

LEGAL VACUUM SURROUNDING SYNTHETIC MEDIA OWNERSHIP RIGHTS

ABSTRACT

*When an intelligent agent becomes an intelligent principal and carries out the process of producing and generating creative, novel, and copyrightable output without any human input, who owns the right to be referred to as the “author” or “copyright owner”? What happens if an intelligent agent composes every single musical melody yet to be composed? All legal jurisdictions around the globe fall, with regard to those questions, **under a legal vacuum**, which refers to the state where applying the traditional rule of law does not yield a definite solution to a factual situation. In this article, we establish a firm understanding around the concept of “Synthetic Media” and who owns it. We also specify why synthetic media created in toto by an intelligent agent, acting as the principal, should fall under public domain, all while showcasing how some jurisdictions adopted a different approach by allowing intelligent agents to acquire some forms of intellectual property.*

KEY WORDS

Intellectual Property, Legal Vacuum, Artificial Intelligence, Copyright, Author, Synthetic Media.

INTRODUCTION

Intangible rights, more precisely intellectual property (IP), have long been a topic of great dispute and ambiguity especially in matters surrounding its ownership, application and finding a legislative rhythm that moves in tandem with the fast evolving development in the IP universe.

Starting with John Locke’s labor theory of copyright and the natural rights in 1690 (Lockean Theory), followed by Kant’s moral philosophy and Hegel’s personality based philosophy in the 18th and 19th century respectively, passing through the World Intellectual Property Organization (WIPO) establishment and all international treaties that followed, various jurisdictions enacted laws and directives to bring clarity regarding the debate of who owns a certain artistic or literary work, and they have largely succeeded in doing so to this present day.

Nevertheless, no law or directive has yet to address the drastic result and the impact of a fusion between the technological advancement and the IP world, for the exception of a couple of recent decisions rendered by the United States Copyright Office.

The below will mainly focus on synthetic media and will decipher the legal vacuum surrounding it, leading to an analytical answer regarding the ownership of the output generated by Artificial Intelligence (AI) without thoroughly expanding on the technical explanation of the various forms

of AI (i.e. reactive machine, limited memory, theory of mind and self-aware AI).

WHAT IS SYNTHETIC MEDIA?

Synthetic media, in simple terms, is the use of algorithmic means for the development, modification or creation of artistic and literary works by or *via* AI.

A breakdown of the above will instigate the discussion over the following three topics: i- The ownership of a work developed *via* AI, ii- The ownership of a work modified *via* AI and iii- The ownership of a work created *in toto* by AI.

This article will not dive deep in the matter relating to the modification *via* AI as this is purely a licensing matter, since the original owner will remain the holder in the case of a simply modified work, unless the licensing agreement states otherwise. Moreover, in the absence of a licensing agreement, the modified work is simply an infringement on the author’s rights. Furthermore, in the case of a heavily transformed modified work worthy of being copyrightable on its own merit, this output falls under the topics of Synthetic Media developed or created by AI.

Therefore, the main area of focus will be the legal vacuum surrounding to the topics of development and creation of synthetic media.

WHO OWNS SYNTHETIC MEDIA DEVELOPED VIA AI?

Development of synthetic media refers to the process of materialization of an idea using AI. In this case, the user seeks the assistance of AI to carry out the execution of an idea originally incepted in the user’s brain. This action is normally conducted by writing the AI algorithm, but can also be conducted

by simple English language commands provided to an already existing AI platform (*e.g.* OpenAI – GPT-3).

Many scholars view this side of AI generated work to be somehow similar to a work made for hire, whereby the AI is acting as a contractor working on executing the user's commands and requests. Therefore, the output generated by AI, which is the materialization of the idea originating from the user, will be owned by the user himself, subject to the terms and conditions of the AI platform used. Some platforms *e.g.* OpenAI's T&Cs clearly stipulate that "OpenAI will not assert copyright over Content generated by the API for you or your end users". While other platforms viewed that they should assume ownership of all content generated through their AI platforms, which, from a logical perspective is a totally ill-intentioned approach. It is similar to Microsoft asking every writer using Microsoft Word to forfeit the ownership of his/her novel just for using Microsoft as a medium to materialize his book. Hence, prior to using any platform, the end user is always advised to read the platform's terms and conditions thoroughly to avoid any legal dispute.

However, both above stated arguments lack legal substance and could lead to dangerous results as *per* the below demonstration.

What if the end-user requests an intelligent agent to generate every single melody yet to be composed? Who owns the output?

As far-fetched as this might sound, this task has already been accomplished back in 2019-2020, without the use of AI. When Noah Rubin (Musician and Programmer) and Damien Riehl (Musician, Programmer and Copyright attorney) both wrote down a code targeted at giving all permutations to every single melody (formed of the 8 notes) yet to be composed, and the output was of around 69 Billion melodies.

As a sign of righteousness, both developers registered all of their findings in the public domain in a way to benefit songwriters and to help them get out of unnecessary copyright infringement cases.

During his TEDx Minneapolis intervention back in 2020, Riehl thoroughly explained the rationale behind his and Rubin's endeavor. He stated that copyright laws need reviewing and updating especially in the musical field because there is only a limited amount of melodies that can ever be composed. And copyright infringement cases in the musical field are becoming more and more ludicrous in the way they are handled, to an extent

that judgements are issued based on the person's subconscious infringement of a copyright.

What Rubin and Riehl did by placing all their results in the public domain, was largely the honorable decision.

However, and hypothetically speaking, what would have happened if they did not? Would they be the authors of every melody yet to be composed? Or in case the development was used *via* AI would the latter be eligible for ownership or co-ownership?

In that aspect, one must emphasize on the fact that what Rubien and Riehl achieved was without the use of any form of AI. Therefore, the output of melodies was in the form of random sets of the known eight notes composed in one octave. In contrast, **if the feat was accomplished using AI, the outcome would have been different as it would have resulted in a number of melodies comprising of a pleasing arrangement of sounds** after discarding the combinations that have no musical value.

Going back to the question above, if Rubin and Riehl requested to copyright all their findings under their names, or under the AI's name, the United States Copyright Office would have most likely rejected their requests on the basis that **the work lacks human authorship**. Not to mention that registering the copyrights would have effectively given Rubin and Riehl control over the entire music business, hence, destroying new releases with requests for royalties and remunerations.

On a similar track, on February 14 2022, the United States Copyright Office's Review Board rejected a request filed by Steven Thaler to copyright a picture he named "A Recent Entrance to Paradise" with the author of the work being an AI he developed called "Creative Machine" on the grounds that the work lacks "human authorship". Hence, affirming the Copyright Office's previous verdict rendered in 2018 regarding the same request.

However, and in an offset decision regarding Patent registration, the Australian federal courts issued a verdict back in 2021, stating that in matters related to patents, AI can register an invention and can be referred to as the "inventor". The rationale behind this decision was that the law does not specify that the owner/inventor needs to be a natural person. Therefore, discarding the fact that human intervention is necessary for the ownership, and as a result, opening doors for other interpretations for other forms of IP.

Nevertheless, the Australian decision lacks legal substance in various aspects, most noticeably being the fact that the true intention of the legislators is to award ownership rights to natural persons or legal entities. Not to mention other risk factors associated to such decision that will be addressed in the following topic of discussion related to the ownership of works created totally by AI.

In summary, using AI to develop IP/output aiming at facilitating, assisting and helping someone to perform certain tasks and to scale up their business (*e.g.* creating a company logo, creating company ads, slogans, coding, analytical studies etc...) should not be construed as non-copyrightable IP. As the output should remain the sole property of the end-user as the human aspect and intervention is substantial in that case, unless the end-user is using a third party AI platform and in that case he should refer to the T&Cs of the said platform.

However, generic or specific computer-generated works developed using limited to no human and economic substance and activity, **cannot be viewed on a work made for hire basis, and cannot be rewarded in full or in part to any person or entity, and should automatically fall in the public domain.** In addition, and to remove any ambiguity, generic computer-generated works should refer to outputs resulting from totalitarian AI aiming at destroying fair competition.

WHO OWNS SYNTHETIC MEDIA CREATED IN TOTO BY AI?

Creativity is a quality that allows us to produce and develop novel and useful ideas. However, this trait is finite and all authors experience tiredness and moments of mental blockage (also known as writer's block), whereby the author's creativity slows down and sometimes comes to a complete halt.

AI, on the other hand, does not experience any of the above. It is in constant development and in constant progress, especially deep learning AI that are acquiring knowledge, developing, and adapting their behaviors in ways that are unimaginable. Going back to the GPT-3 AI mentioned above, which is a primitive AI capable of deep learning to produce human like texts, this AI possesses 175 billion machine learning parameters compared to its predecessor GPT-2's 1,5 billion machine learning parameters which is an astronomical growth in a span of two years.

Consequentially, the progress rate by far eclipses any human capability. In addition, as of late, AI started to acquire human-like creative skills

whereby some of the output originating from AI possesses some serious imagination, and if the pattern of evolution has taught us anything in the recent decade it is that the evolution trend will not stop anytime soon.

Nowadays, intelligent agents that are made available to the public mainly act on a command basis. However, this is not the complete picture, as it is thought that some AIs claim to be sentient, and are close to reaching self-awareness in the near future and can therefore independently and autonomously develop and update their purposes and produce outputs that are totally theirs from the inception phase to the execution phase. Hence, the IP conundrum arises:

Who owns the rights of the synthetic media created in totality by AI?

Looking back at the history of IP, starting with the Lockean Theory, followed by Kant and Hegel's philosophy on intellectual property, and all IP laws that followed, it is clear that ownership of IP can only be attributed to humans.

However, some copyright laws use the terminology "author" or "copyright owner" to refer to the owner without specifying if the said author is a natural person or not. Nevertheless, exploiting any ambiguity as a result of the current technological advancement –just as the Australian Federal Court did in its patent decision- is not in its correct place. As the actual text of law is only a manifestation of the true intention of the legislators, and the true intention laying behind all laws is to unequivocally award ownership rights to natural persons and legal entities.

Moreover, thinking of awarding AI any economic ownership rights could be a wild exploitation, as the number of artistic works an AI can generate in a matter of minutes if not seconds is astonishing and could result in the AI's control over the entire IP industry generally not just copyright. In addition, having prospective licensees pay for royalties and remunerations to an AI for the use of its works could constitute a black hole to the economy. Furthermore, if ownership is awarded to AI, then the question of when a work becomes part of the public domain arises, since all jurisdictions stipulate that artistic works become part of public domain after a certain period following the author's death, which is not the case with AI as an intelligent agent cannot pass away *per se*.

Therefore, and in the case of synthetic media created by self-aware AI, the terminology

“intelligent agent” should not apply, and should be substituted by the terminology “**intelligent principal**” as the AI is not acting based on any input. Moreover, **separating the right of attribution from other ownership rights is necessary**, as no one can take away the credit owed to the intelligent principal. Whereas, ownership rights, *inter alia*, the economic right, is another matter as all works generated *in toto* by AI without any human input should be construed to be works falling *ab-initio* in the public domain and as a result are open to the public for exploitation without the need to offer any financial consideration to the author.

CONCLUSION

Change is inevitable, and being susceptible to change is a virtue, while remaining in a stagnant state is a hindrance in today's standards.

WIPO is holding various forums, symposiums and conversations regarding the effects of AI on IP. On the other hand, governments around the globe are yet to assume the gravity of not admitting that AI constitutes a great danger to IP if it is not regulated properly and if the laws are not amended in a proper way to adapt to such change. In contrast, most AI developers and AI in itself is evolving at such a rapid pace that eventually legislators will find themselves on the downside of advantage when it comes to adapting laws to suit the technological change.

Hence, the establishment of a centralized focused international body/agency operating under the auspices of the United Nations similar to the WIPO (*e.g.* World Artificial Intelligence Task Force) is needed. Whereby it will oversee the execution and enactment of *sui-generis* unified laws, issues regulations, directives and unified operation protocols, in an effort to try and contain the effects of AI in the present and the near future.

Finally, yet importantly, adopting the argument of considering synthetic media as part of the public domain in case AI develops it without any significant human input, or, if it is created in whole by the AI can be viewed as the lesser of two evils argument. As, on one side, synthetic media will inevitably take over a significant share of the creative space available for exploitation by human intellects especially in matters related to copyrights in the not so distant future. On the other side, no AI will have control over those works (for the exception of the right of attribution) due to the dangers surrounding such aspect of ownership.

Nevertheless, several questions remain unanswered:

1- Will AI be able to defend its case and convince lawmakers of its right in all aspects of copyright ownership?

2- Is a presumption of public domain necessary to protect against synthetic works being registered? Whereby **all works** are presumed to be of public domain until the author/inventor/owner proves a significant human involvement in the work?

3- Will the Australian Federal Court patent decision that awarded the full ownership rights to an AI, set a precedent to be adopted by various jurisdictions whereby AI will eventually be entitled to own various forms of IP (*e.g.* trademarks, industrial designs, etc.)?

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