
Law and generative artificial intelligence. Dilemmas on authorship, originality and assignment of intellectual property rights

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In recent years, the advances in generative artificial intelligence (AI) and the spread of models and applications like ChatGTP, Stable Diffusion and Midjourney have spurred academic research on their consequences for intellectual property rights, and they have been used to undertake legislative initiatives in different jurisdictions and have also given rise to numerous lawsuits, most of which are still awaiting a ruling.

Based on information entered by a user or a prompt, generative AI systems generate new contents, such as images, texts, videos or computer programme source code. These results or AI products are very similar to the type of content that is recognised by copyright; that is, they have the usual features of literary and artistic works like poems, drawings, photographs or software, which are the primary target of intellectual property protection. For this reason, generative AI systems are raising different questions related to this branch of law. In this article, I am concerned with the question of whether the results of generative AI can be protected by copyright, but there are other topics of practical and theoretical interest, like the possibilities of training the underlying models with copyright-protected works and the risks of violating the law if the AI products are too similar to existing works (Lee *et al.*, 2024).

In European law, original works can be protected by copyright. According to a consolidated body of jurisprudence from the Court of Justice of the European Union (EU), to be considered original, a work has to be the intellectual creation of an author; in other words, it has to reflect the personality of that author based on their free, creative decisions (Rubí Puig, 2024). It is not at all clear that an AI product reflects the personality of the AI user or anyone else, such as an engineer who developed the model or the compiler of the database used to train it. What is more, one can also claim that these AI products are not original, given that they are determined

by technical considerations or the rules by which the model functions. In other words, they contain no personal expression *per se* but are instead a result based on a statistical or probabilistic optimisation model.

Right now, there are no rulings or resolutions on this legal issue in any EU member state. However, we do find resolutions in other influential countries, especially the USA. The most prominent case is the Kashtanova affair, whose ruling was handed down by the US Copyright Office on 21 February 2023. Ms Kristina Kashtanova had used Midjourney to create different images, and afterwards she arranged them to make a comic entitled *Zarya of the Dawn*. She went to register the comic as a protected work in the US Copyright Office registry, but the Office denied that protection when it discovered that the images had been generated automatically. More accurately, it limited the safeguard to the aspects that the applicant had contributed – the text of the comic and the arrangement of the different images to tell a story – but not the individual images in every frame. The ruling cites a series of arguments to deny protection of the AI-generated contents, which very clearly illustrate the dilemmas around their originality, authorship and attribution.

First, it states that legal copyright systems embody an anthropocentric model in which only creations made by humans can be protected (Błaszczuk, 2023). In this sense, it cites *Naruto vs Slater*, a case in which a San Francisco district court determined that this anthropocentric model prevented rights from being assigned to works generated by nonhuman animals. In that case, it was a photograph taken by a crested macaque on an island in Indonesia. An NGO that defends animal rights, People for the Ethical Treatment of Animals, filed a lawsuit on behalf of the monkey and against David Slater, the photographer who had set up the photo and later sold it. The court denied that the macaque could be considered its author but did not determine whether the rights were held by the defendant.

Secondly, the decision states that AI products cannot be sufficiently predicted by the generative AI user. In other words, when users write a prompt, they cannot anticipate the final expression that the system will produce. In this sense, the decision also refers to another ruling, this one from the *Sarony* case, an affair about a portrait of Oscar Wilde that the US Supreme Court ruled on 140 years ago. In that case, the Court deemed that a photograph could be protected by copyright. The technical procedure used was not relevant, according to the Court, but what did matter was the conception of the work and the fact that that conception was reflected in the end result. There, the Court developed the doctrine called the *master mind of the work*: if a subject can envision and anticipate all the expressive aspects of a work, they should be considered its author regardless of the final execution or the technical process used. Applying this doctrine to the Kashtanova case, the decision denies that a generative AI user is indeed a master mind since they cannot predict the final expressive aspects based on their instructions.

Thirdly, the decision notes that the prompts entered by a user are not actually instructions but instead merely suggestions resembling those given by someone who commissions an artist to

make a painting. Therefore, the originality lies in the artist's subsequent actions, not their client's suggestions, even if that information was quite detailed. However, some authors have claimed that if the instructions are very extensive, if the user can be attributed true control over the end result and if the unpredictability of the process is minimal, there are reasons for regarding AI products as works that could be protected and to assign their authorship to the user (Hugenholtz & Quintais, 2021).

The last argument used in the *Kashtanova* decision emphasises that the generative AI user did not make significant changes to the AI products and therefore did not add new creative contributions. If she had used the system as yet another tool in her creative process, it would be easier to assign her copyright. This was, in fact, the solution recently taken by a Chinese court, which determined that an image generated by AI could be protected, given that the system's user had changed the instructions around 150 times, gradually transforming the image until he got a result that reflected his aesthetic preferences.

More arguments against assigning copyright to AI products could be mentioned. One of them claims that society asks to be able to distinguish between works made directly by humans and those produced by machines, and to prioritise the former (Friedmann, 2024). Ultimately, there is a clear preference for the idea of authenticity: protecting only works produced by humans with copyright could be used as a certification tool in the market (Burk, 2023). In fact, this concern can be found in the EU's recently approved Artificial Intelligence Act, which establishes two obligations targeted at guaranteeing this authenticity. First, AI systems have to include technical mechanisms that enable metadata to be used to identify whether a given content has been automatically generated. Secondly, if the content may include deep fakes – that is, if it may reflect voices, images or other features of an individual, may be manipulated or contribute to disinformation – it must be openly revealed that it is the product of an AI system.

There are also arguments that advocate protecting AI products with intellectual property rights. They tend to resort to a pragmatic logic and highlight the fact that since AI products may have an artistic and commercial value, it makes sense to grant exclusivity rights to the subject that generated them (Samuelson, 2020), namely the person who is best poised to control and nurture this value. Likewise, suppliers of generative AI services already acknowledge in their general conditions that users are the holders of the rights to the AI products they produce. This is creating a custom in the market that could one day influence the law. Some authors have also proposed creating new exclusive rights other than copyrights to protect AI products, a similar right that would protect AI products for a much more limited time and on a much smaller scale.

The forthcoming years will prove decisive in establishing the legal criteria and jurisprudence that will clarify the status of contents produced by generative AI tools and how they affect the creativity that copyright seeks to encourage.

References

- BLASZCZYK, Matt (2023). "Impossibility of Emergent Works' Protection in U.S. and EU Copyright Law". *North Carolina Journal of Law & Technology*, 25 (1), pp. 1-55.
- BURK, Dan L. (2023). "Cheap Creativity and What It Will Do". *Georgia Law Review* [online], 57 (4), pp. 1669-1712. <<https://doi.org/10.2139/ssrn.4397423>> [Retrieved: 10 April 2024].
- FRIEDMANN, Danny (2024). "Copyright as Affirmative Action for Human Authors Until the Singularity". *GRUR International* [online], 73 (1), pp. 1-2. <<https://doi.org/10.1093/grurint/ikad133>> [Retrieved: 10 April 2024].
- HUGENHOLTZ, P. Bernt; QUINTAIS, João Pedro (2021). "Copyright and Artificial Creation. Does EU Copyright Law Protect AI-Assisted Output?". *IIC* [online], 52, pp. 1190-1216. <<https://doi.org/10.1007/s40319-021-01115-0>> [Retrieved: 10 April 2024].
- LEE, Katherine; COOPER, Feder; GRIMMELMANN, James (2024). "Talkin' 'Bout AI Generation: Copyright and the Generative-AI Supply Chain". *Journal of the Copyright Society* [online], pp. 1-128 (forthcoming). <<http://dx.doi.org/10.2139/ssrn.4523551>> [Retrieved: 10 April 2024].
- RUBÍ PUIG, Antoni (2024). "Originality in Spanish Copyright Law". In GUPTA, Indranath; DEVAIAH, Vishwas H.; SINGH, Manveen (eds.). *Handbook on Originality in Copyright: Cases and Materials* [online]. Singapore: Springer Nature, pp. 1-15. <https://doi.org/10.1007/978-981-19-1144-6_22-1> [Retrieved: 10 April 2024].
- SAMUELSON, Pamela (2020). "Legally Speaking AI Authorship?". *Communications of the ACM* [online], 63 (7), pp. 20-22. <<https://doi.org/10.1145/3401718>> [Retrieved: 10 April 2024].