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Cover Page Footnote

* Katherine Jung is from New Jersey and attended Harvard College, where she received an A.B. in English cum laude. She will receive her J.D. this spring ('24) and will join Foley Hoag's New York office in their litigation department. She is interested in Copyright and Trademark law and hopes to gain more experience in IP law throughout her career.
Good Readers, Good Writers, and AI: Tool, Collaborator, Author?

Katherine Jung*

Artificial Intelligence ("AI") systems have revolutionized the world of creative writing. Beyond providing simple grammar or spelling assistance, the most advanced of these systems can now play a collaborative role in the writing process, increasing productivity while pushing content in new and surprising directions. AI-generated creativity raises compelling questions in the context of copyright law, which has long been predicated on the assumption of human authorship. The capacity of AI to one day generate writing at a level of mastery on par with human beings complicates traditional notions of creativity, the protection of which the entire copyright system has been built on. This Note seeks to explore the ways in which creativity continues to be defined and redefined in the context of AI and how advanced deep learning models like GPT have innovated the field of creative writing. In this Note, I consider where AI-generated narratives fit within traditional copyright theory and existing legal requirements for copyright protection, whether a machine can meet the standards for creativity and originality, alternative models available for AI-generated creativity, and how a model incorporating legal subjectivity for AI and joint-ownership theory can address some of the most pressing legal issues facing copyright law as AI systems grow more autonomous.

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INTRODUCTION

In 1843, Ada Lovelace posited that computers would never be as intelligent as humans because they can only do what humans program them to do.¹ Unless a machine was capable of originating an idea that it was not designed to, it could not be considered intelligent in the same way that humans are.² Those who try to define creativity suggest it is “the drive to come up with something that is new, that is surprising, and that has value,” and it has long been considered a uniquely human characteristic.³

Alongside the notion that only humans can be creative is a longstanding tradition embedded in copyright law that views the exercise of creativity as an individual act:

Established knowledge at the time of the first copyright law was that each artist worked within a tradition, and that the artist’s job was to carry on this tradition. The author was, thus, viewed not so much as

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2 See id.
3 Id. at 3.
a worker but as an inspired genius whose literary qualities were the result of hidden and mysterious inner processes.4

But viewing creativity as “solitary genius” risks obscuring the ways in which context and culture play essential roles in creative production.5 Additionally, copyright law, which has developed from such a tradition, may not accurately represent how creativity actually manifests.6 The extent to which artists may borrow from works of the past indicates that creativity is often influenced by time and context.7 Further, the mass collaboration that occurs in the digital market is “an organisational form that copyright law appears not well designed for.”8

Margaret Boden defines three kinds of human creativity: exploratory, combinational, and transformational. Exploratory creativity accounts for the majority of human creativity and “involves taking what is already there . . . exploring its outer edges, [and] extending the limits of what is possible while remaining bound by the rules.”9 Bach embodied this type of creativity with his preludes and fugues, which “pushed the boundaries of what was possible before breaking the genre open” for the composers who followed him, ushering in a new era in classical music.10 Similarly, Claude Monet continued Renoir and Pissarro’s initial groundbreaking work reconceiving how nature and the surrounding world could be visualized, but went even further to develop a new form of abstraction.11

Conversely, combinational creativity involves “taking two completely different constructs and finding a way to combine them.”12 This form of creativity has been a powerful tool in mathematics. In

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6 See id. at 1023.
7 See id.
8 Id. at 1023–24.
9 Id. at 1023–24.
10 Du Sautoy, supra note 1, at 8.
11 Id.
12 See id.
finding the solution of Poincaré conjecture, “which describes the possible shapes of our universe,” Grigori Perelman applied the very different tools used to understand flow over surfaces.\textsuperscript{13} Perelman realized that “by knowing the way a liquid flows over a surface one could classify the possible surfaces that might exist.”\textsuperscript{14} Boden notes that this kind of creativity may be particularly well-suited for AI: “Take an algorithm that plays the blues and combine it with the music of Boulez and you will end up with a strange hybrid composition that might just create a new sound world.”\textsuperscript{15}

Transformational creativity is the most elusive category, defined as the fuel “behind those rare moments that are complete game changers.”\textsuperscript{16} Examples of this kind of creativity are Picasso’s invention of cubism as a new art form and Joyce’s innovations in modernism.\textsuperscript{17} Spanning different art forms, “these transformational moments hinge on changing the rules of the game, or dropping a long-held assumption.”\textsuperscript{18} One of the challenges this type of creativity poses for AI is that it “requires us to step outside the system and create a new reality.”\textsuperscript{19} For an AI system to exhibit this kind of creativity appears antithetical to the very rules-based algorithms on which these systems are built, but AI systems have demonstrated insights that were previously thought to be impossible. In 2016, DeepMind’s AlphaGo program, which had been created to play the game “Go,” defeated international champion Lee Sedol in a multipart game.\textsuperscript{20} Notably, “move 37 of Game Two was [considered] a truly creative act.”\textsuperscript{21} Analyzed under Boden’s framework, the move was new, surprising, and proved to have value. AlphaGo contemplated a novel way to play an ancient game and won by playing a move no human had ever played before. This achievement

\textsuperscript{13} Id. at 9.
\textsuperscript{14} Id.
\textsuperscript{15} Id. at 9.
\textsuperscript{16} Id.
\textsuperscript{17} Id.
\textsuperscript{18} Id. at 10.
\textsuperscript{19} Id.
\textsuperscript{20} Id. at 19–20, 30.
\textsuperscript{21} Id. at 37.
suggested that AI could be “a tool for exploring deeper, further, [and] wider than ever before.”

But what is the place of AI in creative writing? On the surface, “writing seems to be the least collaborative of all creative acts and far removed from social and contextual influences.” The image of Hemingway or Woolf setting pen to paper in a secluded room as they wrestle with their innermost thoughts is hard to dispel from the popular imagination—aligned with the sense that writing is the “private, personal expression of a person’s very private inner vision.” But as R. Keith Sawyer argues in “Writing as a Collaborative Act,” even seemingly solitary forms of writing such as poetry and prose involve more collaboration than what is generally assumed; the persistence of the writer as a solitary figure is a myth “based in our culture’s individualist assumptions about how creativity works.” As he illustrates by explaining how T.S. Elliot developed The Waste Land, many writers rely on others to provide valuable edits, guidance, revisions, and even recommendations that make their way into the final compositions. This type of interpersonal engagement occurs even in the absence of direct dialogue with others. Writers are often also prolific readers, influenced by the writings and ideas of their forebears and contemporaries, with new styles and genres building upon past works. In this way, writers are constantly engaging with the works of others in their own writings, whether they consciously realize it or not.

But where does an AI-generated narrative fit within such a paradigm? And can a legal framework predicated on human authorship accommodate the possibility of wholly autonomous, AI-generated creativity in the form of a poem, short story, or novel?

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22 Id. at 39.
23 R. Keith Sawyer, Writing as a Collaborative Act, in Psychology of Creative Writing 166, 166 (Scott Barry Kaufman & James C. Kaufman eds., 2009).
24 Id.
25 Id.
26 Id.
27 Id. at 174.
28 See Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 57–58 (1884) (holding that an author is “he to whom anything owes its origin,” and describing copyright as “the exclusive right of man to the production of his own genius or intellect”).
AI systems have undeniably made inroads into the creative arts. For example, futurist Ray Kurzweil created the Cybernetic Poet, which was trained on the works of celebrated poets like Percy Bysshe Shelley and T.S. Eliot. Notably, when subjected to a Turing test, Cybernetic Poet was “able to trick human judges most of the time.” A behavioral test for artificial intelligence, the Turing test queries whether a machine can think like a human being: “[W]hether the interrogator, at a distance and having no physical contact whatsoever, would be able to distinguish the machine from the genuine individual through a conversation game. If not, the machine must be considered intelligent.” As early as the 1960s, a school of French writers and mathematicians known as “Oulipo” began exploring the use of algorithms to create literature. One of the founders of the group, Raymond Queneau, suggested that algorithms were particularly well-suited to poetry because they imposed quasi-mathematical constraints, and “constraints were an important part of the creative process.” One of Oulipo’s algorithms, which “takes as its input any poem and acts on all the nouns in the poem by shifting them seven words along in the dictionary,” was designed to encourage people to view original texts with a new perspective. In this way, AI demonstrated the possibility of applying the constraints imposed by mathematical formulas to seemingly achieve the exact opposite, new forms of expression that stimulated human creativity by intimating novel ways of seeing and hearing. However, the amenability of poetry to an algorithmic approach, with the “constrained nature of the form provid[ing] a template that the algorithm can try to fill in a meaningful manner,” also raises the question of whether AI would be as useful when applied to a creative form with fewer constraints.

29 See Du Saütoy, supra note 1, at 262–63.
30 Id. at 263.
31 Bernardo Gonçalves, The Turing Test is a Thought Experiment, 33 Minds & Machs. 1, 2 (2023).
32 See Du Saütoy, supra note 1, at 260.
33 Id.
34 Id. at 260.
35 Id.
36 Id. at 262.
Notably, many coders participate in “NaNoGenMo,” a spin-off on a popular novel writing competition (NaNoWriMo) that applies algorithms to existing literature. Instead of writing novels in the traditional mode by transforming ideas into text, coders run novels through their original algorithms. NaNoGenMo was developed by Darius Kazemi, who decided to dedicate the time he would have spent writing the requisite 1,667 words a day necessary to complete a novel in a month to writing code that could generate a fifty-thousand-word novel. One of the standouts in this competition was “The Seeker,” a novel that “documents an algorithm’s struggle to understand how humans operate by reading different articles on wikiHow.” What distinguished this program from other algorithmic creations was that it produced a novel that allowed the reader to experience “getting inside the head of the algorithm as it tries to make sense of humans.”

Further, the issue of AI-generated creativity raises ethical questions. While some have suggested that AI-generated text is just another tool a writer can use to improve their writing (such as spell-check or grammar tools), others argue that “AI-generated text is cheating, as it gives the user an unfair advantage.” The proliferation of plagiarism detection tools (e.g., Scribbr, Quetex, Dupli-Checker, Grammarly, etc.) somewhat mitigates these concerns, as these tools can detect AI-generated content by searching for common signs: (1) incorrect and outdated information, (2) lack of depth and personality, and (3) repetitive language. However, as AI-generated content improves and grows more sophisticated, these tools will need to keep pace and find other ways to detect AI-generated content and plagiarism.

\[\text{Id. at 264.}\]
\[\text{Id.}\]
\[\text{Id.}\]
\[\text{Id. at 265.}\]
\[\text{Koen Driessen, 10 Best Free Plagiarism Checkers in 2023 | Tested & Reviewed, SCRIBBR (June 8, 2023), https://www.scribbr.com/plagiarism/best-free-plagiarism-checker [https://perma.cc/TTL6-DMA7].}\]
generated content in the absence of more obvious signs. Moreover, while plagiarism may be prevented through different tools, the issue of authorship for texts autonomously generated by the AI itself raises complex questions about who deserves to be credited for a work, especially if humans continue to drive the creativity of AI systems. As for the writing itself, whether the AI can truly capture a writer’s unique voice, understand their intentions and style (including readers’ reactions), and create a believable narrative present additional ethical questions. If AI can one day write at a level of mastery that surpasses human beings, possible implications include fewer opportunities for writers to have their works published and a corresponding disincentive for human writers to generate creative work. Moreover, because of the unique ways in which literature both reflects and shapes society, the proliferation of AI-generated writing may be responsible for detrimental effects such as the spread of fake news and manipulation of public perception.

And yet, perhaps the most robust argument against AI-generated creativity matching (or surpassing) human creativity is the reality that “all the creativity in machines is being initiated and driven by the human code.” Machines are not expressive in the way that humans are, acting out of their free will. To that end, creativity may also be defined as “humans asserting they are not machines.” The notion of creativity as a kind of self-reflection suggests the limits of even the most advanced autonomous AI systems to truly generate creative works on par with that of human beings. Part I discusses the technology behind AI, Part II explores the legal background of copyright law in the US and elsewhere, and Part III asserts an innovative solution for AI-generated content and discusses its limitations.

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44 See Baquero, supra note 41.
45 See id.
46 Du Sautoy, supra note 1, at 281.
47 Id. at 283.
GOOD READERS, GOOD WRITERS, AND AI

I. TECHNOLOGY BACKGROUND

A. Defining AI

AI systems are software algorithms that are regulated under the current copyright law regime. While there are various definitions for AI systems that emphasize different components of these systems, one definition is a system “capable of performing tasks that would normally require human intelligence, such as recognition, decision-making, creation, learning, evolving, and communicating.” As a tool, AI can increase the efficiency of existing solutions by drawing on available data. Previously, the field of artificial intelligence was dominated by “expert systems,” which used a rules-based decision process. Notably, these systems lacked true intelligence because they were not fully autonomous. Such systems were mostly incapable of generating results that diverged from their original (human-created) programming and could not evolve through learning—impediments to the exercise of true creativity.

B. Neural Networks

Current AI systems, known as “neural networks,” are much more advanced. The issue of whether AI-generated works can hold copyrights stems from the creativity and originality that the most advanced machine learning models are now capable of exercising, often free of human intervention. Understanding the complexity at which these AI machine learning models operate requires an understanding of what they were modeled after. While human artistic works form the primary pool of data for programming and teaching these machines, the functional condition of the programming system

49 Id. at 673.
50 See id. at 681.
51 See id. at 674.
52 See id.
53 See id.
55 See id.
was designed to mimic the complex neural processes of the human brain. An artificial neural network “principally functions to simulate the behavior of interconnected brain cells in a computer program so that it may, through repetition and outcome, effectively learn, recognize patterns, and arrive at independent decisions.”

Emulating the way that biological neurons send signals to one another, neural networks are composed of artificial “neurons” organized in interconnected layers. “Input” neurons receive outside information that the network seeks to process, learn about, and recognize. The input neurons activate “hidden” neurons that process and transform the data. Those hidden neurons are then connected to “output” neurons, which communicate the neural network’s response to the information it has received. Like a human brain, these artificial neurons are all interconnected and pass signals between them. The transmissions between the neurons are characterized by their “weight,” a number that can activate another neuron or suppress it. In the same way that brain cells interact through synaptic activity, the higher the weight of the signal from one neuron to another, the greater the influence of that neuron on the other.

An intelligent algorithm is taught by feeding various patterns of information and data into the neural network through these artificial neurons. The input neurons activate the hidden neurons, which reach the output neurons in a process called a “feedforward network.” Through a mechanism known as “backpropagation,” the algorithm learns through feedback. Backpropagation involves analyzing the output the network actually produced against the true

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56 See id.
57 Id.
58 See id.
59 See id.
60 See id.
61 See id.
62 See id. at 188–89.
63 See id. at 189.
64 Id.
65 Id.
66 Id.
67 Id.
output it was intended to produce and uses any variation to adjust the weights between the neurons in the network. In this way, the connection is traced backwards from the output neurons to the hidden neurons and back to the input neurons. The machine learns through a process of trial-and-error, and it autonomously reduces the gap between the actual and intended output until its weights converge toward an accurate representation of the true decision-making process. Through this process, the algorithm learns by recognizing patterns, similarities, and connections in the data and transforming them into decision-making rules.

Significantly, these machines often produce outcomes that are unpredictable even to their human developer or user. Programmers feed the algorithm examples of “desired input-output behavior” instead of programming it manually by predicting the expected response for all possible inputs. Thus, AI is not just mimicking works of art from an original body of work but engaging autonomously in the creative process by producing a final output that might depart significantly from what the user or programmer anticipated.

C. Natural Language Processing

Natural language processing (“NLP”) is a subfield of artificial intelligence that aims to build computers with the ability to understand and manipulate human language. NLP combines computational linguistics, which applies computer science to the analysis of human language, with statistical, machine learning, and other models. These technologies enable machines to process human language as it is spoken and written, including understanding the

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68 Id. at 190.
69 See id.
70 Id.
71 See Yanisky-Ravid, supra note 48, at 679.
72 Paquette, supra note 54, at 190.
75 IBM NLP, supra note 73.
writer’s sentiment. NLP can be further divided into “natural language understanding (NLU), which focuses on semantic analysis or determining the intended meaning of text, and natural language generation (NLG), which focuses on text generation by a machine.”

As digital text began to proliferate, it influenced the development of algorithms that could understand human language from expansive amounts of natural text. This marked an important shift in NLP research to empirical machine learning models. Instead of learning language structure by collecting large amounts of online text and extracting a rule-based model from this data, NLP researchers began to focus on “constructing annotated linguistic resources, such as labeling the sense of words, instances of person or company names in texts, or the grammatical structure of sentences in tree-banks.” Unlike text collection, which was limited because it facilitated learning language structure by “counting particular facts” (e.g., the number of associations a word might have with locations with people versus a metaphorical notion), the latter applied machine learning techniques to build models that were capable of producing labels from these linguistic resources when presented with new pieces of text.

The development of deep learning methods starting in 2013 provided a more powerful method for building performant models. Deep learning is a subset of machine learning: “a neural network with three or more layers.” These neural networks imitate the behavior of the human brain, allowing it to “learn” from large amounts of data through a combination of data inputs, weights, and bias. Under this approach, “words and sentences are represented by a

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76 DeepLearning NLP, supra note 74.
77 See Christopher D. Manning, Human Language Understanding & Reasoning, 151 (2) DAEDALUS 127, 129 (2022).
78 See id.
79 Id.
80 Id.
81 Id.
82 Id.
84 Id.
position in a (several hundred- or thousand-dimensional) real-valued vector space, and similarities of meaning or syntax are represented by proximity in this space.\textsuperscript{85} Between 2013 and 2018, deep learning made it easier to model longer distance contexts, with models generalizing better to words or phrases with similar meanings by using proximity in vector space rather than relying on the identity of symbols, such as a word form or part of speech.\textsuperscript{86} But machine learning models still required supervision to perform particular analysis tasks.\textsuperscript{87}

In 2018, the development of the first large scale, self-supervised neural network fundamentally changed the field’s orientation.\textsuperscript{88} Under this approach, systems acquire general knowledge of a language and the world following exposure to enormous quantities of text (normally in the billions of words).\textsuperscript{89} This process is self-supervised because the system creates its own prediction challenges from the text, such as identifying each subsequent word in the text given the previous words.\textsuperscript{90} The system repeats these predictive tasks billions of times, learning from its mistakes and improving when provided with a similar textual context.\textsuperscript{91} The result is a trained model capable of adapting (through fine-tuning or prompting) to provide results on all matters of natural language understanding and generation tasks.\textsuperscript{92}

\textbf{D. GPT-3}

Neural networks typically process language by “generating fixed- or variable-length vector-space recommendations.”\textsuperscript{93} Following exposure to representations of individual or parts of words, they aggregate information from surrounding words to determine the

\textsuperscript{85} Manning, supra note 77, at 129.
\textsuperscript{86} Id.
\textsuperscript{87} Id.
\textsuperscript{88} Id.
\textsuperscript{89} See id.
\textsuperscript{90} See id.
\textsuperscript{91} Id.
\textsuperscript{92} See id. at 129–30.
meaning of language in context. Recurrent neural networks (“RNNs”) provided the typical architecture for translation, operating by processing language sequentially from left-to-right or right-to-left. RNNs are “a type of artificial neural network which uses sequential data or time series data.” These deep learning algorithms are often used for language translation and NLP and use data to learn. However, unlike traditional deep neural networks, which “assume that inputs and outputs are independent of each other, the output of recurrent neural networks depend on the prior elements within the sequence.” Because RNNs read one word at a time, determining what a word means in context requires multiple steps. For words spaced far apart, as in the sentence—“I arrived at the bank after crossing the river”—an RNN would have to process each word between “bank” and “river” in order to determine that “bank” referred to a river and not a financial institution in this context. The number of steps required ultimately inhibits how effectively RNNs can learn to make these decisions.

In 2017, Google introduced the Transformer. A novel neural network architecture for language understanding based on a self-attention mechanism, Transformer outperformed RNNs on machine translation tasks, producing better translation quality and speeding up the translation process. Unlike RNNs, Transformer performed a small, constant number of steps. At each step, “it applied a self-attention mechanism which directly modeled relationships between all words in a sentence, regardless of their respective

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94 See id.
95 See id.
97 Id.
98 Id.
99 See Uszkoreit, supra note 93.
100 Id.
101 Id.
102 Id.
103 See id.
104 See id.
position.” Where an RNN may have taken multiple steps to make a translation, Transformer could learn to immediately attend to a given word in a single step.

These advances catalyzed the largest neural network ever produced at the time: GPT-3 (Generative Pre-trained Transformer-3). By combining the Transformer architecture with unsupervised learning, this model eliminated the need to train task-specific architectures from scratch. Created by OpenAI, a research laboratory “whose stated goal is to promote and develop friendly AI that can benefit humanity,” GPT-3 was the most recent and advanced of these language generation models prior to the launch of GPT-4 in 2023.

From a source input (“prompt”), GPT-3 generates sequences of words, code, or other data using 175 billion parameters (i.e., the values the neural network tries to optimize during training). Provided with the starting text and without supervision, input, or training concerning the “right” or “correct” text that should follow the prompt, GPT-3 produces the next word in a sequence that is a statistically good fit. Unlike previous models that might have required fine-tuning through additional supervised learning or training on the exact task of interest, GPT-3 can perform novel tasks with just a prompt. Given a human language description or a few examples

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105 See id.

106 See id.


110 The Tech Platform, What is GPT-4 and How Does it Compare to GPT-3 and Other Language Models?, MEDIUM (June 8, 2023), https://thetechplatform.medium.com/what-is-gpt-4-and-how-does-it-compare-to-gpt-3-and-other-language-models-55d0e97a2d9f#:~:text=With%20a%20staggering%20175%20billion,by%20more%20than%20100%20times [https://perma.cc/5JJM-CFFZ].

111 Id.

112 Floridi & Chiriatti, supra note 109, at 684–85.

113 See id. at 685.
of the desired task, GPT-3 can perform many tasks for which it was never trained. However, these systems still face certain limitations, lacking a human-level ability for careful logical or causal reasoning.

GPT-3 formed the basis for an influx of AI-generated writing following its release. In 2017, Ross Goodwin published an experimental, AI-generated novel called *I the Road*. The Guardian famously released an article written by AI in 2020 that caused a public stir among its human readership. That same year, the *New York Times* had GPT-3 write a series of pieces for Modern Love, the paper’s column about relationships and feelings. Indie novelists have also implemented AI programs to help them churn out content faster.

Deep learning approaches like GPT-3 “can focus attention on key textual features and make connections over longer textual passages,” in addition to being tuned for individual tasks like question and answer or text generation. Perhaps the greatest contrast between human and AI-generated writing is that while an individual’s writing remains fairly consistent, GPT’s output is highly unpredictable and variable. Researchers have found that GPT-3 excels in aspects of writing that even humans might find challenging:

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114 See id.
115 See Manning, supra note 77, at 136.
120 See Katherine Elkins & Jon Chun, Can GPT-3 Pass a Writer’s Turing Test?, 5 J. CULTURAL ANALYTICS 1, 2 (2020).
121 See id.
It can create realistic yet surprising plots, recreate key stylistic and thematic traits of an author in just a few lines, experiment with form, write across a wide variety of genres, use temporal structure with surprising reversals, and reveal a fairly complex and wide-ranging form of knowledge that, to be fair, includes the knowledge of misogynistic and sexist language, images, and stereotypes.122

However, GPT-3 performs poorly at other tasks that humans tend to do quite easily, such as maintaining a coherent argument or narrative thread, following simple grammar rules, and demonstrating commonsense reasoning.123 Nevertheless, as the results of one experiment has suggested, “[w]hile GPT-3 may lack commonsense and foundational knowledge, it has knowledge of a different kind—of philosophical positions and complexities, and of the way in which an argument can be structured to create nuance and subtlety.”124

Researchers acknowledge that GPT-3 and other large-scale statistical models are not sufficient to fully grasp language and emphasize the importance of building causality and more systematic reasoning into these models.125 Others suggest that AI would require a physical embodiment to learn, interact, and experience the true meaning behind language.126

Introduced by OpenAI on March 14, 2023, GPT-4 has 1.5 trillion parameters, which allows it to process image inputs in addition to text, facilitating a greater understanding of data.127 GPT-4 has been described as “‘more creative’ particularly ‘on creative and technical writing tasks’ in comparison to previous versions.”128 One way researchers have tested such creativity is by employing divergent thinking tasks, which allow for “flexibility to determine

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122 See id. at 3.
123 Id.
124 Id. at 12.
125 See id. at 13.
126 See id.
127 The Tech Platform, supra note 110.
multiple creative solutions.” The results from one such study revealed that “GPT-4 demonstrated higher creative potential across an entire battery of divergent thinking tasks,” supporting that the creative potential of AI could surpass human potential. However, researchers acknowledge that an examination of creativity is multifaceted and that such findings “reflect only a single aspect of divergent creativity, rather than a generalization that AI is indeed more creative across the board.”

In another study, AI chatbots received higher average scores than humans in the Alternate Uses Task, which is a test designed to measure human creativity. However, issues of how to measure creativity and whether these tests can appropriately measure AI’s creativity persist: “proving that machines can perform well in tasks designed for measuring creativity in humans doesn’t demonstrate that they’re capable of anything approaching original thought.” An alternative theory to the creativity of these models is that rather than generating new ideas, they are simply “drawing on things it’s seen in its training data,” meaning that researchers are simply measuring a model’s past knowledge of a particular task instead of any creativity on the part of the machine. Such findings temper the notion that AIs are “developing an ability to do something uniquely human,” or even demonstrating creativity as humans understand it.

Advanced language models like GPT raise compelling questions about the limits of the current copyright regime to address AI-generated creativity where attribution and ownership cannot be readily identified in a human source. Much of the conversation

129 Id.
130 Id. at 8.
131 Id.
133 Id.
134 Id.
135 Id.
136 Id.
around AI and creative writing has centered on AI as writing assistants (tools that might aid writers without supplanting them) and collaborators that can push writers in new and unexpected directions.\textsuperscript{137} AI has also been perceived as an impending death knell for human writers who might see their roles replaced by AI once it advances to a point where it can write novels and other creative works indistinguishable from that of human authors.\textsuperscript{138}

CoAuthor, a human-AI collaborative writing dataset, provides additional insight into how AI is shaping the process of creative writing.\textsuperscript{139} Researchers followed 60 people who used CoAuthor to develop more than 1,400 stories and essays.\textsuperscript{140} Writers were given the option to choose from five suggestions generated by GPT-3 throughout their writing and could accept or reject the suggestions, modify them, etc.\textsuperscript{141} CoAuthor tracked all of the interactions between the writers and the model.\textsuperscript{142} From this data, researchers were able to analyze where writers found CoAuthor helpful (e.g., by accepting suggestions), which suggestions were popular, and even how those suggestions influenced their writing throughout the process.\textsuperscript{143} Notably, CoAuthor can use this data to improve its suggestions for future language models.\textsuperscript{144}

CoAuthor’s creators found that the use of large language models increased writer productivity.\textsuperscript{145} While acknowledging technical hurdles (large language models are prone to generating biased and toxic language), this outcome suggests that the best collaborations between human writers and models occur when AI offers


\textsuperscript{139} See Myers, supra note 137.

\textsuperscript{140} Id.

\textsuperscript{141} See id.

\textsuperscript{142} Id.

\textsuperscript{143} See id.

\textsuperscript{144} See id.

\textsuperscript{145} See id.
suggestions to guide the writing process and humans use their own creativity to evaluate them.\textsuperscript{146}

In his article on the limits of AI to process narrative, AI scholar Angus Fletcher draws from his research on GPT-3 and other deep neural networks to argue that AI will never be able to read or write novels or any other kind of narrative.\textsuperscript{147} Recounting his experience with a natural language processor, Fletcher notes that while the program excelled at identifying the meaning of words because it could identify subjects, predicates, and linking verbs, it struggled to process other verbs: “To process those other verbs, the program had to convert them into subjects, predicates, and linking verbs, but data was getting lost in translation. The lost data was narrative; it was the \textit{action} of the verbs, what they were causing through time.”\textsuperscript{148}

Although deep neural networks are modeled after the human brain, AI researchers “universally acknowledge that computer AI and humans think differently.”\textsuperscript{149} Often, researchers defer to terms that add little clarity to this distinction (e.g., consciousness, emergent properties, black-box intelligence).\textsuperscript{150} One way to draw a clear boundary between how AI and the human brain process information is to recognize that “AI thinks entirely in equation, while the human brain thinks partly in equation but primarily in action.”\textsuperscript{151} Action operates by predicting that certain causes will lead to certain outcomes.\textsuperscript{152} If these outcomes do not occur as expected, the human brain responds by contemplating another prediction.\textsuperscript{153} On the other hand, equation operates under the assumption that one thing correlates with another.\textsuperscript{154} In response to an equation failure, the AI simply “enlarges the equation with a new correlation.”\textsuperscript{155}

\textsuperscript{146} See id.
\textsuperscript{147} See Angus Fletcher, \textit{Why Computer AI Will Never Do What We Imagine It Can}, 30 \textit{Narrative} \textit{114, 115} (2022).
\textsuperscript{148} Id. at 116.
\textsuperscript{149} See id.
\textsuperscript{150} Id.
\textsuperscript{151} Id.
\textsuperscript{152} Id. at 117.
\textsuperscript{153} See id..
\textsuperscript{154} See id.
\textsuperscript{155} Id.
Humans purposefully designed machines to think in equations because they can be powerful problem-solving tools. In contrast, action is a biological tool that has existed for millions of years. The neurons that power the brain are constantly acting, even absent any input, and “because the neuron’s frequency is ultimately autonomous, its firing will often conflict with other neurons in its network, leading to psychological vacillation, indecision, self-contradiction—and also to creativity.”

The constant, independent actions of these neurons explain why humans think in narrative: narratives are chains of actions. The ability to think in action is baked into the machinery of human neurons, so narrative processes can occur in the brain absent consciousness. Analogously, algorithms can execute complex statistical calculations despite lacking sentience because computers are designed to think in equations. AI researchers suggest that because different physical processes can nonetheless produce identical results, computers can use their own processes of creating and problem-solving to match humans on these intellectual tasks. However, while AI might be able to defeat a chess grandmaster, whether it can imitate this success with narrative is more ambiguous. Fletcher suggests that the crux of this issue is that creating a narrative is fundamentally a process, and one cannot accomplish a process through a different process. Narrative creation is a process because it requires action, which necessarily requires a cause-and-effect. A narrative’s text doesn’t exist in the pages of a novel but

156 See id.
157 See id.
158 Id.
159 Id.
160 See id.
161 See id. at 117–18.
162 See id. at 118.
164 Fletcher, supra note 147, at 119.
165 See id. at 120.
in the neural processes in the human brain that run the cause-and-effect analysis, a process that a computer cannot imitate.\textsuperscript{166}

Moreover, AI continues to fail certain tests, including the Turing test: “today, the irreversibility of semantic questions is \textit{still} beyond any available AI systems.”\textsuperscript{167} Another way researchers have framed the issue of AI and human intelligence is by decoupling the ability to solve a problem effectively from the requirement that one (whether human or AI) must be intelligent to do so.\textsuperscript{168} Placed in context with Fletcher, this approach moves away from the focus on whether AI can achieve human-level consciousness or intelligence by suggesting that part of the problem with speculating about the capabilities of AI is evaluating its performance relative to humans. Under this reasoning, AI’s capacity to write excellent prose, poetry, and other forms of literature is significant not because of what it has achieved through the end product, but because of \textit{how} it has managed to do so.

When subjected to a test on ethics, GPT-3 reflects negative human biases and stereotypes because it is trained on human texts.\textsuperscript{169} From the perspective of cognitive psychology, these limitations stem from differences in how humans and GPT-3 learn about the world: “Humans learn by connecting with other people, asking them questions, and actively engaging with their environments, whereas large language models learn by being passively fed a lot of text and predicting what word comes next.”\textsuperscript{170}

Small variations in presented prompts might easily misdirect GPT-3’s output, and the model lacks important pillars of human cognition, such as directed exploration and causal reasoning.\textsuperscript{171} One solution to produce more intelligent systems would be to not only

\begin{footnotes}
\footnote{166}{See id.}
\footnote{167}{Floridi & Chiriatti, \textit{supra} note 109, at 683.}
\footnote{168}{See id.}
\footnote{170}{Marcel Binz & Eric Schulz, \textit{Using Cognitive Psychology to Understand GPT-3}, 120 PNAS 1, 9 (2023).}
\footnote{171}{See id.}
\end{footnotes}
scale up algorithms but to allow these artificial agents to directly engage with the world. Such a view cuts against the notion that “we are witnessing not a marriage but a divorce between successful engineered agency and required biological intelligence.”

Instead, this perspective suggests that actively interacting with the world in the same way that humans interact within their larger social contexts will be crucial for systems like GPT-3 to match human cognition.

Nevertheless, because AI is capable of writing better than most people, its ability to mass produce translations, summaries, newspaper articles, reports, etc., portends that writers may have less work in the future. Microsoft has already replaced journalists with automatic systems for news production on MSN. People who are able to retain their writing jobs will still be impacted by the increasing advancements of tools like GPT-3. Working with these tools requires that they “learn the new editorial skills required to shape, intelligently, the prompts that deliver the best results, and to collect and combine (collate) intelligently the results obtained.”

Floridi and Chiriatti emphasize the significant role that human intelligence continues to play in this process: “[T]hese new jobs will still require a lot of human brain power, just a different application of it.” For example, tools like GPT-3 can fill in missing parts of texts or complete unfinished works by human authors, such as when an AI system completed the final movements of Schubert’s Symphony No. 8.

Human involvement remains necessary at both ends of the content generation process to use these tools effectively. To have AI “create,” a human must first enter a prompt into a generative model,

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172 Floridi & Chiriatti, supra note 109, at 687.
173 See Binz & Schulz, supra note 170, at 9.
174 See Floridi & Chiriatti, supra note 109, at 691.
175 See id.
176 See id.
177 Id.
178 Id.
179 Id.
with “creative prompts yield[ing] creative outputs.” 181 To that end, the generative model’s success in creating content directly depends on the creativity of a human catalyst. Rather than eliminating jobs, positions like “prompt engineer” may become available to humans until AI grows more advanced. 182 At the end of the content generation process, such AI-produced content must then be “evaluated and edited carefully by a human,” 183 a process that can take a significant amount of time and effort. 184

While readers and writers may benefit from AI tools (e.g., improvements in grammar and reduced typos), the effects are two-sided, and GPT-3 may adopt poor linguistic habits from the contexts of its human creators. Other negative impacts may follow when such writing tools are dispersed to the general public. Widespread availability and improvements will increase content and pressure the available space for recording while also producing massive “semantic garbage, from cheap novels to countless articles published by predatory journals.” 185 Further, the automation of text production exacerbates two existing problems. First, tools like GPT-3 will aid clickbait because it can produce excellent writing cheaply and efficiently in ways that can be targeted to the reader. 186 Second, the proliferation of tools like GPT-3 may support the growth of “‘no-code platforms,’ enabling marketers to create applications to automate repetitive tasks, starting from data commands in natural language (written or spoken).” 187 Fake news and the spread of disinformation are also possible consequences of GPT-3 generated texts, which are better able to lie and mislead credibly. 188 While counterbalanced by the prospect of more sophisticated systems and improvements in relationships between consumers and producers, the myriad of consequences posed by GPT-3 point to the need for a legal framework that can accommodate the novel ways in which GPT-3 has and will

181 Id.
182 Id.
183 Id.
184 Id.
185 Floridi & Chiriatti, supra note 109, at 692.
186 See id.
187 Id.
188 See id.
interact with human beings, including in the creation of narrative works.

II. LEGAL BACKGROUND

The courts and Congress have clarified that the primary purpose of copyright law is to “encourage the production of original literary, artistic, and musical expression for the good of the public.” Copyright law is primarily driven by the utilitarian theory that creators will provide value to society if given the right incentive. Notably, while authors benefit from a bundle of proprietary rights, the primary consideration behind these laws is to motivate creativity that is intended to benefit the public while also providing an economic incentive for creators.

Under U.S. law, copyright protection requires an original work of authorship fixed in a tangible medium in order to be valid. A work meets the fixation requirement when its “embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.” A work is original if it is “the independent creation of the author and was not copied from another source.”

A. Originality

In Feist Publications v. Rural Telephone Service Co., the Supreme Court defined the originality requirement under two prongs: holding that to “qualify for copyright protection, a work must be ‘independently created by the author’ and ‘possess[] at least some minimal degree of creativity.’” Independent creation requires that the author must not have copied from other works, but this standard

190 See id. at 15.
191 See id.
192 See id. at 17.
194 Brown, supra note 189, at 5.
is relatively easy to meet: “[A] work may be original even though it closely resembles other works so long as the similarity is fortuitous, not the result of copying.” The author’s intent is irrelevant to this inquiry, as is the “novelty, ingenuity, aesthetic value, artistic merit, and intrinsic quality” of the work. The creativity requirement also presents a very low threshold, and “even a minimal amount of creative expression will suffice.” Accordingly, a new work meets the standard for creativity if it offers “a faint trace of originality” and if it provides a “distinguishable variation.” The test is satisfied when the work results from creative choices made by the author.

B. Authorship

Notably, the Copyright Clause of the Constitution empowers Congress to secure authors with exclusive rights to their writings. While authorship is not expressly defined in the Copyright Act itself, courts have defined its parameters through case law. As Arth Nagpal observes:

In *Community for Creative Non-Violence v. Reid*, Justice Marshall defines an author as “the party who actually creates the work, that is, the person who translates an idea into a fixed, tangible expression entitled to copyright protection.” Professor Nimmer also mulls over the impending reality of non-human authors but leaves the question of the interpretation of “person” unanswered. Elaborating on the general principle that the creator of the work is its author, barring cases of “works for hire,” a district court in *Lindsay v. R.M.S. Titanic* accorded probative

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196 *Id.*
197 Brown, *supra* note 189, at 18.
198 *Id.* at 19.
199 *Id.*
201 See U.S. CONST. art. 1, § 8, cl. 8 (authorizing Congress to, *inter alia*, “secur[e] for limited Times to Authors . . . the exclusive Right to their respective Writings”).
significance to the presence of control in the determination of the true author of the work in question.  

Federal courts and the U.S. Copyright Office have been consistent in their interpretations of the law, overwhelmingly analyzing conflicts in ownership rights through the lens of authorship and denying authorship to non-humans. In Community for Creative Non-Violence v. Reid, the Supreme Court defined the author as the party who creates a work, clarifying that they must be a “person who translates an idea into a fixed, tangible expression.” In Urantia Foundation v. Maaherra, the Ninth Circuit also defined authors as the “first human beings who compiled, selected, coordinated, and arranged [the work].” The motivation to define authorship through personhood may be partly explained by the courts’ emphasis on the idea of inspiration, which is conceptualized as “uniquely human.” In Burrow-Giles Lithographic Co. v. Sarony, the court defined an author as follows: “[H]e to whom anything owes its origin; originator; maker; one who completes a work of science or literature.” The court in Bleistein v. Donaldson Lithographing Co. held that the author’s unique personality and reaction to nature is the essence of a copyrightable work. Further, in Feist Publications, Inc. v. Rural Telephone Service Co., Inc., the Supreme Court held that a copyrightable work must possess “some creative spark.” Justice O’Connor stated that a necessary condition of a work’s copyrightability is its originality to the author.

202 Arth Nagpal, Authorship in Works Created by AI 4 (2020) (unpublished “special mention” in the Center for Legal & Court Technology’s Artificial Intelligence Writing Competition) (on file with the Center for Legal & Court Technology).

203 See id.


206 Id. at 1.

207 111 U.S. 53, 57–58 (1884).

208 188 U.S. 239, 250 (1903).


210 Id.
The U.S. Copyright Office further clarified that copyright protections apply only to human authors, following *Naruto v. Slater*.211 In *Naruto*, the main issue involved whether a monkey could assert statutory authority under the U.S. Copyright Act to sue for copyright infringement.212 The Court of Appeals upheld the lower court’s decision that non-human animals lacked statutory standing under the Act, relying on the common-law concept of authorship.213 Specifically, “if an act of Congress does not ‘plainly state’ that animals have statutory standing, then the answer is clear, and it can be concluded that they, in fact, do not.”214

The U.S. Copyright Office enshrined this holding by affirming that the Copyright Office will only register an original work authored by a human being under Section 306 of *The Human Authorship Requirement* in the Compendium.215 The Compendium further reinforces this requirement in Section 313.2, clarifying that works which lack human authorship are ineligible for copyright registration, specifically mentioning “a photograph taken by a monkey” as an example.216 The effort to exclude non-human entities from copyright protections has been extended to artificial intelligence: the Compendium plainly states that the Office will not register works created by a “machine or mere mechanical process” that operates autonomously without the creative participation or intervention of a human author.217 Moreover, even if a human and AI were to produce identical works, “applying the context, the history, and the legal analysis of the [Naruto] case, autonomously created AI works would be rejected by the Copyright Office.”218

Much of the rationale for limiting authorship under the current U.S. copyright regime in this way stems from the notion that copyright was instituted “for the encouragement of learning.”219 Beyond

212 *Id.*
213 *Id.* at 202–03.
214 *Id.* at 203 (citing *Naruto v. Slater*, 888 F.3d 418 (9th Cir. 2018)).
215 *Id.* at 204.
216 *Id.*
217 See Paquette, *supra* note 54, at 204.
219 Paquette, *supra* note 54, at 205.
lacking a motivation for economic award or attribution, algorithms lack a concern for the natural rights stemming from their work because such a concern is “native to the human mind.” This policy rationale, in addition to the case law confining authorship to humans, means that AI-generated works and the AI responsible for generating them are deprived of authorship due to lack of personhood.

C. Theoretical Models

Nevertheless, while the law requires a human to obtain a copyright, the work-for-hire doctrine allows non-natural persons to hold one. For example, where an employee acts within the scope of their employment, the hiring party gains ownership over the copyright. Such a model, embodied under Section 201 of the U.S. Copyright Act, proposes one way around the issue of legal personhood. Rather than conferring authorship to the AI, “the ‘work for hire’ doctrine can just as readily be adapted to allow works created by AI to acquire protection under copyright law by bringing a minor modification in the law to allow the developer or the licensee of the AI to be considered the ‘deemed owner’ of the copyright.” This model avoids the problem of vesting ownership in a non-human lacking legal protections by vesting ownership in a legal/natural person instead. However, the Supreme Court’s decision in Community for Creative Non-Violence v. Reid complicates the “work for hire” classification of AI-generated works. While the Court did not contemplate AI-generated works in this case, it did circumscribe the flexibility of this doctrine when applied to AI. By establishing strict factors required to satisfy an employer-employee relationship, the Supreme Court’s decision in this case largely placed the control over a work and “the manner and means by which the product is accomplished” in the hands of the employer/hiring party.

220 Id.
221 See id.
222 See Nagpal, supra note 202, at 5.
223 Id.
224 See id. at 7; 17 U.S.C. § 201(b).
225 See Nagpal, supra note 202, at 5.
226 Id. at 6.
227 Id.
Moreover, in *Thaler v. Perlmutter*, the United States District Court for the District of Columbia (in dicta) “indicated its agreement with the Copyright Office’s position that AI cannot be considered an ‘employee’ subject to the work-for-hire doctrine, nor could it transfer a copyright that it could not author in the first place.”228 The case involved Mr. Thaler’s copyright registration application for an AI-created image in which he had listed the author as the “Creativity Machine,” “a computer algorithm running on a machine.”229 While the court “declined to address Mr. Thaler’s other ‘legal theories under which a copyright in the computer’s work would transfer to him, as the computer’s owner; for example, by operation of common law property principles or the work-for-hire doctrine,’”230 it upheld the Copyright Office’s original rejection based on the human authorship requirement—“while the doctrine does allow a human author to vest ownership of a copyright in a corporate, non-human employer via contract, it does not imply that the employer created the copyrighted work.”231 However, the court only considered the question of copyright ownership for AI in a context completely devoid of human involvement, which leaves room for interpretation (and perhaps greater flexibility) in cases where AI-generated content features some human involvement, as was noted by the Copyright Office in 2023.232

An alternative theoretical model is Shlomit Yanisky-Ravid’s AI Work Made for Hire (“AI-WMFH”) model, “which views the AI system as a creative employee or independent contractor of the user.”233 Under this model, while “the AI system itself would be the

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229 *Id.*

230 *Id.*

231 *Id.*


proximate creator of the work, others, such as the user of the AI system at whose instance the work is ultimately created, will be entitled to ownership as well as accountability in regard to the works.” While the user may vary according to the context, this decision would be guided by policy and practical rationales that recognize the benefits of incentivizing people or other entities to use creative AI systems to produce creative works. Incentive theory operates under the assumption that “promising the power to prevent other, similar works from being produced or distributed” to creators through intellectual property protections will stimulate creation. Under incentive theory, identifying the most efficient entity to control AI systems can guard against AI systems getting out of control by holding the user (who is likely best positioned to deal with potential issues) accountable. This model also resolves the problem of multiple stakeholders involved in the development of AI systems by facilitating “further investment in the AI industry and likely promote science and technology, thus promoting the goals of the Constitution and promoting total welfare.” However, the potential of this model is circumscribed by the Supreme Court’s suggestion that the WMFH doctrine “applies only to instances where Congress has expressed a clear and explicit intent to override section 102,” which would require new legislation to broaden its reach. Moreover, because the costs related to AI-generated creativity can be quite low, creating a new legal framework to incentivize owners of creative AI systems may not be justified.

Another theoretical avenue to address the issue of personhood in authorship and thereby grant AI the protections of copyright is to endow it with legal personhood. While many jurists have preferred to “address the legal issues emerging from the agency of AI systems

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234 Id. at 712.
235 Id.
237 Yanisky-Ravid, supra note 48, at 712.
238 Id. at 713.
239 Id. at 715.
240 Id. at 716.
by adapting existing liability models,”\textsuperscript{241} the increasing autonomy of these systems raises the issue of attributing legal personality to AI models. AI could be granted legal personhood in the context of copyright law without addressing moral agency or criminal law liability, which emphasizes censure and “assumes a kind of moral agency that is not obvious in the case of current day autonomous systems.”\textsuperscript{242} While restricting criminal law liability to natural persons makes sense because of its focus on moral blame, non-human entities like corporations and AI (which presently lack the capacity to experience moral responsibility) may be extended legal personhood where appropriate.\textsuperscript{243} Acknowledging that “legal personhood can be attributed in the context of different legal domains”\textsuperscript{244} avoids the problem of attributing legal personhood to AI in contexts that don’t make sense.

The kind of legal subjectivity attributed to persons is not acknowledged for AI because it does not demonstrate any evidence of being conscious or sentient.\textsuperscript{245} The belief that “the abilities of AI are limited in relation to humans”\textsuperscript{246} has led to more frequent comparison with animals, while reinforcing the Western view that “animals and juridical persons are, next to humans, the only true candidates for broader- or narrowly-determined legal subjectivity.”\textsuperscript{247} However, rooting legal subjectivity in consciousness fails to account for humans who may have sentience limited by age, health, or abnormality, and for legal cultures in which a river or a mountain may be made legal subjects.\textsuperscript{248} Significantly, despite recognized mental abnormalities, “sociopaths and psychopaths are regarded as legally responsible even according to criminal law.”\textsuperscript{249}

\textsuperscript{241} Claudio Novelli et al., \textit{A Conceptual Framework for Legal Personality and its Application to AI}, 13 JURIS. 194, 198 (2022).
\textsuperscript{242} MIREILLE HILDEBRANDT, LAW FOR COMPUTER SCIENTISTS AND OTHER FOLK 240 (2020).
\textsuperscript{243} Id.
\textsuperscript{244} Id.
\textsuperscript{246} Id. at 207.
\textsuperscript{247} Id.
\textsuperscript{248} Id. at 207–08.
\textsuperscript{249} Id. at 207.
the New Zealand government enacted legislation extending legal personhood to the Whanganui River, for “holding rights and responsibilities equivalent to a person.”

Despite New Zealand law’s origins in English common law, the government’s acknowledgment of the ancestral connection that the indigenous Māori people have with this river “models a practice to evolve the common law to better respect and reflect Indigenous legal principles.” The attribution of legal personhood to a river suggests that extending legal personhood to AI is not so far-fetched.

Additionally, while human beings are considered “natural persons,” slaves and women were historically denied the status of legal subjects and could not vote, own property, or claim rights to privacy or freedom of expression, among others.

The decision to endow all human beings with legal subjectivity was a “political decision that sprang from the idea that governments should treat each individual as deserving equal respect and concern.” And the law has since recognized legal personhood for other entities, like corporations, foundations, and municipalities. But the level of personhood may vary based on jurisdiction, so a corporation could be a legal person under private law but not under criminal law.

The idea of personhood is central to the dual roles of law: “[I]t is an instrument where it enables an entity to act in law or to be held liable and it protects where it prevents equating legal status with the living person.” AI may be viewed like corporations under the law, which are legal persons/subjects because of a legal fiction rather than being actual persons or subjects. However, just as corporations are not natural persons and cannot act independently of their


251 Wojtczak, *supra* note 245, at 208 n.11.

252 Cheater, *supra* note 250.


254 *Id.* at 241.

255 *Id.*

256 *Id.*

257 *Id.*

258 *Id.* at 242.
legal representatives, this conception of legal personhood suggests that AI requires representation.\(^{259}\) Additionally, viewing AI as analogous to corporations or other entities for purposes of legal personhood risks circumscribing AI in a false hierarchy:

This analogy assumes that there is a single hierarchy or sequence of entities, organized according to their degree of similarity to human beings, and, secondly, that the place of an entity in this hierarchy or sequence (based on the degree of development) determines the scope of subjectivity attributed to it.\(^{260}\)

Under such a theory, AI could never derive the legal subjectivity necessary for the protections of copyright because it lacks the sentience of human beings.

Sylwia Wojtczak makes a compelling argument for understanding legal subjectivity through the lens of participation in social life. As opposed to active participation, this view considers that “even those persons who lack consciousness or reason because of age or health are able to participate or be present in social life.”\(^{261}\) It also contemplates that “participation or presence in social life may be the result of the social subject holding some intrinsic or instrumental value.”\(^{262}\) However, this value is social-relational, dependent on some ability to influence social relationships.\(^{263}\) Importantly, an object does not derive its social value from being a subject of law; it is recognized as a subject of law only when it “participates or is present in social life, and is believed to be socially valuable.”\(^{264}\) By this reasoning, AI has the capacity to one day be a social participant because “an AI that communicates with a man through an understandable language has the ability to influence the decisions and personality of that man.”\(^{265}\)

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\(^{259}\) Id.

\(^{260}\) Id. at 208.

\(^{261}\) Id. at 209.

\(^{262}\) Id. at 211.
The social value of AI is gaining recognition. For example, it has been used to provide company and therapy for the elderly and autistic children.\(^{266}\) Social robots are also a source of burgeoning interest and development.\(^{267}\) Honda’s ASIMO (Advanced Step in Innovative Mobility) robot, which can go up and down stairs, open bottles, and shake hands, was designed to provide assistance to those suffering from reduced mobility.\(^{268}\) However, the growing social utility of AI has been tempered by warnings that “such attribution should not enable those who develop and employ artificial agents to outsource and escape responsibility, thus incentivizing them to take risks and externalize costs because they know they will not be liable.”\(^{269}\) One way around this issue might be to adopt a version of a limited liability partnership, where those who benefit from the AI bear the risks of financial liability.\(^{270}\)

Another way to frame these issues is through agency rather than personhood. Legal agency is “the capability, attributed by law, to act in law and to be liable for one’s own actions (legal subjectivity).”\(^{271}\) But there is another meaning of legal agency: the capacity to act on behalf of another as a representative.\(^{272}\) Framed another way, this understanding of agency “assumes a specific legal relationship between an agent and its principal, where the agent acts on behalf of a principal.”\(^{273}\) However, an issue arises with this theory in the context of liability. While being a legal agent implies legal subjectivity, an artificial agent lacks subjectivity because it is a tool.\(^{274}\) As a result, an artificial agent cannot bind the legal subject it operates under.\(^{275}\) Scholars raise the issue of “an artificial agent that causes harm or damages in a way that was unforeseeable for its

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\(^{266}\) Id.

\(^{267}\) Id.

\(^{268}\) Id.

\(^{269}\) Id.

\(^{270}\) Id.

\(^{271}\) Id.

\(^{272}\) Id.

\(^{273}\) Id.

\(^{274}\) Id.

\(^{275}\) Id.
‘principal,’ as they fear that such unforeseeability will stand in the way of liability of the ‘principal.’” 276 Put another way, the accountability problem that arises with autonomous AI is that “humans are held accountable for actions they may not have intended to take, nor could reasonably have prevented, or there is a liability gap, as nobody can be held accountable.” 277

The theories concerning ownership under intellectual property laws are further complicated by the sheer number of rights recognized. The Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”) is an international legal agreement among all members of the World Trade Organization (“WTO”) that recognizes at least seven categories of intellectual property rights. 278 These categories include individual ownership and collective ownership. 279 Individual ownership begins with the notion of one person holding one exclusive IP right and reflects a Western understanding of the right to property. 280 Recognized in the TRIPS preamble, such rights are “private rights” “meant to stimulate, and at the same time reward individual innovation, creativity and investment.” 281 The individuals vested with these rights may be the inventor, designer, breeder, creator, or responsible investor. 282 In copyright law, “the terms ‘author’ and ‘rightholder’ . . . cover both categories, i.e., the creator (authors’ rights systems) as well as the producer (copyright systems).” 283 The rights are characterized as having a predefined scope, excluding the rest of the world while granting the individual owner an exclusive right to use the subject matter. 284 Under the current intellectual property system, knowledge and creative ideas that lack these protections belong to the public domain. 285

276 Id.
277 Novelli et al., supra note 241, at 199.
279 Id. at 197.
280 Id.
281 Id. at 197–98.
282 Id. at 198.
283 Id.
284 Id. at 199.
285 Id. at 223.
In contrast, collective ownership is characterized by the fact that while only one IP right is at stake, this IP right is “held by a plurality of persons.”286 Within the collective ownership framework, two subcategories of ownership—joint and co-ownership—have different effects on exclusivity.287

Joint ownership is an example of group innovation. In copyright law, joint authorship is defined as “a collaborative work between two or more authors, with each creating something independently copyrightable and intending to merge their contributions into a single work.”288 Examples include two inventors who create a new technology, or two authors who collaborate in writing a story.289 Alexander Peukert argues that this kind of collaboration is distinct from a film or an orchestra performance and “does not result in multiple subject matters and rights, independently held by different owners.”290 Because there is only one output (e.g., the new technology or story), only one IP right manifests.291 While both US and European law mention joint or co-ownership, there are various views of what these terms mean, and the “applicable general contract or company law governs the relationship of joint owners among themselves and vis-à-vis third parties.”292 However, this restriction is balanced by the condition that a joint author “may not unreasonably refuse her consent to the publication, exploitation or alteration of the work.”293

Part of the inquiry under a joint ownership theory is whether an AI qualifies as an author for the purpose of vesting a copyright. From a theoretical standpoint, an AI-created work meets the de minimis threshold of originality prescribed under Feist and the independent creation requirement depending on the sources it used.294

286 Id. at 212.
287 Id.
288 Nagpal, supra note 202, at 7.
289 Peukert, supra note 278, at 212.
290 Id.
291 Id.
292 Id. at 206-07.
293 Id. at 207.
294 Nagpal, supra note 202, at 7.
Thus, it would be entitled to copyright protection. Again, the central issue is the non-personhood of the machine.

Different countries and their legal systems have taken diverse views on copyright protections for works generated by AI. China, a leader in the use of AI in journalism, is one of the first countries in the world to set a court case precedent that protects copyrights for AI-generated works. In 2019, a Chinese court granted copyright protection for an article written by “Dreamwriter,” a news-writing bot, claiming that the human intellectual activities of the AI program’s creators extend to the works written by the software. Developed by Tencent Technology, Dreamwriter is an algorithm-based intelligent writing assistance system. The court held that the article generated by the Dreamwriter software was a written work protected by China’s copyright law, and the plaintiff owned the copyright. Significantly, while the court found that the article generated by Dreamwriter was a written work, it “specifically emphasized that the article in question was generated by the creative team of the plaintiff Shenzhen Tencent using Dreamwriter software.” In doing so, it adhered to the legal principle that “the work must be the result of the author’s intellectual creation.” To the extent that the work in question incorporated the creative team’s input data selection (e.g., template and corpus style choices), the article was not purely the output of the AI. The involvement of human intellectual activities reinforces the protection of a work under China’s copyright laws.

296 Id.
298 Id.
299 Id.
300 Id.
301 Id.
In considering whether autonomously generated works by AI can be granted copyright, the AI’s capacity to form new, autonomously generated algorithms apart from those pre-programmed by humans and the products resulting from these autonomously generated algorithms “could be called autonomously generated products of AI.” However, according to the current judicial practice of the Chinese courts, cases “involving whether the autonomously generated products of AI constitute works protected by the Copyright Law” have yet to arise. And some courts continue to note that “[t]he creation of a natural person should still be a necessary condition for a work to be copyrighted under the Copyright Law.” Moreover, the Dreamwriter court found that because the article in question was the result of the intelligence and collective efforts of multiple teams presided over by the Plaintiff, “the copyright of the work completed by the AI in the case is enjoyed by the user of the AI software, i.e., the Plaintiff.” Absent clear answers regarding the copyrightability of autonomously generated products of AI, the issue of copyright ownership remains premature.

In Australia, according to Section 35 of the Copyright Act 1968, “the author of a literary, dramatic, musical or artistic work is the owner of any copyright subsisting in the work.” Significantly, the act doesn’t clarify who or what constitutes an “author.” However, subsection 5 states that “an author” of a work can only be “a person” who has created the artwork. Further, almost all the sections (in relation to authorship) referred to in the Copyright Act 1968 describe “an author” as “a person.”

The UK’s Copyright, Designs and Patents Act of 1988 also suggests clear demarcations concerning authorship and ownership of works created by intelligent machines. Section 9 (3) of the Act
details that “[i]n the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken.”

310 Authorship and ownership rights over AI-generated works are therefore granted to “the person who has created a necessary environment for the machine to create the work.”

311 Even if an AI system created an artistic work on its own, the author would be the human who provided the database of instructions and expectations.

312 Most countries overwhelmingly continue to identify a ‘human’ as an author or an owner of a copyrightable work under the rationale that copyrightable creative works are only possible with the creative input of a human being.

III. Solution

This Note argues that autonomous, AI-generated works should be granted copyright protections in accordance with their contributions to the creation of a written work. The proliferation of sophisticated and autonomous AI systems, as evidenced by Co-Author and other creative writing programs, supports that AI is no longer merely a passive tool. Rather, it can operate as a collaborator.

313 The prospect of future advancements necessitates a legal framework that can accommodate a future where AI-generated creativity may be wholly autonomous.

The proposed model is two-pronged. First, AI should be attributed a degree of legal subjectivity based on its contributions and interactions with society and its potential to be a significant participant in social life. Because legal personhood has been developed in different legal domains, AI does not need to be circumscribed by existing legal definitions of what constitutes a person under the

311 Devarapalli, supra note 306, at 727.
312 See id.
313 See Myers, supra note 137.
314 See Wojtczak, supra note 245 at 205.
315 See HILDEBRANDT, supra note 242, at 240–241
law. This is evident by the fact that AI does not fit neatly into the categories of “natural persons” recognized under the law or animals (as in *Naruto v. Slater*). As opposed to transplanting AI into one of these categories, recognizing that AI-generated creativity is novel and distinct from human creativity offers a new way to measure who and what is deserving of protections under copyright law. Legal personhood for AI must be separated from the requirement of moral subjectivity or moral personhood because the assumptions underlying subjectivity for humans and for AI operate on different planes. AI is not human and will never be human. Viewing legal subjectivity as a fluid and malleable construct enables attribution of copyright protections to AI without the need to define it based on how closely it resembles human-generated creativity.

Legal subjectivity for AI depends on recognizing that AI can be the subject of both rights and duties and can perform legal acts. AI should derive its legal personhood under the law as a subject with rights and duties based on its participation and contributions to social life. As Sylwia Wojtczak argues, even conceding the power that humans have over AI, “it cannot be denied that an AI that communicates with a man through an understandable language has the ability to influence the decisions and personality of that man.” AI’s value to social life is also evidenced by the fact that it is already being used “to provide company or therapy for older people or autistic children.” And the continuous advancement of AI lends support to the notion that “when AI becomes feeling and conscious in some degree, or successfully imitates these abilities, it could be regarded by its users as an intrinsically valuable partner in social relationships, maybe even in [the] same sense as companion animals.”

Rather than deriving its personhood the way natural persons do from sentience and consciousness, legal personhood for AI can be justified by virtue of its engagements within a wider social network. In the context of creative writing, its social-relational value can be measured by how it assists writers in the drafting process: from

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317 *Id.* at 211.
318 *Id.*
319 *Id.*
offering suggestions that stimulate creativity to inspiring writers to take new directions. Beyond its utility as a social companion, AI has also proven to be both an important tool and collaborator in the field of creative writing. It has helped novelists keep pace of demanding deadlines and supported writers suffering from writer’s block. The role that AI plays in the writing process could have a significant social impact if the work is published and disseminated to a wider audience.

This model finds support in the incentive and cultural theories of copyright law. Based on Bentham and Mill’s utilitarian and economic analysis of law, incentive theory seeks to maximize social welfare by creating a system of incentives to encourage creative output. This theory is prospective because it looks beyond rewarding labor or personal entitlements for current creativity and instead aims to generate creativity in the future through sufficient incentives. Importantly, incentive theory “is less concerned with the humanity of the author than are personality theories,” which “provides more room for arguments in favor of nonhuman authorship and protectability of AI-generated creativity.” Granting protection to AI-generated creations under incentive theory may very well encourage innovation by the humans collaborating with the AI, even if the AI itself does not need an incentive to create. And such an approach recognizes that the advancement of AI largely depends on human involvement: “providing financial incentives in order to encourage the growth and development of the AI industry and ensure the dissemination of AI generated works is arguably the ultimate goal of assigning copyright to human authors.” However, the policy

320 Id.
321 See Myers, supra note 137.
322 See Hood, supra note 119.
324 See id. at 158–59.
325 Id. at 168.
326 Id.
327 Id.
328 Id.
concern that “granting protection for these works could devalue human authorship and existing jobs in the field” persists.\textsuperscript{329}

Cultural theory, which looks to the well-being of society as a whole, similarly buttresses a framework where AI derives legal subjectivity from its contributions to society.\textsuperscript{330} Rooted in Thomas Aquinas’ ideas that “the role of society is to define a framework for human happiness,” cultural theory suggests that the focus of the intellectual property policy framework should be on promoting distributive justice as opposed to merely aggregating consumer welfare in accordance with traditional market-based approaches of welfare and utilitarianism.\textsuperscript{331} With its roots in promoting the “common good of humanity,” cultural theory is well-positioned to recognize the value of AI as social companions, collaborators, and agents of creativity. Collectivistic and prospective theoretical justifications also support protections for AI-generated creativity by moving away from the perspective that rights to a creative work can only inhere in natural persons.

This Note’s solution for endowing AI with legal subjectivity based on its participation and contributions to social life also incorporates an agent-principal framework to deal with issues of liability in relation to AI-generated creativity. Legal personhood assumes a capacity to perform legal acts, which requires a system of accountability for the consequences flowing from those acts.\textsuperscript{333} The Restatement (Third) of Agency defines personhood as follows: For the purposes of agency, a person is (1) an individual, (2) an organization that “has legal capacity to possess rights and incur obligations,” (3) a governmental entity, or (4) any other entity that “has legal capacity to possess rights and incur obligations.”\textsuperscript{334} In his argument for recognizing personhood for autonomous systems, Dalton Powell makes a compelling distinction between autonomous systems—“non-human computer systems that, once created, can operate in

\textsuperscript{329} Id. at 168–69.
\textsuperscript{330} Id. at 158–59
\textsuperscript{331} Id.
\textsuperscript{332} Id. at 159.
\textsuperscript{333} See Hildebrandt, supra note 242, at 241.
\textsuperscript{334} RESTATMENT (THIRD) OF AGENCY § 1.04 (AM. L. INST. 2006).
undefined environments and react to unanticipated stimuli—\textsuperscript{335}—and computer programs, which the Restatement clearly excludes from acting as principals or agents.\textsuperscript{336} This distinction is important because it removes truly autonomous AI from the reach of the Restatement, which “appears to be based solely on automated systems.”\textsuperscript{337} Coupled with the fact that “unlike the economic definition of agency, the legal definition does not require a contract or the delegation of decision-making, so legal agency can be broader than economic agency,”\textsuperscript{338} the existence of autonomous systems supports a modification of agency law to better reflect the capacities of such systems.

Liability could be handled by assuming a specific legal relationship between the AI as an agent and a human stakeholder (whoever is using and benefitting from the AI) as a principal. While the prospect of legal personhood for AI raises concerns that the human actors who develop and use AI can use their status as agents to evade responsibility,\textsuperscript{339} the law presents some safeguards. For example, lawmakers can “connect legal subjectivity with some financial autonomy of the entity, as is the case for legal partnerships (e.g., a limited liability partnership); those who would benefit from the actions of AI would represent the source of financial means assuring this autonomy.”\textsuperscript{340} In this way, even if a principal did not truly understand how AI generates content, the resulting benefit it receives from that creativity would justify liability. Instead of limiting liability to just those actions which the principal can foresee, a limited partnership model must reflect the reality that AI-generated creativity may be wholly autonomous. While the human stakeholder might increase their risk by assuming liability for unforeseeable actions/products of the AI, the benefits they receive from such systems would still incentivize these kinds of partnerships. The

\textsuperscript{335} Dalton Powell, Autonomous Systems as Legal Agents: Directly by the Recognition of Personhood or Indirectly by the Alchemy of Algorithmic Entities, 18 DUKE L. & TECH. REV. 306, 309, 311 (2020).
\textsuperscript{336} Id. at 311.
\textsuperscript{337} Id. at 313.
\textsuperscript{338} Id. at 307.
\textsuperscript{339} See Wojtczak, supra note 245, at 212.
\textsuperscript{340} Id.
corresponding increases in human productivity that flow from AI-generated creativity support the notion that stakeholders will willingly incur potentially greater liability to reap greater rewards.

Another way to approach the liability issue is through “algorithmic entities,” formed by pairing advanced autonomous systems with limited liability companies (“LLC”) which lack individual members.341 As Powell suggests, this would allow AI to attain indirect legal personhood through the LLC: “in an algorithmic entity, the personhood of the underlying autonomous system is dependent on the existence of the separate LLC entity, which is the external reference.”342 Analogously, a human person could also serve as an external reference through which the AI derives its personhood, whether it is the developer or someone who has a financial stake in the development of the AI. While this approach is vulnerable to criticism because the AI contemplated under such a system operates more like a computer program than an autonomous system,343 it avoids the problems that can emerge from attributing direct personhood to AI, such as bad human actors taking risks and externalizing costs because they know they can escape liability by pinning the blame on the AI.344 An additional safeguard the law could provide would be to mandate insurance on AI activity, “the price of which would depend on the failure rate of the AI.”345 Such an approach acknowledges that there are many stakeholders involved in developing AI and eliminates the problem of apportioning liability among them by integrating liability in a single source—the AI.346

The second prong of my model for granting AI copyright protections entails recognizing authorship for AI under a new theory that expands the joint-ownership model. Specifically, I propose that authorship should be divided into three categories based on the present capabilities of AI in the field of creative writing: (1) AI as tool, (2) AI as collaborator, and (3) AI as author. I propose these three categories rather than a one-size-fits-all model because AI-

341 Powell, supra note 335, at 315.
342 Id. at 317.
343 Id.
344 See Wojtczak, supra note 245, at 212.
345 Id.
346 Id.
generated creativity itself exists on a spectrum, from rudimentary editing tools to systems like Co-Author.\footnote{See Myers, supra note 137.} 

The joint-ownership model best captures the current capacity of AI in the context of creative writing. “In copyright law, joint authorship is defined as a collaborative work between two or more authors, with each creating something independently copyrightable and intending to merge their contributions into a single work.”\footnote{Nagpal, supra note 202, at 7.} Joint ownership is essentially a form of group innovation.\footnote{Peukert, supra note 278, at 212.} Examples include two inventors creating a new technology, or two authors writing a story together.\footnote{Id.} The collaboration that inheres in joint ownership “does not result in multiple subject matters and rights, independently held by different owners.”\footnote{Id.} Instead, joint ownership concerns one subject matter of protection only, leading to just one IP right that protects the created product.\footnote{Id.}

The theory of joint-ownership is well-suited to AI-generated creativity because it moves away from the extremes of viewing AI as either a limited editing tool or as a wholly autonomous generator of creativity. While AI has already proven its capacity to write novels and articles, it still struggles to process narrative in ways that humans can recognize as essentially “human-like,” including coherent characters and plots, and humans often retain a role akin to a creative director in overseeing the actions of the AI.\footnote{Fletcher, supra note 147, at 120.} Moreover, even the most advanced AI systems lack the ability to “distinguish fiction from reality,” supporting the notion that humans continue to play an important role in fact-checking content and in the overall writing process.\footnote{See Baquero, supra note 41.}

Part of the inquiry under a joint ownership theory is whether an AI qualifies as an author for the purpose of vesting a copyright. From a theoretical standpoint, because an AI-created work

\footnotesize{\begin{itemize}
  \item \footnote{See Myers, supra note 137.}
  \item \footnote{Nagpal, supra note 202, at 7.}
  \item \footnote{Peukert, supra note 278, at 212.}
  \item \footnote{Id.}
  \item \footnote{Id.}
  \item \footnote{Id.}
  \item \footnote{Fletcher, supra note 147, at 120.}
  \item \footnote{See Baquero, supra note 41.}
\end{itemize}}
meets the de minimis threshold of originality prescribed under Feist and the independent creation requirement depending on the sources it used, the remaining issue is the non-personhood of the machine. This is addressed by the first prong of this Note’s proposed solution, which attributes legal subjectivity to AI to fulfill the “personhood” requirement under copyright law. Attributing legal personhood to AI through Powell’s “algorithmic entities” avoids the problem of human authorship by rooting the AI’s personhood in an external reference. Additionally, the copyright statute can be expanded to allow AI to be considered an author for the purpose of joint authorship based on its collaborations with a human author to create a single work. Because the proposed framework defines personhood for AI through its social contributions and in the context of an agent-principal relationship, it avoids the problem of whether an AI is considered ‘human’ for purposes of a copyrightable work. Specifically, it recognizes that the capacity for creativity is not limited to human beings, while separating out the more problematic issue: the question of liability. Ownership is necessarily vested in a principal (a human stakeholder) who can be held liable for any negative consequences flowing from AI-generated creativity, but the framework remains flexible enough to accommodate the possibility of wholly autonomous AI-generated creativity. Therefore, an AI may hold joint ownership in a work it contributed to and be recognized as an author of said work in accordance with its level of involvement, while a human remains accountable for the AI because of how it benefits from that AI’s productivity.

This solution is premised on the notion that AI must be granted some legal subjectivity under the law because of its capacity for autonomous creativity and authorship, but a legal subjectivity conditional on different parameters than what is applicable to a human being. While AI may one day create copyrightable creative works without any creative input from a human being, the human involvement currently required lends support to a model that expands copyright protections to AI while recognizing that humans still play a key role in the creative process. Holding human stakeholders liable for the actions of AI in exchange for allowing them to reap some of

355 See Nagpal supra note 202, at 7.
the benefits of AI-generated creativity and modulating that relationship accordingly (e.g., the greater the liability taken on, the greater the stake in the benefit received; the lower the liability, the lower the benefit received, etc.) will continue to incentivize innovation and creation, fulfilling the primary aims of the copyright system.

A. Drawbacks

While this model operates to some extent within already existing legal frameworks in U.S. copyright law (e.g., joint ownership), it does propose certain changes that will require action from Congress, such as recognizing limited legal subjectivity for AI. The copyright statute would also need to be modified to allow an AI to be considered a joint author of a creative work. The proposed model faces the same roadblocks that other new legal frameworks face regarding incentivization: because the costs related to AI-generated creativity can be quite low, the prospect of creating a new legal framework to incentivize owners of creative AI systems may not be justified. While this Note’s proposal for adopting a kind of principal-agent framework offers one way to incentivize owners of creative AI systems, it remains unclear whether the potential benefits they might receive from AI-generated creativity provide enough of an incentive to justify taking on increased liability to minimize the accountability issue.

The proposal for endowing AI with legal subjectivity is also premised on the notion that current legal frameworks addressing non-human entities (such as corporations or animals) fail to provide an adequate framework to address the unique circumstances of autonomous AI systems. However, such a perspective might receive backlash since the U.S. perspective on ownership and authorship in copyright continues to emphasize the centrality of the human actor(s).\textsuperscript{356} Because this framework defines AI not by how it resembles or departs from human-generated creativity but by placing it on a different plane entirely, this proposal could engender criticism given

\textsuperscript{356} See Pearlman, supra note 205, at 15.
This Note’s proposal also stops short of discussing how an agent-principal relationship and joint-ownership model would play out upon the emergence of an AI system capable of creating a written work devoid of nearly any human involvement. This model takes a more open-ended approach to this possibility and does not contemplate whether stronger justifications may be necessary under a system where autonomous AI systems producing creative writing at superior levels of expertise and efficiency begin deterring human creativity and innovation. While this framework views AI more as a collaborator than as a replacer of human creativity, the possibilities posed by the most advanced AI systems cut against the notion that humans will continue to play an important role in the creative processes of AI. Finally, this proposal is premised on the notion that AI can derive its legal subjectivity from its contributions to society rather than the “natural” personhood a human being attains simply by virtue of intrinsic qualities. However, a future is possible where AI could achieve some measure of consciousness, whether human or not. If AI can one day participate actively in social life and human relations by its own volition, this Note’s decision to sever the inquiry into moral rights or moral personhood from the definition of legal subjectivity for AI will be challenged. What would it mean for AI-generated creativity in the form of a novel or a poem if that AI attained some level of consciousness? Would it justify rights and personhood for AI in a manner more like that attributed to humans? And how might this affect copyright protections for AI?

CONCLUSION

While AI has yet to be a bestselling author or the recipient of the highest accolades for writing, its capacity to both assist and arguably influence human creativity is significant. Because AI systems continue to advance at unprecedented rates, existing legal frameworks must be expanded to accommodate AI-generated creativity. The

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357 See Brown, supra note 189, at 15.
U.S. copyright system is premised on encouraging and incentivizing innovation and creativity for the progress and betterment of society. AI undeniably now plays an important role in innovation and creativity, especially in the arts, and must be granted copyright protections accordingly. While it remains unclear whether the United States or other countries will ever adopt copyright protections for AI completely independent of human involvement, growing recognition of the contributions and benefits that AI can have in society as both a collaborator and a creator support rethinking how authorship and ownership rights are delegated. The advancements in autonomous AI systems support redefining creativity from a non-human lens to recognize that AI might have the capacity to be creative, and AI-generated creativity can further the goals of the copyright system while positively influencing human creativity and innovation.