S. cases. In *Thaler v. Vidal*, a patent action, the United States Court of Appeals for the Federal Circuit affirmed the United States District Court for the Eastern District of Virginia's grant of summary judgment in favor of the U.S. Patent and Trademark Office and against Dr. Thaler.[56] This ruling solidified the USPTO and general United States' position firmly against providing intellectual property protections to AI "creators" on the basis that AI are non-human entities.[57] The District Court in *Thaler v. Vidal* paradoxically admitted, "there may come a time when artificial intelligence reaches a level of sophistication such that it might satisfy accepted meanings of inventorship," but refused to grant Dr. Thaler's patent, despite the USPTO not disputing that DABUS had invented the claimed subject matter without human intervention.[58]

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[51] *Stephen L. Thaler, Ph.D., supra* note 49.

[52] *Id.*

[53] *Team*, ARTIFICIAL INVENTOR PROJECT, https://artificialinventor.com/team (last visited Apr. 21, 2024).

[54] *Id.*

[55] *The Artificial Inventor Project*, ARTIFICIAL INVENTOR PROJECT, https://artificialinventor.com (last visited Mar. 22, 2024).

[56] Thaler v. Vidal, 43 F.4th 1207, 1209 (Fed. Cir. 2022).

[57] *Id.*

[58] Ryan Abbott, *July 2022 AIP Update Around the World*, ARTIFICIAL INVENTOR PROJECT (July 10, 2022), https://artificialinventor.com/867-2.

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AIP's most recent foray in the United States demonstrates the discord between U.S. copyright law and copyright protection for AI-generated works. The current Compendium of Copyright Offices Practices released by the U.S. Copyright Office, quoted in a rejection to Dr. Thaler's application for an AI-created piece of artwork, states that "the Office will refuse to register a claim if it determines that a human being did not create the work."[59] This piece of artwork, entitled "A Recent Entrance to Paradise," depicts a set of train tracks surrounded by green and purple foliage,[60] a landscape reminiscent of similar works by Kinkade or Monet. The U.S. Copyright Office's refusal spurred Dr. Thaler and his colleague, Dr. Ryan Abbott, to file a complaint in the United States District Court for the District of Washington D.C., on June 2, 2022.[61] In his complaint, Dr. Thaler brought a claim alleging that the Copyright Office's final rejection was a violation of the Administrative Procedure Act.[62] This claim was based on the assertion that the Copyright Office requiring human authorship for copyright registration is contrary to law.[63] Unfortunately, this case was dismissed at the summary judgment level by a memorandum opinion filed on August 18, 2023, in which the court held that no valid copyright can exist in a work generated "[i]n the absence of any human involvement."[64] However, one must be careful not to read the opinion as applying broadly to all AI-generated works, as the court explicitly hinged its conclusion on the very characteristic that makes DABUS unique—its autonomy from humans in the creation process.[65]

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[59] U.S. COPYRIGHT OFF., COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 306 (2021); U.S. Copyright Rev. Bd., Opinion Letter to Ryan Abbott on Thaler's request for reconsideration for refusal to register an artwork claim (Feb. 14, 2022), https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf.

[60] *See* Complaint at 4, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf.

[61] *See id.* at 1–2.

[62] *See id.* at 18.

[63] *Id.* at 8.

[64] *See* Thaler v. Perlmutter, No. 22-1564 (BAH), 2023 WL 5333236, at *6 (D.D.C. Aug. 18, 2023).

[65] *See id.* The court appears to go to lengths to qualify its decision on this factor. *Id.* ("Undoubtedly, we are approaching new frontiers in copyright as artists put AI in their toolbox to be used in the generation of new visual and other artistic works."). The court even goes so far as to distinguish a case which found a book copyrightable despite being allegedly created by "celestial beings," because humans asked questions to illicit the beings' responses and humans selected and arranged the "revelations." *Id.* at *5 (citing Urantia Found. v. Maaherra, 114 F.3d 955, 958–59 (9th Cir. 1997)). This circumstance is remarkably similar to many prompt-based AI design generators, such as DALL-E. *See supra* notes 27–34 and accompanying text.

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Dr. Thaler has taken his efforts abroad as well, applying for IP protections in eighteen countries.[66] Dr. Thaler was granted patent protection for an invention in South Africa, which listed the inventor as "DABUS, [t]he invention was autonomously generated by an artificial intelligence."[67] In contrast, Dr. Thaler's efforts have been rebuffed in Australia, and either applications or appeals are pending in numerous other countries.[68] However, *Thaler v. Perlmutter* is AIP's first foray into copyright law.[69]

B. The Authorship Requirement

As the Artificial Inventor Project was reminded, the U.S. Copyright Office currently will not grant copyright protection for works created by anything other than a human being.[70] The Copyright Act provides that copyright protection exists for "original works of *authorship* fixed in any tangible medium of expression[.]"[71]As such, authorship is a core requirement of copyright eligibility in the United States.[72] Pursuant to this authorship requirement, Section 201(a) of the Copyright Act states that copyright ownership initially vests with the author of the work.[73] Courts have previously read the language of Sections 102 and 201 to mean exclusively human authorship,[74] which presents issues for those employing AI technology to create otherwise copyrightable works. This interpretation has been furthered by the Copyright Office's Compendium of Regulations, stating that works not created by a human being fail to meet the authorship requirement of the Copyright Act.[75] The

[66] *See Patents*, ARTIFICIAL INVENTOR PROJECT, https://artificialinventor.com/patent (last visited Mar. 22, 2024).

[67] *Id.*; *see* Cos. and Intell. Prop. Comm'n, *Patent Journal: Including Trade Marks, Designs and Copyright in Cinematograph Films*, PATENT J., July 28, 2021, at 255.

[68] *See Patents*, *supra* note 66.

[69] *See Copyright*, ARTIFICIAL INVENTOR PROJECT, https://artificialinventor.com/copyright/ (last visited Mar. 22, 2024).

[70] *See* U.S. Copyright Rev. Bd., *supra* note 59; *see also Thaler*, 2023 WL 5333236, at *6.

[71] Copyright Act, 17 U.S.C. § 102(a) (emphasis added).

[72] *See id.*

[73] *Id.* § 201(a).

[74] *See* Urantia Found. v. Maaherra, 114 F.3d 955, 958 (9th Cir. 1997) ("At the very least, for a worldly entity to be guilty of infringing a copyright, that entity must have copied something created by another worldly entity."); Kelley v. Chi. Park Dist., 635 F.3d 290, 304 (7th Cir. 2011).

[75] U.S. COPYRIGHT OFF., *supra* note 59.

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dilemma here is basically a *Catch-22*—an AI entity cannot be an author, and a human being cannot register the copyright because they are not the "author of the work." Therefore, the resulting design is rendered unregistrable.

This outcome is at odds with the purpose of intellectual property protections in the United States. The core purpose of intellectual property law is "to promote the progress of science and the useful arts."[76] Without intellectual property protections to protect AI-generated works, the public and other copycat companies are free to reproduce and use AI-generated designs.[77] This disincentivizes the utilization of AI image generation technology and the creation of new works overall. The consequences of this failure are upstream effects in the technological community, as well as downstream effects on product costs for consumers.[78] Because the failure of the law to protect AI works frustrates the core purpose, it is imperative that the United States adopts a framework to protect AI-assisted and AI-generated works. The United States is being pushed, perhaps reluctantly, toward a solution by both domestic companies and the world.

C. International Law

As reflected by Dr. Thaler's endeavors, refusing to grant intellectual property rights to AI-generated work is not an internationally uniform assumption of the legal system. Some countries have opted to provide IP protection to AI-generated works—among these countries are Hong Kong, India, Ireland, New Zealand, the United Kingdom, and South Africa.[79] In contrast, countries including Spain, Germany, and Australia have tended in the same direction as the United States by opting to only protect works created by a human.[80] Despite this, the grants of protection have global implications because of the Berne Convention.

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[76] U.S. CONST. art. I, § 8.

[77] Andres Guadamuz, *Artificial Intelligence and Copyright*, WIPO: WIPO MAG. (Oct. 2017), https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html.

[78] *Compare* De Klerk, *supra* note 14 (discussing the compensation contract between Hedi Slimane and Saint Laurent), *with Fashion Pricing: 3 Ways to Price Your Clothing Line*, *supra* note 9 (discussing methods of pricing a clothing line, all of which consider the cost of producing the garments as a critical factor).

[79] Guadamuz, *supra* note 77; Ryan Abbott, *First Patent Granted to the Artificial Inventor Project*, ARTIFICIAL INVENTOR PROJECT (July 28, 2021), https://artificialinventor.com/first-patent-granted-to-the-artificial-inventor-project.

[80] Guadamuz, *supra* note 77.

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The Berne Convention is an international treaty adopted in 1886 with the purpose of promoting uniformity and protection of copyrights.[81] Signing members agreed to conform to minimum protection standards set forth within the treaty.[82] As a member of the Berne Convention, the United States therefore must honor international copyrights of AI-assisted works in the United States.[83] The motion of other countries toward protecting AI-assisted works further impresses the importance of the United States developing its own comprehensive system for these works to avoid inconsistency in protection.

III. JUSTIFICATIONS FOR OVERCOMING THE AUTHORSHIP REQUIREMENT AND THEIR SHORTCOMINGS

As Dr. Abbott argues, an expedient solution to the AI copyright issue is necessary to promote the production of "socially and commercially valuable works."[84] The first step in coming to such a conclusion is to overcome the obstacle of the authorship requirement. Legal scholars who have weighed in on the issue of copyright protections for AI-generated work have suggested analogizing past instances of challenging circumstances regarding the authorship requirement of copyright protection to justify granting copyright for AI works.[85] These debatably analogous situations include animal authorship, human utilization of technology to author works, and work for hire situations.[86] However, each of these justifications present their own drawbacks and issues. Never before has another entity been able to create with human-like intellect that potentially rises to the level of "original intellectual conceptions" that would qualify for copyright protection.[87] For this reason, each of these allegedly synonymous situations ultimately fail to provide a

[81] *See Berne Convention for the Protection of Literary and Artistic Works*, WIPO, https://www.wipo.int/treaties/en/ip/berne (last visited Apr. 21, 2024).

[82] *See id.*

[83] *Berne Notification No. 121 Berne Convention for the Protection of Literary and Artistic Works*, WIPO (Nov. 17, 1988), https://www.wipo.int/treaties/en/notifications/berne/treaty_berne_121.html.

[84] Complaint at 9, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf. *But see* Samuel Scholz, *A Siri-Ous Societal Issue: Should Autonomous Artificial Intelligence Receive Patent or Copyright Protection?*, 11 CYBARIS INTELL. PROP. L. REV. 81, 126–31 (2020).

[85] *See* Dennis, *supra* note 1, at 614–33.

[86] *Id.*

[87] *Cf.* U.S. COPYRIGHT OFF., *supra* note 59 (explaining the underpinnings of the requirement for human authorship).

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perfect analogy because of their dissimilarities and inflexibility in light of the rapid advancement of AI technology. Despite this, the work for hire analogy adequately provides the logical underpinnings to justify overcoming the Copyright Office's current interpretation of the authorship requirement.

A. Animal Authorship

Animal authorship, referring to works which are literally created by an animal with minimal or no human intervention, is both too dissimilar and too inflexible to meet the demands of a functional AI property rights framework. While, initially, AI and animals may appear similar—due to their shared capacity to create works but lack of legal rights of a human being—the similarities largely end there. Simply put, animal authorship fails to be an adequate analogy because animals are not man-made, and do not require human input and creative influence to function.[88]

Curiously, the seminal case on the issue of animal authorship, popularly known as the "monkey selfies" case, never actually addressed the issue of the supposed "human authorship" requirement to copyrightability.[89] Rather, the case was dismissed on the procedural grounds that an animal lacked standing to sue under the Copyright Act.[90] In a letter from Dr. Abbott to the attendants of the Second Session of the WIPO Conversation on AI and IP, he took note of this fact, stating, "[a]s a result, the merits of the human authorship requirement have never been tested in court."[91]

However, no answer to animal authorship is needed to determine the merits of AI copyright; the animal authorship analogy fails for the same reason that all the other tests currently employed by courts fail—it is too inflexible to endure the rapid advancement of AI technology and the consequent disparity in capacity for ideation and independence between animals and AI. Consider the respective cognitive capabilities at issue. It has been theorized that a monkey may be intellectually comparable to a human toddler in preparing for future outcomes and consequences

[88] Dennis, *supra* note 1, at 616–17.

[89] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018) (finding that an animal lacks standing to bring a claim under the Copyright Act).

[90] *Id.* at 426.

[91] Letter from Ryan Abbott, Professor of L. & Health Sci., Univ. of Surrey Sch. of L., to WIPO Conversation Attendants (July 7, 2020), https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ind_abbot.pdf.

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or solving puzzles,[92] while AI can hold complete conversations, solve complex problems, and generate hyper-realistic images.[93] In sum, animal authorship is both too dissimilar and too inflexible to meet the demands of a functional AI property rights framework.

B. "Tool" Utilized by Humans

Burrow-Giles Lithographic Co. v. Sarony serves as the foundation for the protection of works created with the assistance of a tool or machine. In this case, a photographer brought an action for copyright infringement against a lithographer, with the work in question being a photograph that the plaintiff took of Oscar Wilde.[94] The defendant lithographic company, in turn, challenged the constitutionality of protecting photographs.[95] In the analysis of the issues, the Supreme Court stated:

> The only reason why photographs were not included in the extended list in the [Copyright] Act of 1802 is, probably, that they did not exist, as photography, as an art, was then unknown, and the scientific principle on which it rests, and the chemicals and machinery by which it is operated, have all been discovered long since that statute was enacted.[96]

Further, the Court found that the artistic control and input of the photographer is what makes the photograph an "original work of art, the product of plaintiff's intellectual invention," which Congress intended to protect.[97] This is the approach favored by the Copyright Office in the Current Compendium,[98] which states:

> 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

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[92] Amanda M. Seed & Katherine L. Dickerson, *Future Thinking: Children but not Apes Consider Multiple Possibilities*, 26 CURRENT BIOLOGY, R525, R252 (2016); Jonathan Symcox, *Monkeys as Smart as Toddlers: Scientists Say Apes can Understand Abstract Properties*, MIRROR (Oct. 31, 2014, 19:39), https://www.mirror.co.uk/news/weird-news/monkeys-smart-toddlers-scientists-say-4544589.

[93] *See Introducing ChatGPT*, *supra* note 24; Ramesh et al., *supra* note 29.

[94] Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 54 (1884).

[95] *Id.* at 56.

[96] *Id.* at 58.

[97] *Id.* at 60.

[98] U.S. COPYRIGHT OFF., *supra* note 59, § 313.2.

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> 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."[99]

The juxtaposition of this guidance with the USPTO's statement in the rejection letter for DABUS's invention that "there may come a time when artificial intelligence reaches a level of sophistication such that it might satisfy accepted meanings of inventorship,"[100] reveals the true discord of the government's positions on the issue of AI creatorship.

While the "tool" analogy is admittedly more tempting than animal authorship, human utilization of technology (such as cameras) to author works also fails to be an adequate justification, just like the failure of the animal authorship analogy. In making its determination of authorship, the Court in *Burrow-Giles* looked at elements such as the amount of creative control exercised by the human user.[101] Consequently, while this analogy may be sufficient to justify extending protection to works in which the AI requires significant input and guidance, other systems requiring less would be producing very similar output but would merit no protection under this reasoning. This is because the types of technology that humans have previously utilized—and been granted copyright protection for the resultant works—simply do not rise to the level of autonomy of AI technology.[102] Because of this, analogizing the use of human utilization of machines—such as that in *Burrow-Giles*—is a short-sighted solution, as AI technology is becoming increasingly autonomous and will likely need less and less human intervention over time.[103]

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[99] *Id.* (quoting U.S. COPYRIGHT OFF., REPORT TO THE LIBRARIAN OF CONGRESS BY THE REGISTER OF COPYRIGHTS 5 (1966)).

[100] Abbott, *supra* note 58.

[101] *Burrow-Giles*, 111 U.S. at 60.

[102] *See id.* at 54 (involving a camera); Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic, No. 97 Civ. 9248(HB), 1999 WL 816163, at *1 (S.D.N.Y. Oct. 13, 1999) (involving filmmaking); Andrien v. S. Ocean Cnty. Chamber of Com., 927 F.2d 132, 133 (3d. Cir. 1991) (involving printers).

[103] *See generally* Carolyn Blais, *When Will AI Be Smart Enough to Outsmart People?*, MIT SCH. OF ENG'G, https://engineering.mit.edu/engage/ask-an-engineer/when-will-ai-be-smart-enough-to-outsmart-people (last visited Apr. 21, 2024).

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This problem was not overlooked by the AIP attorneys, who argued that more advanced AI systems like DABUS complicate the outcome of this test.[104]

> [A]t least some of the time, the act that qualifies a natural person to be [a creator] is functionally automated by a machine. Further, some of the time there isn't a natural person who would traditionally qualify as an inventor. In those cases, we argue the machine is not "just a tool," it is automating invention.[105]

This argument also picks up on the second major issue with relying on *Burrow-Giles* and its progeny—the Court defined "author" to mean "he to whom anything owes its origin."[106] Under this definition, it would seem that the AI, not the human user, would receive the copyright. However, AI are not legal entities with rights.[107] Accordingly, the tool utilization analogy offers more headaches than solutions.

C. Work for Hire

The final proposed analogy is the work for hire situation, which the Copyright Act explicitly provides for in Section 201.[108] In these situations, the copyright vests initially with "the employer or other person for whom the work was prepared," unless some contractual agreement exists otherwise.[109] Analogizing work for hire is the position furthered by Dr. Ryan Abbott in the AIP's copyright action.[110] In the *Thaler v. Perlmutter* complaint, Dr. Abbott argues that the work for hire doctrine is "sufficiently flexible to apply" to AI.[111]

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[104] *Frequently Asked Questions*, ARTIFICIAL INVENTOR PROJECT (2022), https://artificialinventor.com/frequently-asked-questions.

[105] *Id.*

[106] *Burrow-Giles*, 111 U.S. at 57–58.

[107] *See* Jessica Peng, *How Human Is AI and Should AI Be Granted Rights?*, COLUM. BLOGS: JESSICA'S SECOND BRAIN (Dec. 4, 2018), https://blogs.cuit.columbia.edu/jp3864/2018/12/04/how-human-is-ai-and-should-ai-be-granted-rights/; Complaint at 16, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf.

[108] Copyright Act, 17 U.S.C. § 201(b).

[109] *Id.*

[110] *See* Letter from Ryan Abbott, *supra* note 91.

[111] Complaint at 15, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf.

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The Achilles heel of the work for hire analogy is that courts have relied on the principals of agency law to inform their decision of whether an employment relationship exists, which largely turns on the amount of control the employer exercises over the employee.[112] Just as with human use of machines and technology discussed above,[113] the control analysis fails to sufficiently meet the needs of AI creatorship. This is because any test for control will provide inconsistent outcomes between differently programmed AI systems and even separate uses of the same AI, depending on the amount of input used by the human "director" of the AI. Further, any solution hinging on the degree of input or control will inevitably prove increasingly problematic as AI continuously becomes more efficient and requires less human intervention. Finally, the work for hire solution also is fundamentally flawed in that it attempts to determine the "employer" of a non-human piece of property, which promises even further confusion if the AI is "working" for one entity but owned by another.

Despite the many shortcomings of work for hire as applied to AI, this analogy provides a valuable example of an accepted framework where authorship and ownership are severed. The reasoning underpinning copyrights for work for hire involves the copyright for a work vesting by default with a non-creator of a work (the employer), rather than with the literal creator (the employee).[114] This logic can serve as a stepping stone in crafting a solution for AI-generated works.

IV. DETERMINING WITH WHOM COPYRIGHTS SHOULD VEST

Granting copyright ownership of AI-generated designs is further complicated by the reality that, once a court determines that AI-generated designs should be copyrightable, the court must determine with whom ownership is properly vested. Based on the parties involved from start to finish with AI generation of fashion designs, there are four potential owners of the designs: (1) the programmer of the AI system; (2) the owner of the AI (either the fashion brand or a licensor); (3) the end user (i.e., the designer); and (4) the AI itself.[115] Each of these entities poses unique challenges and considerations.

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[112] *See, e.g.*, Cmty. for Creative Non-Violence v. Reid, 490 U.S. 730, 752 (1989) (citing RESTATEMENT (SECOND) OF AGENCY § 220(2) (AM. L. INST. 1958)).

[113] *See supra* Section III.B.

[114] Copyright Act, 17 U.S.C. § 201(b).

[115] Dennis, *supra* note 1, at 617.

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A. AI Programmer

Some proponents for copyright protection of AI creations argue that the programmer is the human entity properly granted ownership.[116] By virtue of encoding the learning and generation process that the AI employs, the programmer does exercise a large degree of control over the underlying function of the AI system. However, there are practical and policy reasons against authorship and ownership initially vesting in the programmer of the AI.

First, and perhaps most detrimentally, some advanced AI systems have the capability to rewrite their own code.[117] This creates an immediate problem with assigning rights to the programmer, as the initial code linking the programmer to the output may not even exist by the time the work at issue is created. Second, it is often the user, not the programmer, who exercises creative control over the input of the AI device.[118] While the code of the AI does drive the process to some extent, the input used by the user is the creative control which ultimately directs the AI's output. Depending on the approach taken by courts or the legislature to protect copyright of AI-generated works, this control inquiry may be critical to determining who has "earned" the rights to an AI-generated work.[119]

In past cases where courts grappled with determining with whom copyright should vest, actual control and creative control have often been the focal point. In *Burrow-Giles Lithographic Co. v. Sarony*, the Supreme Court held that "there could be no doubt" that the author of the photograph was the photographer because he directed the composition by choosing costumes, arranging draperies and accessories, and fine tuning the other key details captured in the photo.[120] *Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic* applied *Burrow-Giles* and took the idea of creative control further, explaining that an author must show that the work is the proposed

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[116] Guadamuz, *supra* note 77.

[117] Matt Reynolds, *AI Learns to Write Its Own Code By Stealing from Other Programs*, NEW SCIENTISTS (Feb. 22, 2017), https://www.newscientist.com/article/mg23331144-500-ai-learns-to-write-its-own-code-by-stealing-from-other-programs/.

[118] *See* Wombo Studios, Inc., *supra* note 25; *DALL-E 2*, *supra* note 24.

[119] *See generally* Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 54–55 (1884) (discussing the creative control of a photographer generally); Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic, No. 97 Civ. 9248 (HB), 1999 WL 816163, at *5 (S.D.N.Y. Oct. 13, 1999) (finding that a filmmaker's high level of control made them the author of the work); Andrien v. S. Ocean Cnty. Chamber of Com., 927 F.2d 132, 135 (3d Cir. 1991) (finding that exercising creative control, though not physical control, over a work was sufficient to find plaintiff the author of the work).

[120] *Burrow-Giles*, 111 U.S. at 54–55.

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author's "original intellectual conceptions," which is indicated by the degree of creative control exercised.[121] The court in *Lindsay* ultimately held that the director of an underwater shoot could be the author of the resulting film, despite not being part of the crew physically filming because he provided detailed instructions and screened footage to ensure he got the specific product he envisioned.[122] This sentiment has been echoed by other courts, which have had the tendency to find that creative control is a paramount concern when determining who authors any given work.[123]

Beyond the issues raised by self-coding and lack of creative control, additional considerations weigh against the programmer receiving copyright ownership. For example, authorship and ownership vesting in the programmer would require additional contractual rights agreements to be made for the programmer to effectively license the AI technology. Through the industry-specific lens of fashion, it is unlikely that fashion houses would directly employ the AI programmers. This adds an additional burden to receiving IP protection for these designs. Recognizing this reality, some companies that develop AI explicitly assign the rights, if any, held in generated materials over to the user of the system.[124] OpenAI's terms of use provide: "[a]s between the parties and to the extent permitted by applicable law, you own all Input, and subject to your compliance with these Terms, OpenAI hereby assigns to you all its right, title and interest in and to Output."[125] In sum, the rights vesting in the programmer of the AI would disregard the reality already understood in the market and frustrate practical applications of AI in industries such as fashion.

Despite these concerns, granting IP protection to the programmer is the route that countries such as Hong Kong, India, Ireland, New Zealand and the United Kingdom have taken.[126]

B. Owner of AI

The second set of hands that an AI is placed into is the purchaser or licensor of the AI system, which would be the fashion brand in the case of an AI purchased to

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[121] *Lindsay*, 1999 WL 816163, at *4.

[122] *Id.*

[123] *See Andrien*, 927 F.2d at 135.

[124] *Terms of Use*, OPENAI (Nov. 14, 2023), https://openai.com/terms/.

[125] *Id.*

[126] Guadamuz, *supra* note 77.

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be utilized for design. In some situations, the owner of the AI system may also be the end user. However, in the context of commercial utilizations, the owner (i.e. the corporation) will not be the operator because the corporation's employees will likely operate the AI. Framing this theory within the context of the fashion industry, the owner of the AI would likely be the fashion brand, while the end user would be the designer.

Assigning ownership of copyrights to the owner of the AI is supported by several existing legal theories. First, and perhaps most clearly, common law property rights support the brand receiving copyright for the AI's designs.[127] This theory is explained by Dr. Abbott in the *Thaler* complaint, where he states: "[i]t is generally the case that where property creates additional property, the owner of the original property is entitled to the subsequent property."[128] Dr. Abbott goes on to explain that this theory, sometimes referred to as "accession," should apply where an individual owns a piece of property (i.e., an AI system) which, in turn, generates another piece of property (i.e., a design).[129] Second, the owner of the AI is also the proper owner of the copyright of an AI-generated design if the work for hire scenario, as recognized by the Copyright Act,[130] is applied analogously to AI-generated works. The brand, as the "employer"/owner of the AI, would be the "employer or other person for whom the work was prepared."[131] In sum, the perceived similarity of the property rights and work for hire situations are what make the owner of the AI an attractive candidate to also own the copyright of AI-generated works.

C. End User

The end user theory of ownership vestment is, in many ways, similar to the AI-owner theory of ownership vestment discussed above.[132] However, granting rights to the end user recognizes the creative control exercised by the designer or user who inputs the source materials (images, textual prompt, etc.) that the AI uses to generate

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[127] *See* Thomas W. Merrill, *Accession and Original Ownership*, 1 J. LEGAL ANALYSIS 459, 459 (2009) (discussing accession in property rights).

[128] Complaint at 14, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022) (citing Merrill, *supra* note 127), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf.

[129] *Id.* at 15.

[130] Copyright Act, 17 U.S.C. § 201(b).

[131] *See id.*

[132] *See supra* Section IV.B.

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its output image. This solution, while following previous control-based reasoning favored by courts,[133] presents complications when considered in commercial contexts. First, ownership vesting in the end user, unlike the owner, frustrates property rights principles such as accession.[134] Second, copyrights going to the end user by default may render the process unnecessarily circuitous. In commercial contexts, the end user will likely be employed by the owner of the AI—ultimately resulting in a contractual assignment of any IP rights to the employer/AI-owner anyway under the "works made for hire" theory.[135]

D. AI

Section 201 of the Copyright Act provides that "[c]opyright in a work protected under this title vests initially in the author or authors of the work."[136] Despite this, commentators in the United States seem to generally agree that AI itself—because they are not legal entities—cannot be the owner of the work.[137] Scholars have long weighed in on the classification and rights of artificial intelligences and robots, with many coming to the conclusion that AI fails to meet the combination of biological, physical, environmental, and philosophical requirements that the legal system uses to classify "human beings" and accordingly assign legal rights.[138] This sentiment is echoed by Dr. Abbott in the *Thaler v. Perlmutter* complaint, who notes that an AI is "a machine that has no legal rights[.]"[139] Because of this classification and the Copyright Office's aversion to AI creation, AI themselves seem both an unlikely and impractical candidate for copyright to vest.

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[133] *See* Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 54 (1884) (discussing creative control generally); Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic, No. 97 Civ. 9248 (HB), 1999 WL 816163, at *5 (S.D.N.Y. Oct. 13, 1999) (finding that a filmmaker's high level of control made them the author of the work); Andrien v. S. Ocean Cnty. Chamber of Com., 927 F.2d 132, 135 (3d Cir. 1991) (finding that exercising creative control, though not physical control, over a work was sufficient to find plaintiff the author of the work).

[134] *See supra* notes 129–31 and accompanying text.

[135] *See* Copyright Act, 17 U.S.C. § 201(b).

[136] *Id.* § 201(a).

[137] *See* Letter from Ryan Abbott, *supra* note 91.

[138] *See, e.g.*, Peng, *supra* note 107.

[139] Complaint at 16, Thaler v. Perlmutter, No. 1:22-cv-01564 (D.D.C. June 2, 2022), https://artificialinventor.com/wp-content/uploads/2022/07/Thaler-v-Perlmutter-Complaint.pdf.

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V. NOTE'S PROPOSED SOLUTION

Protecting AI created works is the best way to promote further innovation and advancement of the arts and sciences.[140] However, as the shortcomings of the previously proposed analogies point out, attempting to bend dissimilar, existing law to a novel and complex issue will only result in sloppy, short-term solutions that ultimately cause more headaches for courts, users, the Copyright Office, and lawmakers. Rather, a comprehensive solution that is capable of enduring the test of time and technological development is necessary. This Note argues that such a solution is not as far out of reach as some may believe.

Current U.S. law supports transfer of ownership as well as the separation of authorship and ownership.[141] For example, the work for hire analogy provides helpful insight into an existing and accepted framework where authorship and ownership are severed.[142] In the work for hire situation, an employee is the literal creator of a work, yet the copyright vests initially with a non-creator employer.[143] As addressed above, attempting to stretch and adopt this existing approach is more likely to obfuscate this issue than solve it. Instead, by employing a novel framework that is informed by and modeled after the existing framework, a long-term solution can be reached.

This Note proposes a proxy rights holder register for owners of AI machines, wherein the owner of an AI would be required to register themselves as the owner and consequent default holder of copyright for works produced by the AI system. The practicality of this solution is in its simplicity—by requiring that the parties involved in AI-generated works contract for the rights of what is generated, the Copyright Office can avoid the complications that necessarily arise by attempting to craft a broad rule for all AI systems. The reality is that AI vary greatly in their operation and capabilities. However, by imposing a framework for AI works wherein a legal entity is registered as a designated rights owner for each AI "creator"/machine for copyright purposes, the Copyright Office could avoid the negative consequences of denying protection without straying far from existing frameworks.

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[140] Anna Carnochan Comer, *AI: Artificial Inventor or the Real Deal?*, 22 N.C. J.L. & TECH. 447, 480 (2021); Guadamuz, *supra* note 77.

[141] Copyright Act, 17 U.S.C. § 201(b), (d).

[142] *See supra* Section III.C.

[143] Copyright Act, 17 U.S.C. § 201(b).

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Further, this solution avoids the complications that accompany attempting to employ the existing tests and justifications, such as determining the "employer" of a non-human piece of property. Rather, the owner of the AI can transfer their right to the registered AI's creations under existing Copyright Act provisions[144] to the licensee of the machine. This solution would retain the current framework of denying copyrights for non-human authors as a default, while recognizing the difference between AI systems and previous non-human authorship situations and offering a regulated route to protection. Finally, the Copyright Office already requires that registrants submit an application form when registering and already maintains a database of existing copyrights,[145] so an AI register would impose only a small administrative burden, which could be compensated by registration fees.

CONCLUSION

The pressure to develop a framework will only increase as AI-generated works become increasingly desirable to companies attempting to further their objectives in a more economically efficient way. The deficiencies in the existing frameworks make them inoperable as solutions to this issue. Further, other suggestions—such as leaving the ownership of rights up to the parties to contract for[146]—fail to provide a definitive solution that businesses and the Copyright Office can rely on without being lost in contract interpretation squabbles and questions of copyright validity. In light of advancements in AI image generation technology, a solution like the proposed rights register is required to facilitate the progress and economic development of countless industries, including fashion.

[144] *Id.* § 201(d).

[145] *Registering a Work*, U.S. COPYRIGHT OFF., https://www.copyright.gov/help/faq/faq-register.html (last visited Mar. 23, 2024).

[146] Jeffrey Greene & Anne Marie Longobucco, *Is Artificial Intelligence the Newest Trend in Fashion?*, ALM LAW.COM: N.Y.L.J. (Aug. 24, 2018, 3:40 PM), https://www.law.com/newyorklawjournal/2018/08/24/artificial-intelligence-the-newest-trend-in-fashion/?slreturn=20230111183754.

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