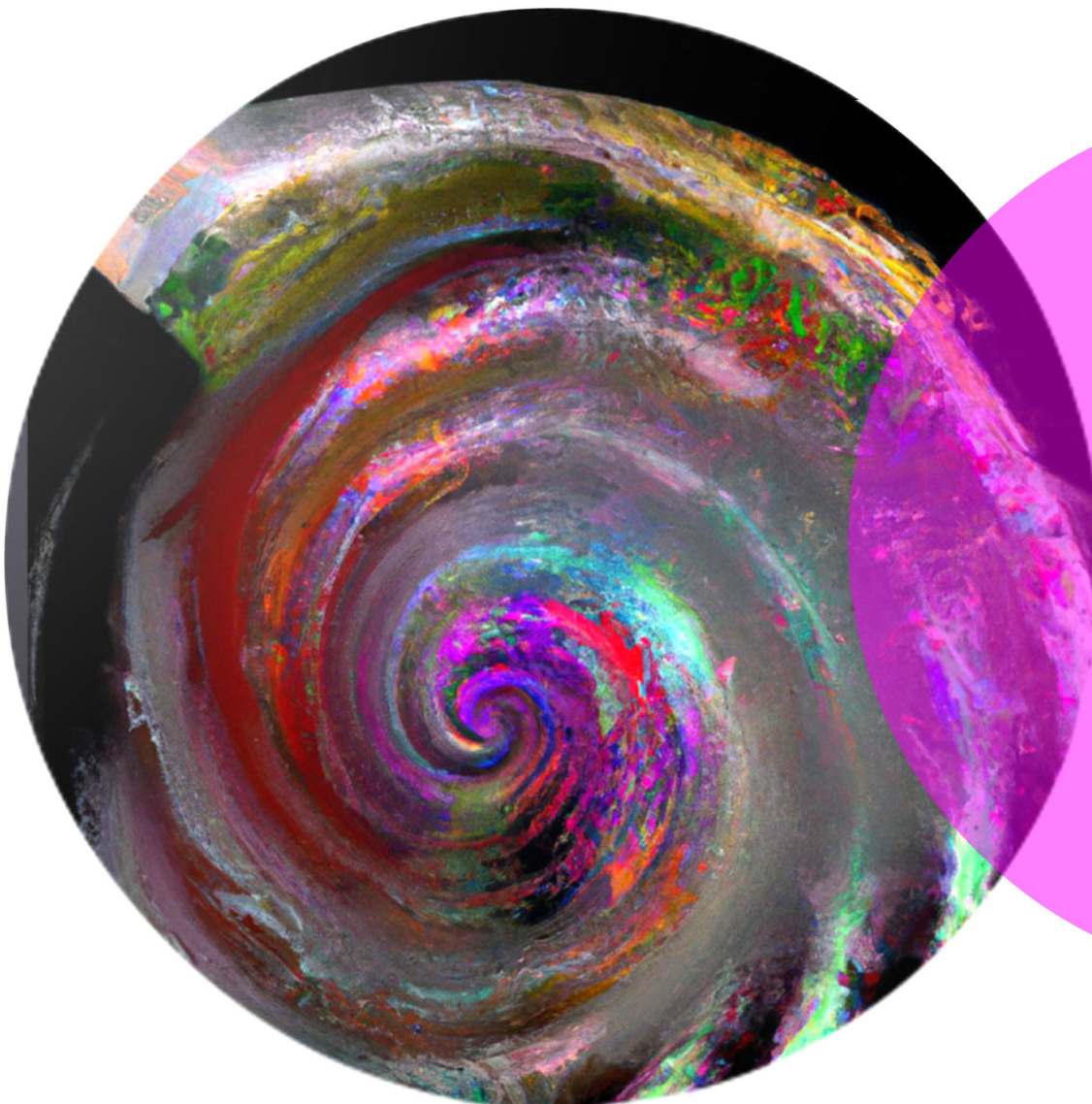


# Artificial Intelligence and The Future of Art: The Challenges Surrounding Copyright Law And Regulatory Action

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**Cover Photo :** Created by **DALL-E**, prompt by **Theodore Christakis** : *“Generate an image that resembles a circular painting and conveys the fusion of AI and art, with futuristic elements and a forward-looking aesthetic”*

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# Artificial Intelligence and The Future of Art: The Challenges Surrounding Copyright Law And Regulatory Action

**The present contribution provides an overview of two of the most pressing legal questions concerning IP law, authorship of AI-generated works and copyright infringement. It does so through the lens of US copyright law, since US courts have dealt with the highest number of AI art cases, and many AI systems manufacturers and suppliers are based in the US. It cannot and does not address the full range of copyright issues, such as dataset algorithms copyright for example, neither does it provide a solution to the issue of copyrightability of AI works in general.**

The use and assistance of Artificial Intelligence (AI) systems<sup>1</sup> for creative purposes is currently the subject of heated debate. While many creative people are keen to incorporate digital technology into their work, producing [avant-garde art of extraordinary quality](#), others are skeptical about it, or even campaign [against it](#). The debate is not only confined to AI-assisted art. The fear that artists may ultimately be replaced by AIs, including those systems that function without any or much human involvement, is equally pervasive. AI systems today do not just produce art: they may also deliver talks at art exhibitions, in the case of [Ai-da](#), or even sell their artwork, as per [Botto](#), which recently made its [first million at an auction](#) selling its artwork via NFTs.

The concerns raised by the complexity of the AI phenomenon and its impact on the evolution of contemporary art are however far from purely ethical – or philosophical – in nature. A variety of legal issues have arisen, especially in the area of Intellectual Property (IP) law. They generally comprise two types of issue: firstly those that involve human rights (with respect to artistic freedom for example, and the liability of AI systems, for instance where an AI generated artwork is found to be obscene, blasphemous, hateful etc.) and secondly, those specific to Intellectual Property (IP) law. Intelligent and independent or quasi-independent AI generative systems are possibly the most

problematic cases, since these systems involve largely unauthorised use of existing works.

## AI Art and the issue of authorship: Can AI be an ‘Author’?

In August 2023, a [US federal court for the DC district upheld](#) the unfortunate decision to grant copyright protection to Thaler’s [Entrance to Paradise](#) (USCO [Thaler](#), 2022). The work involved was generated by an AI system in its entirety, Stephen Thaler’s ‘Creativity machine’. Thaler, as the owner of the machine, ([Dabus](#): the ‘Device for the Autonomous Bootstrapping of Unified Sentience’) had requested that the USCO register copyright of the work *under the name of the machine*, and transfer it to him under a work-for-hire agreement as per [section 101 of US Copyright Act](#). This point was specifically rejected by the US Courts, which refused to acknowledge that an AI creative software system, and the artwork created by such software, is the same thing as a work made for hire, or the relationship between an employer and its employees.

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<sup>1</sup> AI systems come in different varieties depending on the level of autonomy and human involvement. According to the predominant [working definition of AI](#), there is a general distinction made between AI assisted systems (in the domain of the art, these include for instance AI whereby human creativity

is predominant (thereby producing AI assisted artworks), and AI generative systems, that can in fact generate data independently (thereby producing AI-generated artworks, that have no human involvement).

In particular, Judge Howell found that human authorship is a ‘bedrock requirement’ in the US Copyright system, as [had already been highlighted by various IP lawyers](#). This issue of human authorship, which was raised in the *Thaler* case, has not come as a surprise. In 2021, the [USCO issued guidelines](#) in which it emphasised the requirement around human authorship. On the other hand, in the other [much discussed](#) case involving art created with the assistance of AI tools, the USCO has decided that AI artwork can only be granted partial authorship.<sup>2</sup> The work involved was Kristina Kashtanova’s comic book [Zarya of the Dawn](#), which was assisted by tools available in the [Midjourney](#) AI art software (the assistance provided by Midjourney was in fact substantial, and Mrs Kashtanova’s involvement minimal, limited only to the selection, framing and cropping of images in the comic book – and her ‘sweat of the brow’ argument, about the time she had spent working with the Midjourney tools, was found to be irrelevant). So the suggestion that the AI assisted part was original was rejected, and although Kashtanova did demonstrate to the court that she had indeed used a number of ‘tools’ such as ‘cropping, juxtaposing and framing of the images’, the USCO maintained that images created by AI software programs do not represent ‘independent creation and sufficient creativity’ as per [Feist](#) (concerning copyrightability of the ‘White pages’) and as a result Kashtanova was only granted copyright for the text.

This explicit human authorship requirement is necessary to spare US Courts from raising the much more complex originality question. Originality is defined in different ways in different jurisdictions, as other authors have explained in detail (see [here](#) and [here](#)). Under US law, for example, originality requires that the author both produces an independent creation and demonstrates a minimal degree of creativity, as per the requirements set out in [Burrow-Giles Lithographic Co. v. Sarony](#) and [Feist](#).

It follows that originality requirements under US law are generally understood as involving minimal levels of creativity in the common sense of the word, and this could arguably play in favour of authorship recognition in AI art. Moreover, *Burrow-Giles* also considered the purpose of copyright law, as a whole, in light of the new technology. As noted by the Court in *Thaler vs Perlmutter*, ‘the appropriate takeaway from *Burrow-Giles* is not that an AI cannot be an author, but rather that our courts have a long history of purposive interpretation of the Act in light of technological evolution’ (at 35). This specific debate has certainly also been a factor in other cases, such as the [Sony](#) case regarding the time shifting function of the Betamax videotapes.

Therefore, the human authorship solution in reality represents an impasse. Some years ago, Artificial Intelligence (AI) technology and 3D printing was used to [create a Rembrandt painting from scratch](#), in a manner that was identical to the style of the Renaissance genius. Since then, the use of AI technology has grown rapidly. AI tools are increasingly used in the heritage sector and in artwork restoration,<sup>3</sup> and recently in [another painting by Rembrandt](#). Facial recognition technologies too, [are used to help researchers identify](#) information about the history of the paintings, including signature traces. The discourse in the field of IP law however is different. The lack of recognition of authorship (and subsequent registration) of AI works entails that AI artwork is not copyrightable, with the public domain being the only option. For some works this may be understandable (for example, the first AI manga author who is selling his comic book, [while admitting he has ‘zero drawing talent’](#)). The lack of recognition of authorship (and subsequently registration) of AI works in general, however, entails that AI-artworks will not be copyrightable, with the public domain being the only option. Yet art needs copyright.

<sup>2</sup> Mrs Kashtanova had in fact originally registered *Zarya* omitting to mention the use of AI technology, which is why she was originally granted full authorship of the work in September 2022. Therefore, in the secondary review of the case, the USCO [cancelled the initial registration](#) and reexamined the case paying particular attention to the way Midjourney functions. Following this secondary review, it rejected the authorship claim for the AI-

generated images, and in [February 2023 informed Mrs Kashtanova](#) that it would replace the previous registration decision with a new, more limited one, which would exclude non-human authorship.

<sup>3</sup> Yusa, I. M. M. ., Yu, Y. ., & Sovhyra, T. (2022), Reflections On The Use Of Artificial Intelligence In Works Of Art, *Journal of Aesthetics, Design, and Art Management* , 2(2), 152-167.

This is because lack of copyrightability of AI generated works prevents artists working or experimenting with AI using reproduction rights, or the right to prepare derivatives, since these rights apply to copyrightable works. Likewise, as noted by art lawyer [Amelia Brankov](#), it prevents them from invoking the [Visual Artists' Rights Act \('VARA'\)](#). The VARA protects certain visual artists' moral rights (against mutilation or distortion of their work etc.) and offers even greater protection for works of 'recognised stature', yet it is applicable only to copyrightable works. This, however, would be detrimental to visual artists.

### Copyright infringement and Fair Use: the problems that surround unauthorised use of artists' works

The problems stemming from the unauthorised use of artists' works, however, are way more complex than those that concern authorship. This is because of the creative functionality within certain AI systems (including programs such as [Nightcafe](#), [Photosonic](#), [Craiyon](#), [Google imagen](#), [OpenAI's DALL-E](#), [Midjourney](#) and others that produce photorealistic GAN style images). Akin to [ChatGPT](#) and other chatbots that imitate human abilities and [produce 'texts upon request'](#), these systems are fed with existing data (e.g. artwork) in order to produce visual art, with varying degrees of human guidance. Hence, most AI generator feeds are not only comprised of authorised works, but also (and in fact more often than not) unauthorised works. In addition, AI generator software programs are easy to use, and are therefore popular, even among non-professional artists. This essentially amounts to massive, computerised reproduction of copyrighted works and an aggravated form of copyright infringement. According to the legal team involved in the [class action suit](#) brought by visual artists Sarah Andersen, Kelly McKernan and Karla Ortiz against Stability AI, Midjourney and Deviant Art, 'every image that a generative tool produces "is an infringing, derivative work', see [here](#)).

Most of the time copyright infringement (and data mining) are discovered by authors either randomly,

or by other types of [AI software](#). The first issue here is whether AI systems would be able to benefit from any form of defence or exceptions against copyright breaches, such as fair use, fair dealing etc. (assuming that such exceptions within national laws are compatible with article 9, paragraph 2 of the [Berne Convention](#)). In the US in particular, the fair use test has been 'extended' in such a way as to also incorporate [transformative use](#) ([Cariou v Prince](#)). The transformation test in effect goes way beyond the flexible copyright exception and the four-factor test. Hence, it is generally possible to defend against copyright infringement as long as the claimant proves that their art was created using a *new* or *different* setting - i.e. demonstrating that the way they use 'raw material' in an entirely 'entirely different aesthetic' context (by questioning for example how the work in question appears to the reasonable observer or whether the new work in some way critically refers back to the original works.

In addition, some years earlier, a US Federal Appellate Court found in [Authors Guild v. Google](#) that the massive digitisation of books by Google constitutes fair use, because by allowing the public access to books in digital format (for example, through the 'snippet' function), societies' knowledge and education is enhanced. On this basis, one could have claimed, at least prior to 2023, that AI art amounts to transformation. Even transformative use, however, is likely to fail. In the [2023 Warhol Foundation v Goldsmith](#) ruling the US Supreme Court sided with the Court of Appeals, stating that 'the district judge should not assume the role of art critic and seek to ascertain the intent behind or meaning of the works at issues'.

Forms of defence such as 'fair use' should not be applied in cases involving copyright infringement by AI systems. This is because the copyright system as a whole must not only respond to technological advancement but must also promote artistic and cultural expression within societies, by giving incentives to creators – and not just creators who use AI in their work, and *a fortiori* not AI art generators. Equality should therefore be taken into consideration, both when the content is being created and when it is produced. Furthermore, machine learning, in the case of visual arts, is unlikely to be considered fair use without the artist having



specific licencing which permits this, as essentially what is copied is not extracts from a work, but an entire style (as [Sobel writes](#), ‘if Google wanted to train the Smart Reply engine to write like David Foster Wallace, the company might have to license his oeuvre, but if Google were content with Smart Reply writing like every Gmail user, no additional licensing would be needed’).

It is possible that some of these issues could have been resolved in the course of the aforementioned [class action suit](#) against Stability and Deviant Art (unfortunately, it was rejected in summer 2023, because of flaws). Other lawsuits however, are still [pending before US courts](#), including those brought by well-known US authors (against Chat GPT, OpenAI and other AI systems).

### **Additional safeguards concerning the use of AI generative systems : parallels with the EU**

The fact that companies that own software-based AI are primarily private entities poses an additional layer of complexity and raises the problem of at least some type of State control through [AI art regulation](#), in order to control the spread of unauthorised reproduction. The position of the European Union provides an interesting parallel perspective that enables better understanding of how the phenomenon of copyright infringement could potentially be tackled, and whether this could apply in the US. Generally, EU institutions, as per WIPO, [maintain the distinction](#) between AI-generative and AI-assisted AI systems as [Pieter De Grauwe and Sacha Gryspeerd](#) point out.

In addition to this, however, the EU has been monitoring the impact of AI systems on fundamental human rights and values much more closely through legislative initiatives. This is evident, firstly, due to the passing of the copyright directive, and the discussion that ensued over the challenges of

maintaining the values that are cherished by European societies, which predominantly include freedom of expression<sup>4</sup> (but also the creative expression of all those artists who work with digital media, and are well versed in the use of AI tools, such as copying, cropping, sampling, looping and other techniques). Secondly, there has been much more impetus on developing a normative framework in order to tackle the challenges raised by AI generative systems that produce creative content. An additional safeguard against massive, or potentially massive, copyright infringement perpetrated by the latter therefore is the regulation of AI, which is precisely what the EU is aiming for in the years to come.

In fact, since 2021, the EU Parliament has been working on a regulation proposal to harmonise EU laws, with the aim of regulating AI models that pose the most significant danger to EU values, such as fundamental rights, environmental values and the rule of law. The proposal was amended and finally adopted by the EU Parliament on June 14th, 2023, and is currently being negotiated by the EU Council. If passed, it will be [a pioneering document on AI regulation](#). The so called AI Act<sup>5</sup> is significant because it introduces a risk-based approach to AI systems that categorises them on the basis of the threat that they pose (AI systems that generate art without the consent of the parties involved, or an appropriate licence, are therefore likely to be categorised as high risk, akin to those that perpetrate personal data breaches). Hence, with respect to all systems categorised as ‘high risk’, the proposal lays down requirements and obligations for the relevant operators, and transparency obligations for certain AI Systems. The proposal further substantially expands the safeguards around AI systems that are categorized as high risk,

<sup>4</sup> Boutelle, A. & J. Villasenor, ‘The European Copyright Directive: Potential impacts on free expression and privacy’, Commentary, 2 February 2021, Brookings. <https://www.brookings.edu/articles/the-european-copyright-directive-potential-impacts-on-free-expression-and-privacy/>, accessed on 3 October 2023.

<sup>5</sup> European Commission. (2021). Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts. COM/2021/206 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206>

as Karathanasis<sup>6</sup> and other authors<sup>7</sup> have explained. That said, however, for now there has been no compliance with the draft, as noted by Mauritz Kopp and in the [relevant study of 2023, by Stanford University](#).

## Conclusion

There is no doubt that AI has the potential to generate original work, not from the philosophical meaning of the word, but in IP terms. Despite the fact that [AI artwork is increasingly visible in exhibitions, competitions and auctions](#), the human authorship requirement still stands, and is applied by US courts and the USCO. However, this criterion appears to only be a short term solution, as evidenced by the [recent study undertaken by the USCO](#), in the autumn of 2023, on the copyright law and policy issues raised by AI, and the various [workshops and conversations conducted by WIPO](#). It seems rather unavoidable that AI works will eventually become copyrightable.

This is not of the industry claims, which are increasingly putting [pressure on governments](#) to recognize AI artwork, but also because of existing legal gaps, and the possibility of a blend of creative expression that involves both human and AI art. As far as copyright infringement is concerned in particular, self-regulation, and regulation of cyberspace appears to be the only solution.

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<sup>6</sup> Karathanasis, T. (2023), Guidance on Classification and Conformity Assessments for High-Risk AI Systems under EU AI Act, AI-Regulation.com, February 22th, 2023. <https://ai-regulation.com/guidance-on-high-risk-ai-systems-under-eu-ai-act/>, accessed on 3 October 2023?

<sup>7</sup> Edwards, L. (2022), The EU AI Act proposal. Ada Lovelace Institute. Available at: <https://www.adalovelaceinstitute.org/resource/eu-ai-act-explainer/>