

The Role of Human Creativity in the Copyrightability of Artificial Intelligence-Generated Works

Author : Christophe Geiger

Date : April 29, 2022

P. Bernt Hugenholtz & Joao Pedro Quintais, [Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?](#), 52 *IIC - International Review of Intellectual Property and Competition Law* 1190 (2021).

Do you believe in the human heart? I don't mean simply the organ, obviously. I'm speaking in the poetic sense. The human heart. Do you think there is such a thing? Something that makes each of us special and individual?" This is a question put to Klara, the narrator of Kazuo Ishiguro's novel *Klara and the Sun*, who is an "artificial friend"—an artificial intelligence (AI)-operated android- that, in a not-too-distant future imagined by the Nobel Prize winner for literature, is meant to replace companions for children.¹

This philosophical question also lies at the heart of the question of the protectability by copyright of AI-generated outputs: Is there something in the human creative process that makes it unique and different from any output generated by a machine? And is the copyright system apt to incentivize and reward these moments of genius that generate new creative works and induces cultural enrichment?

In their article *Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?*, Bernt Hugenholtz and Joao Pedro Quintais of the Institute for Information Law at the University of Amsterdam try to address this crucial issue from the perspective of the legal framework for copyright protection in the European Union (EU).

Their approach is not a philosophical one, but a legal, more technical one: can an AI-assisted output satisfy the criteria of copyright protection? Of course, the underlying policy question is not far, for if copyright protection is denied, this might induce policy makers to reflect on a possible legal instrument to be introduced to this effect.² Also, the big normative questions such as the desirability of protecting AI by copyright, are deliberately not addressed. Nevertheless, their analysis is absolutely fascinating.

Indeed, their doctrinal approach towards advancing the AI protectability discussion provides an excellent examination of the various legal conditions developed over time by the Court of Justice of the European Union (CJEU) for an intangible output to benefit from copyright protection, which they put to the test regarding AI-generated outputs. By doing so, they undertake a categorization that has hardly been done (at least in such a clear manner) in literature before on the standard for protectability of copyrighted works in the EU.

It might come as a surprise to many but, as the authors rightly recall, "the EU currently is mostly silent on questions of copyright subject matter and authorship. Despite extensive copyright harmonization, no single directive harmonizes the concept of the work of authorship in general terms". The conditions have been developed incrementally by the case law of the CJEU, and the authors scrutinize each condition to see if AI-generated outputs can qualify. As they underline, in order to be protected, AI-generated outputs need to be a "work" that is "original" in the sense that it reflects "creative freedom". But since an AI-generated output has never been analyzed so far by the CJEU, the authors also reflect on possible unwritten aspects of the law as might be encountered when dealing with AI-generated works.

For instance, the authors examine the general idea that a work, in order to be protected, and further in line with the international copyright framework, needs to be the result of a “human creative effort”. As they put it, “although EU copyright law nowhere expressly states that copyright requires a human creator, its ‘anthropocentric’ focus (on human authorship) is self-evident in many aspects of the law”. Indeed, the notion of originality is often defined as the expression of the personality of the creator, his creative choices, his “heart” or “soul” in the poetic sense of Kazuo Ishiguro that we have mentioned at the start of this review. This presupposes a human being, one capable of possessing a “heart” or “soul” in the first place. Thus, the authors conclude that according to EU conceptions of copyright “an output wholly generated by an AI system without human intellectual effort is excluded from copyright protection”. This conclusion also seems in line with the position of the US Copyright Office which, in a decision of February 14, 2022, refused to register an AI-generated work, finding that “human authorship is a prerequisite to copyright protection in the United States and that the Work therefore cannot be registered”.³

However, the authors’ analysis, unlike many other recent writings on the subject, does not stop there, as they underline that the necessity to have human intellectual effort “does not rule out creations by human authors made by the aid of machine”, provided that the other criteria of copyright protection are met such as e.g., the need to be original and to reflect creative choices.

At this point, they develop the main argument of the paper, which is that human creativity in AI-assisted production may occur *in different phases* of the creative process, which they propose to label “conception” (design and specifications), “execution” (producing draft version) and “redaction” (selecting, editing, refinement, finalization). They find that, “while AI systems play a dominant role in the execution phase, the role of human authors at the conception stage often remains essential. Moreover, in many instances, human beings will also oversee the redaction stage”, for example through editing the output generated before publication.

Accordingly, the authors conclude that when human-made creative choices “are expressed in the final AI-assisted output, the output will then qualify as a copyright-protected work”. The analogy can be made with other creative areas where the creators use machines as tools in their creative processes, such as computer program-operated digital art or even more classical creations such as photography where the photographer uses an automated camera, or the painter uses tools to disseminate the colors on the canvas without fully controlling the end-result. Such as the same idea with, for example, the recognition of ready-mades in contemporary art, what remains essential for a potential copyrightability is the creative choice of the human creator, not necessarily the execution of the artwork (as the object does not need to be made or produced by the artist, but only chosen).

Of course, from a more normative perspective, the findings of Hugenholtz and Quintais that many AI-assisted outputs can benefit from copyright protection does not solve the (pending) question of the social desirability of such conclusions and, ultimately, what could be the consequences on follow-on creativity if the gates of copyright will be opened too widely for these types of works. These questions of course are essential to solve for the future of creativity, and maybe more broadly for the future of our society. For now, the interesting analysis drawn by Hugenholtz and Quintais in their submission offers us a new perspective through which we can begin to view a complex societal issue more clearly, showing that if new technologies often raise groundbreaking questions, the answers from a strictly legal point of view are often not so new and that the copyright system potentially can adapt. But should it adapt, or should it rather be adapted? For sure, it opens fascinating paths for future research.

1. Kazuo Ishiguro, **Klara and the Sun** (2021).
2. Indeed, the article draws on a report done by the authors for the European Commission on the

challenges to the IP framework posed by the developments of AI: P.B. Hugenholtz et al, [*Trends and development in artificial intelligence: challenges to the intellectual property rights framework \(IViR and JIIP\). Final report for the European Commission.*](#)

3. U.S. Copyright Review Board, [Re: Second Request for Reconsideration for Refusal to Register A Recent Entrance to Paradise \(Correspondence ID 1-3ZPC6C3; SR # 1-7100387071\)](#) (Feb. 14, 2022).

Cite as: Christophe Geiger, *The Role of Human Creativity in the Copyrightability of Artificial Intelligence-Generated Works*, JOTWELL (April 29, 2022) (reviewing P. Bernt Hugenholtz & Joao Pedro Quintais, *Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?*, 52 **IIC - International Review of Intellectual Property and Competition Law** 1190 (2021)), <https://ip.jotwell.com/the-role-of-human-creativity-in-the-copyrightability-of-artificial-intelligence-generated-works/>.