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► To cite this version:

Iony Randrianirina. Copyright Issues Arising From Works Created With Artificial Intelligence. Medien und Recht International, 2019. hal-04214428

HAL Id: hal-04214428

<https://hal.science/hal-04214428>

Submitted on 29 Nov 2023

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Copyright

Copyright Issues Arising From Works Created With Artificial Intelligence

| Iony Randrianirina

Introduction

The choice of this topic was inspired by a Resolution adopted by the European Parliament on 16th of February 2017, with recommendations to the Commission on Civil Law Rules on Robotics¹). *Via § 59 (f)* of this Resolution, the European Parliament calls on the Commission to create a “legal status for robots”, so that the most sophisticated autonomous robots could be established as having the status of “electronic persons”.

A lot of works are created by machines: Robot reporters routinely write sports news and financial reports. Through a heavy reliance on “automated journalism”, many articles are written by Narrative Science or Associated Press. Music can be composed by an algorithm. *Genesis – vol.1 for Piano and Symphonic Orchestra* is an example of musical composition algorithm developed by AIVA²) Technologies, the first non-human entity who registered its works with the Copyright Office of Luxembourg. A machine named e-David produces paintings using a complex visual optimization algorithm that takes pictures with its camera and draws original paintings from these photographs. And who cannot remember the sale of *Portrait of Edmond Belamy* – produced by GAN (Generative Adversarial Networks) – at auction in October 2018 for \$432,500? The Next Rembrandt, a project developed by a group of experts in engineering, history and art, in conjunction with Microsoft and the Dutch Bank ING, has identical goal: Digitize the painting method of Rembrandt. Once the program “had learned” Rembrandt’s style, it would create a new, creative, independent and original work of art of the genuine painter of the 17th century.

With deep-learning systems, machines are capable of autonomous decision-making. These so-called artificial intelligence machines – or AI machines – are capable of creating new works independently, autonomously, rationally, evolvingly, unpredictably, without copying or infringing others’ copyrights. This raises a new main legal issue: AI systems are advanced enough to force us to ask a genuinely hard and complex question – one that intellectual property scholars, legislators and courts will need to answer soon – namely whether copyrights should be granted to productions made not by humans, but by machines. We have noted with *Portrait of Edmond Belamy* auction that AI-created works generate value. Who then can and should capture this value, and how? Competitors and the public are expected to try to access and possibly reuse those creations for free. It would also be natural for the programmer, the owner or the user of the machine to

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1) *Civil Law Rules on Robotics*, European Parliament resolution of February 16, 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).
2) Artificial Intelligence Virtual Artist.

try to protect this value in every possible way, including by copyright law.

Part I reminds the current criteria for copyright protection. Part II demonstrates that copyright protection of AI-generated works would derive from a political choice. Part III proposes some routes to prospective solutions.

I. The current criteria for copyright protection

In Civil Law systems, particularly in European states, two cumulative criteria must be fulfilled for a creation to be copyrightable: First the creation must be original; Second it must be legally described as a “work of mind”.

1. The originality of the creation

In order to be copyrightable, a creation must be original. As applied by courts, originality requires human authorship: In French law, the traditional originality test is that the work must express or reflect the author’s personality. In the United States as well the notion of originality also requires human input. The question asked to courts was to determine what copyright law should reward: Work, investment or creativity? According to *Feist*, creative choices are required for a work to be copyrighted³). A creative choice is a choice which is made independently by the author and that is not dictated by the function of the work, the method or technique used, or by applicable standards or relevant good practice. According to *Urantia*, some element of human creativity must have occurred in order for the work to be copyrightable⁴). Otherwise we must talk about novelty, not originality. As Professor Daniel J. Gervais wrote, “*Machines cannot make creative choices. They can certainly produce new material, but (...) copyright does not require novelty; it requires independent creation of works of authorship*”⁵).

2. Legal reference as “work of mind”

The second condition derives from the first one: in French law, if a work is original, it has the status of “work of mind”. The word “mind” is understood to refer to “human mind”, as there cannot be other kind of mind. Here again a “work of mind” requires human input.

Answering to the question whether copyrights should be granted to AI-generated works depends on a political choice: Do we – scholars, legislators and courts – want to recognize AI-generated works as “works of mind”?

II. The copyright protection as a political choice

An urgent choice should be made between copyright protection and no copyright protection.

1. The choice of non-copyright protection

If we choose not to protect AI-generated works under copyright law, two consequences may incur: Either we would still have a problem of copyright protection, or we

3) *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991).

4) *Urantia Found v. Maaherra*, 114 F.3d 955, 958 (9th Cir. 1997). See also *Naruto v. Slater*, 2016 WL 362231, at *3 (ND Cal. Jan. 28, 2016), *aff’d*, 888 F.3d 418 (9th Cir. 2018).

5) *Daniel J. Gervais, The Machine As Author*, in: *Iowa Law Review*, Vol. 105 (2019).

would postulate that the work is in the public domain *ab initio*.

1.1. *Problem of copyright protection*

Authorship is a core notion of copyright law. If an AI-generated work is found original enough to deserve copyright protection, who would be designated as the author? If the law does not provide copyright protection to works created by AI systems, on which legal grounds claim the protection? These are unanswered questions.

1.2. *The work would be in the public domain ab initio*

One of copyright law's historical purposes was to promote the creation of artistic works by establishing an incentive structure through which authors are given exclusive control over their works. But unlike humans, AI machines do not need incentives to create artworks. Hence, they do not need any copyright protection. According to Professor Shlomit Yanisky-Ravid, "*Incentivizing AI systems to generate works they are already internally programmed to create is pointless*"⁶). But we can assume that it is in the programmers', owners' or users' interests to maintain exclusive and monopolistic control over AI-generated works. There comes back the need of incentive structure!

2. The choice of copyright protection

If the law adopts the choice of copyright protection on AI-generated works, there would be two options at our disposal: Either we do not proceed to a new paradigm shift, or we accept a paradigm shift.

2.1. *First option: no paradigm shift*

If there is no paradigm shift, we will have to use the existing legal framework: AI-generated works may be treated as fruits or products generated by a machine; They could be also protected under neighbouring rights or related rights.

2.1.1. AI-generated works as fruits or products generated by a machine

Under law of goods, things can generate other things. Land can generate fruits, shares or stocks generate dividends and so on. Why not an artificially intelligent robot? The owner or the programmer of the machine could have natural and exclusive rights on the works generated by his machine. If the work is original, then the copyright could be held by the owner or the programmer or the user. But if the work is not original then there would not be any copyright protection: The work would be just a regular thing or an ordinary thing, a good belonging to the owner or the programmer.

2.1.2. Protection of AI-generated works under neighbouring rights or related rights

Because the creation is not made by a human, the human behind the machine could be defined not as author but as producer. Another option would be the creation of a new sui generis category.

6) Shlomit Yanisky-Ravid, Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era — The Human-Like Authors Are Already Here — A New Model, in: Michigan State Law Review, 659 (2017).

2.2. *Second option: the need of a paradigm shift*

A paradigm shift would imply two options: Either we create a legal personality for AI machines, or we redefine the notion of originality.

2.2.1. The creation of a legal personality for AI machines

The choice to create a legal personality for AI machines would solve many legal issues, beginning with the question of authorship. It would be easy since the European Parliament calls on the Commission to create a “legal status for robots”, so that the most sophisticated autonomous robots could be established as having the status of “electronic persons”⁷⁾. For the moment, a legal personality for robots seems a bit unrealistic regarding tort law. What if the machine generates counterfeiting works? How to punish the robot?

2.2.1. A redefinition of the notion of originality

Redefining the concept of originality is possible because the notion itself has evolved through years: According to French doctrine, originality was depicted as “the expression of the author’s personality”. A few years later, according to the Court of Justice of the European Union’s decision in *Infopaq*, originality is referred to as “the expression of the author’s intellectual creation”⁸⁾.

III. Routes to prospective solutions

We should remember that in the mid-19th century, photographies did not have the status of “works of mind”. They were supposed to be generated by machines—which were the cameras. The same rationale used to apply to movies. It is then possible to expect an evolution of the law. At the current stage, human author is the central theme of copyright. Authors are mostly depicted as the pivot around which copyright evolves. This doctrine was taught with an instrumentalist perspective, as an incentive for authors.

Must authors be human for purposes of obtaining copyright protection?

The word “author” comes from the Latin *auctor* which means “originator”. As Professor Daniel J. Gervais says, “*If copyright had been designed as an investment protection scheme (...), then the investment of publishers would have been sufficient (...) and the basis for protection would have been time and money spent. This would have paved a path to argue in favor of the protection of machine productions, based on the time and money spent on the machines and their code*”⁹⁾.

Why grant rights to authors ?

At the time of the creation of copyright, in the 16th century, laws used to protect publishers, not authors. But there was an evolution of the doctrine. John Milton and John Locke fought to put an end to the Stationers’ licensing regime, which they—rightly—considered as a form of pre-publication censorship. With the Enlightenment philosophy and the doctrine of individualism, a movement for a

7) Civil Law Rules on Robotics, European Parliament resolution of February 16, 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), § 59 (f).

8) CJEU, *Infopaq*, July 16, 2009, aff. C-5/08.

9) *Daniel J. Gervais*, *The Machine As Author*, in: *Iowa Law Review*, Vol. 105 (2019).

protection of authors was anchored in natural rights stemming from the protection of the author's labor. It is then conceivable to grant exclusive rights, not to authors, but to producers of AI-generated works.

Would programmers, owners and users of AI machines accept responsibility for all acts of the machine they program, own or use?

Copyright means rights and rights come with liabilities. Obviously in case of copyright infringement, libel or any other source of liability, the machine would never be able to defend itself, nor be sentenced to repair a damage caused by their works, nor to pay damages. Only humans will.

Are we stuck into copyright law?

Copyright law is not the only perfect legal framework for protection. We are allowed to get out of the scope of copyright law. We could protect AI-generated works under neighbouring rights (related rights). Then, the exclusive rights would belong not to authors but to producers.

Conclusion

We have to admit that traditional copyright laws are inadequate to accommodate AI-generated works. That is because AI systems simply do not fit into the existing framework. We must either rethink these laws or replace them, but we have to act fast.