Copyright Law and AI. Sufficient for an Artificially Intelligent Future? History, Justification, Analysis

Derecho de autor e inteligencia artificial. ¿Suficiente para el futuro de la inteligencia artificial? Historia, justificación y análisis

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Adam Nieuwenhuysen
Algoma University (Canadá)

Abstract

The article explores the evolution of copyright law in order to determine whether work created by artificial intelligence can be copyrightable. It examines US and European intellectual property and its historical evolution. It is concluded that any work created by AI should be in the public domain. In consonance with European Union interpretation of copyright law, there should also be a legal requirement that the work be branded as work created in partnership with an AI.

Keywords: copyright; artificial intelligence; human element; derivative works

Resumen

El artículo explora la evolución del derecho de autor para determinar si el trabajo creado por inteligencia artificial puede estar protegido legalmente. Para ello, se examina la el derecho de propiedad intelectual estadounidense y de la Unión Europea y su evolución histórica. Se concluye que cualquier obra creada por IA debería ser de dominio público. En consonancia con la interpretación del derecho de autor de la Unión Europea, también debería existir un requisito legal de que la obra creada por

inteligencia artificial sea catalogada como obra creada en asociación con una IA.

Palabras clave: derecho de autor; inteligencia artificial; creación humana; obras derivadas

I. Introduction

Since ancient times, mankind has struggled with the issues of private property —of proving ownership of not just physical property but intellectual property. Who owns what and how can that be verified? It is one thing to lay claim to a piece of property. You could produce a deed or show that your family has had continuous use and occupation of the land for four generations. But how can you lay claim to an idea, of all things, when an idea has no tangible component? These are questions that we have struggled to answer for millennia. Our solution, at least with respect to physical property, came with the codification of law, during the time of the Romans, around 450 BCE, when, for the first time in ancient civilization, laws were transcribed for all to see. A group of ten men, both patricians and plebeians, produced what came to be called “the Twelve Tables” (Patterson, 1983, p. 89). Up until that point law mostly had been determined by unwritten tradition and moral code.

Our understanding of legal systems has come a long way since 450 BCE, with the first Industrial Revolutions of the eighteenth and nineteenth centuries, and the modern technological advancements of the twentieth and twenty-first centuries. It was at the dawn of science-fiction that we first read about predictions of a hostile takeover by machines. The forecast for the future in H.G. Wells’ *The War of the Worlds* (1898) involved hostile alien invaders whose advanced technology, including giant fighting machines, threatens humanity's existence. The term “robot” was introduced in 1920 by Karel Čapek in *R.U.R.* (Rossum's Universal Robots), a play that explored the idea of artificial beings rebelling against their creators. Science fiction became more optimistic during the 1940s, the Golden Age of Science Fiction. Authors envisioned futuristic societies shaped by scientific and technological advancements, and we saw rocket ships, flying cars, futuristic megacities, and robots that had eliminated menial tasks and chores around the house, in short, a happy-go-lucky *Jetsons* retro-future. The optimism didn’t last, however, and before too long books, films, and other media were depicting scenarios where artificial intelligence or robots gain sentience and pose a threat to humanity. One such work, Philip K. Dick’s 1968 *Do Androids Dream of Electric Sheep?* (the basis for Ridley Scott’s *Blade Runner* [1982]), features replicants —bioengineered beings virtually indistinguishable from humans— that had rebelled against their creators and thus became outlawed on Earth.

Today, we've set our sights on AI, the end goal something straight out of *Terminator*'s Skynet. But if there's one lesson science fiction has taught us, it's that you never want to give robots a conscience: the implication being that sentient, sapient machines will be the end of humanity. The term AI is an acronym, which stands for "artificial intelligence" and was coined in the summer of 1956 at the Artificial Intelligence Conference, held at Dartmouth College in New Hampshire. This conference is considered the birthplace of artificial intelligence as a field of study. During the conference, John McCarthy (who co-hosted the conference with Marvin Minsky) proposed the term "artificial intelligence" to describe the endeavor of creating machines capable of performing tasks that typically require human intelligence (Anyoha, 2017). The term quickly gained traction and became widely used to refer to the field dedicated to developing intelligent machines and systems. Since then, AI has grown into a diverse and rapidly advancing field with applications ranging from robotics and natural language processing to machine learning and computer vision. AI is still in its very early stages, but it's already made leaps and bounds beyond what was thought possible only several years ago and is not something that the law ever accounted for when it was written —how could it, things such as AI only existed in sci-fi flicks and novels. This paper will argue that current copyright law is ill-equipped to deal with an increasingly digitized future and that not only do the laws of copyright need to be revised, but the very idea of ownership itself needs rethinking.

II. Historical Background of Copyright Law

While the Twelve Tables of the ancient Romans covered may areas of law, for example, wills, succession, property, contracts, torts, and criminal, to list a few, many legal scholars would argue that the real beginning of copyright law as we know it, came in 1710 with the Statute of Anne. Also known as the Copyright Act 1710, the Statute of Anne was a landmark piece of legislation in the history of copyright law. It was enacted by the Parliament of Great Britain during the reign of Queen Anne in 1710 "for the Encouragement of Learning" (Stephens, 2023b, p. 27). The statute is widely regarded as the first copyright law in the modern sense and served as a model for subsequent copyright legislation in other countries. The Statute of Anne addressed the growing concerns of authors and publishers regarding the unauthorized reproduction and distribution of their works. It aimed to balance the interests of authors, publishers, and the public by establishing a legal

framework for copyright protection, while also promoting the dissemination of knowledge and culture. Key provisions of the Act include copyright protection, initially lasting fourteen years, which could be subsequently renewed for another fourteen years if the author was still alive when it expired, as well as the idea of a public domain, which is still a relevant concern today (Stephens, 2023b, p. 28). For example, Steamboat Willie, an earlier version of Disney's mascot Mickey Mouse, entered the public domain at the beginning of 2024. What that means is that anyone today can use Steamboat Willie in their works without permission from Disney; however, any other iteration of Mickey is still protected by copyright.

Copyright originally protected only literary works, but in the years since the Statute of Anne, copyright has come to protect other types of works, "beginning with photography and going on to include player piano music rolls, recorded music in various formats, broadcasts, films, television programs, and computer programs" (Stephens, 2023b, p. 32). However, throughout the eighteenth century and well into the nineteenth century, copyright laws applied only to the "nationals of the country concerned or to works first published in that country". This meant, for example, that if you were a British author who published in Britain, your work was protected only in Britain (and the British Empire) and could be "freely reprinted" in the United States and elsewhere" (Stephens, 2023a).

Things started to change, however, in 1886 when the first international copyright treaty, the Berne Convention, was signed by eight states. There are now 181 members of this Convention (Stephens, 2023b, p. 48), which requires member countries to treat authors from other member countries the same way they treat their own nationals concerning copyright protection. This means that foreign authors receive the same level of copyright protection as domestic authors in each member country. As well, the Berne Convention sets a minimum duration for copyright protection, which is the life of the author plus fifty years after their death. However, many countries, including Canada, the US, and those in the European Union, have extended this duration to life plus seventy years or more. Today, Canada is a signatory, not only to Berne, but to many other specialized international copyright treaties and bilateral agreements (Stephens, 2023a). Clearly, as Stephens' re-phrasing of John Donne's "no man is an island" suggests, where copyright is concerned, "no nation is an island" (Stephens, 2023a), and this is particularly the case when it comes to AI and related technological advances.

III. Genie out of the Bottle

We've had fairly primitive and dumb AI for years, and chatbots have been a thing since ELIZA, which was nothing more than a mainframe connected to a typewriter, was created in the mid-1960s by Joseph Weizenbaum, a computer scientist at the Massachusetts Institute of Technology (MIT). ELIZA, named after Eliza Doolittle in George Bernard Shaw's *Pygmalion*, was designed to simulate a conversation with a psychotherapist by using pattern matching and scripted responses. It could engage users in text-based exchanges, asking questions and providing responses based on keywords and phrases in the user's input. ELIZA's simple yet effective design laid the groundwork for future chatbots and natural language processing systems (Tarnoff, 2023). For its time this was astounding, a novel idea, but it had a long way to go before it could be considered AI.

Fast-forward to 2010, to the present, and advances in chatbots have been remarkable. For example, Apple's Siri, or, much more recently, Amazon's Alexa, and Google Home are all chatbots that have no doubt contributed greatly to the development of these new modern AIs in their responsiveness and versatility. Demonstrating some of the potential pitfalls of AI, Microsoft's Tay AI —a chatbot set up to learn from users on Twitter (rebranded as X since Elon Musk acquired the site in April of 2022)— was unveiled to the public in 2016. This was an incredibly foolish idea on Microsoft's part, as it turned out, and to anyone with a working brain who knows what the Twitter/X landscape is like the outcome was most certainly foreseeable. Within less than 24 hours, Tay was taken off the air as malicious Twitter users had taught the unfiltered chatbot all manner of racist, sexist, bigoted language, and turned Tay into a Holocaust-denying monster. This, I think, is when the word AI began being tossed around to describe these chatbots capable of some degree of learning colloquially.

After the world had forgotten about Tay, with AI once again fading into obscurity, OpenAI quietly took to the stage in late 2022 with a new and improved chatbot, the chatbot which we've all come to know as ChatGPT. Confident in their AI's success, or perhaps just in need of willing testers to iron out the kinks, OpenAI released ChatGPT to the public and quickly reined in the chatbot to prevent another Tay incident. OpenAI saw much success in ChatGPT, a breakthrough in the AI market, with the big tech businesses of the world watching closely as ChatGPT paved a new frontier for AI as we know it.

With the meteoric rise of AI in the West and abroad, with the largest AI startup OpenAI releasing its revolutionary chatbot and

large language model ChatGPT to the public, the world quickly began to take notice of the pros and cons of AI. Its ability to carry a conversation and remember what was said is remarkable and certainly the first of its kind in this field, and the sheer wealth of information it possesses is staggering, but that's because it draws this information from the World Wide Web. ChatGPT doesn't think for itself; you give it a prompt and it pulls relevant data from the Web to answer your question. Then, when you use that data to, say, write an academic essay, that's no different than plagiarizing the information from the Web yourself or paying someone to write it for you. Not only that, but ChatGPT is far from infallible and has been caught multiple times making up complete nonsense (or "hallucinating", as the techies refer to this), as one Canadian lawyer, Chong Ke, learned earlier this year, when she used the tool to cite cases relevant to her client's case, only to discover later that the cases shared with her by ChatGPT were fictitious. Ke claims she had no idea that ChatGPT could simply fabricate information, which seems to be a commonality amongst many users of the software who don't fact-check the information provided and take it *prima facie* (Proctor, 2024). Chris Moran, head of editorial innovation at *The Guardian*, discovered something similar, after one of the newspaper's journalists was asked by a researcher about an article that the journalist had, according to ChatGPT, written. The article "sounded like something they would have written. It was a subject they were identified with and had a record of covering", explains Moran. But the article did not exist, because the reporter had never written it. ChatGPT was making up *Guardian* articles (Moran, 2023), just as it had fabricated legal cases.

IV. AI Goes Viral

With the success of AI in the form of ChatGPT, it was only a matter of time before other businesses in the tech sector wanted a piece of the pie. AI was the hot new commodity, a turning point in the tech industry, a paradigm shift that made it very clear this was the next big thing —adapt or die. It wasn't long before companies like Microsoft, having learned from their failed Tay experiment, as well as Google, got involved in the AI arms race with their Copilot and Bard (now Gemini) AIs, respectively. OpenAI was leagues ahead and the rest of the tech companies, now seeing the potential of AI, were playing catchup. OpenAI continued to stay ahead of the curve by offering services beyond the ChatGPT chatbot model emulated by other companies, including a text-to-image

generation tool dubbed DALL-E, which is a tool that allows users to generate images via a text prompt. ChatGPT and DALL-E have been called “game changers”. DALL-E is “a deep-learning artificial intelligence system capable of generating original and detailed creative images of any kind from mere textual inputs”. It can “generate original picasso-esk and michaelangelo-esk images in seconds” (Bahuch, 2023). The results are a mixed bag, and DALL-E has safeguards in place to prevent it generating anything too risqué or from infringing on popular IPs, for example, Disney characters. Image generators that followed in its footsteps, however, did not.

V. AI Versus Artists

Stability AI and Midjourney, Inc. came up with their own version of text-to-image generators which they offered to the public. The use of Midjourney by Jason M. Allen to generate an image and submit it to the Colorado State Fair’s annual art competition brought many eyes onto the legal issues propagated by AI when the piece in question, “Théâtre D’opéra Spatial”, submitted under “Jason M. Allen via Midjourney”, was awarded first place for emerging digital artists by the judges in the contest. Up until this point, most artists wouldn’t consider AI to be capable of making real art, as any work produced by AI would lack the soul and vision of a genuine piece of art made by a human. The fact that a machine was able, with minimal effort, to beat out for first prize humans who had dedicated months, even years, of their lives to becoming talented artists was most definitely disheartening. The artists argue that Allen cheated by submitting AI artwork, as he had no hand in creating the artwork outside of creating the prompt. Allen argues that he did nothing wrong, as he didn’t omit anything or lie about the fact that he used Midjourney in creating his submission. A spokesperson for the State Fair agreed, but added that the judges, while they knew that Allen had used Midjourney, “did not know that Midjourney was an AI program” (Roose, 2022).

Adding fuel to the fire, Stability AI’s Stable Diffusion, unveiled in August of 2021, was an incredibly divisive tool amongst artists and non-artists/would-be-artists. The major complaint comes from the fact that Stable Diffusion and Midjourney have been trained on the LAION (Large-scale Artificial Intelligence Open Network), which is a web-crawl dataset comprised of over 5.8 billion image and text pairs for AI research purposes, funded in-part by Stability AI. The images contained within LAION include

not only allegedly copyright-infringing material but also private medical records; the faces of just about anyone who has ever put their face online, for example, on a social media platform like Facebook or Twitter/X; non-consensual pornography; and, according to Stanford researchers, child sexual abuse: "The discovery was made by the Stanford Internet Observatory, or SIO, which detailed its findings in a Tuesday report. SIO researchers have identified more than 1,000 exploitative images of children in LAION-5B" (Deutscher, 2023). By using this data, Stable Diffusion's algorithm can generate images based off copyrighted, confidential, and even illegal material, depending on the user's request. After the Stanford findings were released, the people behind LAION went on record to say that illegal imagery won't be tolerated, and, according to a statement on LAION's website, they have revised their datasets to delete instances of child sexual abuse material (CSAM): "LAION has a zero tolerance policy for illegal content and in an abundance of caution, we are temporarily taking down the LAION datasets to ensure they are safe before republishing them" (LAION, 2023).

Stability AI's Stable Diffusion is also open source, meaning anyone can have their own version of Stable Diffusion without safeguards running on their machine and tweak just about every aspect of the software. By feeding it new images, for example, of the Disney characters, Stable Diffusion can learn to generate images based on Disney's or any given artist's style, and there are tutorials all over the Web about how to use the software to copy the style of other artists, which is another big reason why artists are up in arms against AI (at the time of writing this, the first results for the query "stable diffusion copy artist style" return a Reddit thread with a user asking how to use the software to copy an art style, and just underneath that multiple videos teaching AI users how to "copy", "clone", and "train" the AI in any style).

AI art supporters will argue that what the AI does is no different than what a human does when they see a piece of art and interpret it for use in their own artwork, but artists argue that AI does not function the way a human brain does, that even the most complex state-of-the-art AI in its current state is a flaccid imitation of human brain function. AI art could not exist if artists did not post their art online, and so many artists, as a result of the possibility of an AI being fed their artwork, have privatised or paywalled their artwork to deter such practices. In regard to whether diffusion models, like Stable Diffusion, create unique works of art or replicate their training data, a study by the University of Maryland concludes that

> diffusion models are capable of reproducing high-fidelity content from their training data [...] While typical images from large-scale models do not appear to contain copied content that was detectable using our feature extractors, copies do appear to occur often enough that their presence cannot be safely ignored (Somepalli, 2023, p. 10).

While this is only one study, and the researchers were working with the smaller LAION 12M database rather than the 5B, this proves that AI cannibalizes its training data instead of making something new as a human could.

VI. Copyright Law and AI: The Current Situation in Canada and the U.S.

It is a hot topic of debate in the legal field right now, and an ever-evolving discussion, of who exactly owns AI generated work —is it the end user, the AI, or the person who created the AI? Should AI generated content even be copyrightable, or should it fall under the public domain? We already have seen some attempts in Canada and the U.S. by AI users to copyright AI's outputs.

VI. 1. The Canadian Context

Like most other jurisdictions, Canadian copyright law generally attributes authorship to human creators, although it doesn't explicitly forbid non-human entities to be authors. The wording in Section 5a of the Copyright Act reads as follows: "in the case of any work, whether published or unpublished, including a cinematographic work, the author was, at the date of the making of the work, a citizen or subject of, or a person ordinarily resident in, a treaty country". The phrase "citizen or subject of, or a person" would appear to refer to a human author, so, given that AI is not human, AI is seemingly excluded from authorship. As well, that the Copyright Act ties the copyright term to the life and death of an author suggests that authorship must be attributed to a human person.

A 2004 Supreme Court decision, *CCH Canadian Ltd. v. Law Society of Upper Canada*, held that an original work must "be the product of an author's exercise in skill and judgment" and not simply "a purely mechanical exercise" (Pimienta, 2022). The Canadian Government's "Consultation Paper: Consultation on Copyright in the Age of Generative Artificial Intelligence" suggests that this means that as long as a human has contributed

"sufficient skill and judgment in a work produced with the assistance of AI technologies", this human can be "considered the author of the work", but warns that "it is far less probable that this criterion would be met for works produced by generative AI systems, such as ChatGPT and DALL-E, based solely on short instructions by human users" (Innovation, Science and Economic Development Canada, 2023).

VI. 2. The U.S. Context

Copyright law in the U.S. more explicitly requires a human author for a work to be eligible for copyright protection, especially after *Naruto v. Slater* (2016), where David Slater, a British photographer, took a trip to Indonesia to photograph crested black macaques. Slater bonded with the macaques and gave one of them (dubbed "Naruto") the opportunity to press the button on his camera to take the photo. Naruto went on to take a series of photos, some of which Slater published. The People for the Ethical Treatment of Animals (PETA) organization sued Slater on behalf of Naruto, "alleging that, by publishing the photograph that the monkey had taken, Slater had violated the monkey's copyright" (Canadian Bar Association, 2018, p. 8). The case was dismissed, with presiding Judge William Orrick of the United States District Court reasoning that the "Copyright Act does not 'plainly' extend the concept of authorship or statutory standing to animals". The Canadian Copyright Act shares Orrick's sentiment, in that it offers no language that would allow non-human entities, AI or otherwise, to be authors.

The previously mentioned case of the Midjourney author/artist, Jason M. Allen, offers another example of the U.S. situation. After winning first prize in the contest, Allen sought to copyright "Théâtre D'opéra Spatial" in September of 2023, a year after the contest. Unfortunately for Allen, the U.S. Copyright Office held firm in their stance that any work not created by a human would not be entitled to copyright, going so far as to rescind copyright previously granted to an AI-generated comic "for images that artist Kris Kashtanova created using Midjourney for a graphic novel called 'Zarya of the Dawn', dismissing the argument that the images showed Kashtanova's own creative expression" (Brittain [b], 2023). The Copyright Office asked Allen for more information about the parts of "Théâtre D'opéra Spatial" the AI (Midjourney) was involved in, but, despite Allen telling the office that he "input numerous revisions and text prompts at least 624 times to arrive at the initial version of the image," Allen "declined" the Office's

request for him to disclaim the parts of the image for which Midjourney was responsible, and his claim was denied. The Copyright Review Board affirmed the decision that the image was not copyrightable because it contained more than minimal AI involvement. Allen says he expected the outcome, but is determined that "[he] will win in the end" (Brittain [b], 2023). However, it can be safely assumed that works created by AI will not be eligible for copyright protection in the U.S. anytime soon.

VII. The Key Issues

From what we've learned so far, and based on what others have said, we can extrapolate the key issues in the AI copyright debate as follows:

VII. 1. Ownership and Authorship

One significant issue is in determining the ownership/authorship of works created by AI. Traditionally, copyright law attributes the ownership to human creators, but with AI-generated work, it's less clear-cut. Should the AI itself be considered the author, or should it be the programmer, the person/org that owns the AI, or a combination thereof? In terms of Canadian law, the precedent set by *CCH Canadian Ltd. v. Law Society of Upper Canada* (2004) seems the most likely candidate for the AI Oakes test, where plaintiffs will have to convince the court and the Canadian Intellectual Property Office (CIPO) that the interrelationship of human and AI demonstrates the legal standard of "an author's exercise in skill and judgment". In U.S. law, there's been a much more hardline stance against AI works, as demonstrated by the case of the Midjourney artist, where, seemingly, any work containing more than minimal AI-generated material will not be awarded copyright in the United States. Also considering the case of *Naruto v. Slater* (2016), I very much doubt that AI will be given copyright, so that leaves only the option of the copyright going to the user, the creator of the AI, or the work being public domain.

VII. 2. Originality and Creativity

As was shown in the University of Maryland machine learning study, text-to-image generators and, indeed, LLMs (large-language

models) like ChatGPT do not *create* new information, but rather *recompile* it, and it is not uncommon for the AI to amalgamate multiple images from its training data in ways that bear a close resemblance to said original training data. In ChatGPT's case, information in the output is pulled from the Web, while a text-to-image generator like Stable Diffusion relies heavily on relevant training data. Creativity requires an imagination, which is something machines are not yet capable of replicating. When an artist paints or draws, say, a dog, they draw on all the concepts in their head that make up or are associated with a dog —all the shapes, sizes, forms and functions, and whatever individual connotations a dog might have for them, based on life experience and interactions with dogs. A human author of a literary work does the same thing as the artist, albeit with words. An AI does not do any of this; it cannot do any of this because it can only use what is available in its training data; it does not experience or interpret or abstract or imagine the way a human mind does.

VII. 3. Fair Use/Dealing and Derivative Works

Fair use (US) and fair dealing (Canada) are exceptions to copyright protections, granting limited use of copyrighted material. The Canadian Copyright Act, § 29, states, "Fair dealing for the purpose of research, private study, education, parody or satire does not infringe copyright", with the added caveat that both the source and author/maker are mentioned. AI often does not give credit to the source it's pulling from, which leads to the widespread use of AI in academia being rightly labelled as plagiarism. While some works of AI may fall under the parody or satire category of fair dealing, works that are purposefully trying to emulate the style of another artist without doing anything transformative would certainly not. The United States Code, Chapter 1, § 107, states,

> Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.

Similarly to the Canadian Copyright Act, the U.S. Code's definition of fair use only protects the ability to use copyrighted work for transformative or educational purposes.

So, when is AI-generated content considered transformative enough to be fair use? These are questions that remain unanswered, for the time being; after all this is a relatively new frontier in the legal field. Since AI draws directly from numerous copyrighted materials in most cases, Stable Diffusion for example, and mashes them together in different ways, it's hard if not impossible to pin down all the references that the AI used in its output, so perhaps some kind of AI works cited would be required to judge whether the work meets the requirement for transformative content or not; either way it would help rein in the blatant plagiarism. From there, it might become a numbers game, similar to the researches from the University of Maryland, relying on a program to determine and cross-reference how much of an AI generated work closely resembles existing works, which, as the researchers discovered, varies depending on the prompt (Somepalli, 2023, p. 9).

VII. 4. Public Domain and Open Access

While the Statute of Anne served as the modern foundation of copyright law, the original intent was not only to protect the author but also to allow their works via the public domain, presumably after their death, to contribute to the cultural spread of knowledge and allow new projects and inspirations to spring forth from the author's works (since, what use do they have for copyright after they're dead?). While 14 years may have been a bit on the short side, I think it's safe to say that copyright protection has gone too far in the opposite direction now, with the protection lasting not just until the author's death but almost an entire lifetime after their death, so if someone wants to take a popular IP like *Lord of the Rings*, even though Tolkien shuffled off this mortal coil in 1973, his work remains protected by copyright until 2043.

Some have argued —and I am inclined to agree— that AI shouldn't get any copyright protection, given that, as we've seen time and time again and will no doubt continue to see, there are many examples of AI flagrantly copying the work of others. Not to mention, AI has the potential to automate vast amounts of content, which is causing artists to fear the death of artistry as their once respected skilled profession could be replaced by a machine that can output results much faster and in bulk. Further, copyright could be a determining factor in the adoption of AI in the workplace when it comes to things like graphic design. It might even discourage new would-be artists from trying their hand at the craft, fostering a nihilistic mentality amongst aspiring artists that

they shouldn't waste their time since not only are they competing with other humans now but machines as well, which makes the skill gap in that line of work that much larger.

VII. 5. Liability and Accountability

If AI-generated content infringes copyright, the question must be asked, who should be liable? If Disney found that Stable Diffusion was capable of replicating its copyrighted characters and that it did so frequently, would it be the organization which would be responsible for damages, the programmer, or some other party? There's already been attempts made by artists and authors alike to sue AI startups Stability AI, Midjourney, and OpenAI. A class-action lawsuit was filed against Midjourney, Stability AI, and DeviantArt —which is not an AI but a digital art gallery for all artists, amateur and professional, that came under fire for its implementation of a Stable Diffusion-inspired text-to-image generator trained on all the images posted to DeviantArt without users' consent.

In the fall of last year, U.S. District Judge Wiliam Orrick (the same Orrick from the Naruto case) dismissed some of the claims brought by plaintiffs Sarah Andersen, Kelly McKernan, and Karla Ortiz against the defendants DeviantArt, Midjourney, and Stability AI, and dismissed McKernan and Ortiz's claims entirely (they did not file for copyright with the U.S. Copyright Office), while allowing Andersen to pursue her claims against Stability AI, since both DeviantArt and Midjourney allegedly use Stable Diffusion (Brittain [a], 2023). The arguments brought against Stability AI were sufficient for the court to weigh in favor of Andersen in terms of a direct copyright infringement claim, after being able to find copies of her artwork using a website that searches AI databases for matches to existing work (haveibeentrained.com), but the claims brought against Midjourney and DeviantArt lacked substance, according to Orrick. While all defendants moved to dismiss, the proceedings continued against Stability AI specifically (Brittain [a], 2023). To my knowledge, the case is still ongoing, but the defendants named in this lawsuit are the organizations behind the AI, so that looks to be the direction we're headed in in terms of who's liable.

VII. 6. Licensing and Royalties

The waters get even murkier when we consider AI-generated content not only being copyrighted and publicized but monetized. AI-generated content might be used in various commercial contexts, which raises questions about how licensing should work and how royalties would be distributed. Seeing as it's been unofficially decided that the AI, at least at its current state, is not capable of authorship, it's likely that AI also won't be considered when it comes to divvying up the royalties from commercialized work. If the end user of the AI is to be the author, then it makes sense that the royalties should go to them, but this neglects the programmer and organization that publicized the AI and allowed the work to be made. What about the people whose work the AI has been trained on, in most cases without their consent; should they be given royalties any time their work is used in a generative prompt? The AI art scene has been rather silent on this matter, with both OpenAI and Midjourney relying on the fact that training an AI on an enormous dataset of images is not technically illegal right now, but that could change in the future.

The music scene, however, is another story. While most artists are against AI, some musicians are adopting a different approach. Canadian singer-songwriter Grimes is allowing AI enthusiasts to use her voice "without penalty" in their songs, so long as Grimes "approves the collaboration" and they give the appropriate credit to GrimesAI, the proprietary software used to modify the voiceprint, and, if the song is successful, a 50% cut of the royalties to Grimes. The artist even encourages the radical idea of "open sourcing all art and killing copyright" (Pequeño IV, 2023). Toronto rapper Killy feels much the same way as Grimes and tweeted this: "I'll split 50% royalties on any successful AI generated song that uses my voice. Same deal as I would with any artist i collab with" (Lau, 2023). Their opinions are a hot take in the music industry; however, most music artists are outspoken against letting an AI be trained on their work. Sting, for example, said this in a BBC interview: "The building blocks of music belong to us, to human beings", and, in regard to AI threatening artist's copyright, "That's going to be a battle we all have to fight in the next couple of years: Defending our human capital against AI" (Savage, 2023).

VIII. What I Propose as a Way Forward

The world wasn't ready for AI, and it might well never be ready, but it's too late to turn back now. The idea that copyright can be applied to works created by a machine, with the machine

labelled as the “co-author” when it did more work than the human author, is ludicrous and an affront to the idea of human creativity. Regarding artists, the ability to mass produce images in an ungodly quantity on an inhuman scale hurts the ability of artists to find employment, as even the best artists will never be able to compete with the mass output of which a machine is capable.

I side with the U.S. interpretation of the legal debate here, in that the “human element” required in order to lay copyright claim to a work is not sufficient in the case of an AI generated work, regardless of how long it took to come up with the prompt. An AI cannot read your mind (yet, anyway) and so whatever it churns out will be the AI’s interpretation of the user prompt. This is no different than commissioning an artist to create an artwork for you, and, in such a situation, the artist retains the copyright to the work that you commissioned unless it is specified otherwise in a written contract. Now, I’m not saying AI should own the copyright either, given the legal greyness of AI as it is with it creating and pulling information from all across the Web without consent of the authors. Moreover, with AI not being a human, giving it copyright isn’t much different than giving Naruto the macaque copyright of his own images at this current stage. If Aviv Gaon is correct in his prediction and AI reaches superintelligence and “singularity”, then perhaps this discussion can be reopened (Gaon, 2021). For now, I think that any work created by AI should be in the public domain, and, as well, there should be a legal requirement that the work be branded as work created in partnership with an AI (with which, the EU seems to agree) because, while many people do label their work as being created or partially created by an AI, there are many, many users who try to pass the work of an AI off as their own without any acknowledgement of AI involvement.

IX. Conclusion

At a time not so long ago, AI was confined to the realm of science fiction —the idea that a machine could learn and carry on human-like conversations was a product of vivid human imagination. But technology is always advancing, so just as the Wright brothers gave humanity wings and Apollo 11 put man on the moon, it is only a matter of time before the fiction of machines with human-like intelligence, or, indeed, beyond human powers of reasoning becomes our reality. We need to be prepared for that eventuality and it is, I think, paramount to the survival of the human race that we learn from the science fiction that has slowly

seeped into reality, that we take notes from Isaac Asimov's "Three Laws of Robotics," in order to ensure the protection of humanity first and foremost.

As for the law, perhaps it is David Vaver, in his "Preface" to Gaon's book, who puts it best when he says, "Law tends to look backwards. It deals better with the past than the future, especially when it comes to the new-fangled" (Gaon, 2021). The justice system is ever so cautious about adopting new ideas, preferring to rely in many cases on long-standing precedent when deciding what the law should be, and with there being none for nonhuman copyright, no one wants to make the first move. That being said, the law needs to think seriously right now about machine policy and ethics, and about how "to strike a balance between protecting creativity and skills, on the one hand, and not restricting the use of works that do not deserve such protection, on the other" (Fricke, 2022).

There is much uncertainty about what the future holds for us in the age of artificial intelligence. Rockwell Anyoha predicts that AI will dismantle the language barrier, allowing every human to become a polyglot, and that, as well, the often toyed with idea of driverless cars will become a reality, conservatively, in the next twenty years (Anyoha, 2017). Hopefully by that point we've solved, in part or in full, the trolley problem that is currently impeding having driverless cars on the road (though I strongly believe we should never give artificial intelligence of any flavor jurisdiction over human life in any manner). The question of what AI work, if any, deserves copyright, will be a question for the legislators of tomorrow to grapple with, and once AI is given a body —something akin to the body of the replicants of Philip K. Dick's dystopian Los Angeles setting, perhaps— we may be called to reconsider the personhood and property rights of an AI. Given that you can't put the genie back in the bottle, right now legislators would be wise to keep a close eye on developments in the tech industry, especially those pertaining to intelligence of the artificial variety, while we, to borrow Anyoha's phrasing, "allow AI to steadily improve and run amok in society".

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