



Rethinking Copyright: The Art of Ownership in AI Outputs

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Abstract. The emergence of artificial intelligence (AI) as a creator of music, literature and visual art has prompted a critical rethink of copyright. As AI-generated output increasingly mirrors human creativity, the central legal question becomes: who, if anyone, owns the rights to these creations? This article explores the evolving copyright debate, focusing on the challenge of defining authorship in the age of AI. It examines recent legal developments around the world, including key cases such as *Thaler, Zarya of the Dawn*, and *AI Machinations* in the United States, as well as landmark decisions from China and Europe. The article examines whether AI-generated content can be considered ‘original’ and qualify for copyright protection under existing legal frameworks. Through analysis of global jurisprudence, it compares various national approaches to AI authorship. Drawing on recent case law, the article proposes a balanced framework that both protects human authors and recognises the growing influence of AI in the creative process. The research aims to provide a way forward that encourages innovation while maintaining the clarity of copyright law in a rapidly evolving technological landscape.

Keywords: artificial intelligence, copyright, work, output, authorship, ownership.

JEL Classification: K11, K39, O34.

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INTRODUCTION

In an era of artificial intelligence ('AI'), where algorithms create music, generate images and even write books, the issue of intellectual property ('IP') rights has become increasingly complicated. As AI systems evolve to generate creations once solely attributed to human creativity, the legal and philosophical landscape surrounding the definition and protection of these AI outputs has sparked intense debate (Dai & Jin, 2023, Farmaki, 2023, Hugenholtz & Quintais, 2021, Ginsburg & Budiardjo, 2019).

This article examines the core of the copyright debate. While alternative legal frameworks, including trade secrets, may be applied in the case of confidential outputs of economic value, the essence of the controversy revolves around determining the right to regulate the form of expression of outputs. Only copyright and related rights confer such a right. However, related rights are diverse and not universally recognised worldwide, so their transnational application has little practical relevance (Goldstein & Hugenholtz, 2019, pp. 215-216). What may be protected by a related right in Country A, may not be protected by a related right in Country B. Meanwhile, the question of access to international protection needs to be answered today. Our research, therefore, aims to address these fundamental questions: what defines a work in the context of AI-generated outputs, and what are the criteria for distinguishing between the authorship of humans and that of artificial intelligence systems? Furthermore, a crucial issue is how to find the 'golden mean' between protecting works created by humans and those created by AI.

To achieve this, the article provides a synthesis of recent legal decisions and rulings worldwide that have shaped the protection of AI-generated outputs. From landmark cases in the United States, such as the US Copyright Office's ('USCO') decisions in *Thaler, Zarya of the Dawn*, *Théâtre D'opéra Spatial*, *Suryast* and the *AI Machinations* case, to pivotal rulings in China, including *Li v. Liu* and *Shenzhen Tencent v. Shanghai Yinxun*, as well as developments in Europe like a recent judgment in the Czech Republic, we navigate through the evolving legal area of AI copyright law.

A key focus of our work is finding a balance between fostering innovation and protecting the rights of creators. Considering existing jurisprudence and decisions by relevant IP authorities, we propose a framework for determining the status of AI creations as 'works' worthy of protection, irrespective of their mode of creation.

I. 'WORK' WITHIN THE MEANING OF COPYRIGHT LAW

In copyright law, the key concept is the 'work' that is the subject of protection. The definition of a work is not simple, because it stems from the diversity of human creativity that copyright seeks to protect. This section of the article outlines the meaning of this concept from the perspective of international copyright law, including European Union law, and the UK computer-generated works regime. International agreements and legal instruments play a fundamental role in this issue. Their main objective is to harmonise legal matters by adapting domestic legislation to the minimum protection standards. This, in turn, eliminates local regulatory discrepancies and ensures legal certainty in cross-border transactions. International conventions have been negotiated or revised in response to technological advancements and the emergence of new issues, such as internet communication. However, an important question arises: Is the law keeping pace with technology and are the necessary regulations, such as those providing protection for the creations of AI systems, being developed as quickly as technological progress?

The first and one of the most significant conventions, the Berne Convention for the Protection of Literary and Artistic Works, was concluded in 1886 and last revised in 1971 (amended in 1979).¹ Under the Berne Convention, each member state is required to provide a minimum level of protection for an author's economic and moral rights, including the economic right to reproduce, translate and adapt or publicly perform the work. Another important treaty was the TRIPS Agreement of 1994, which explicitly included computer programs and compilations of data

¹ Berne Convention for the Protection of Literary and Artistic Works (as amended on 28 September 1979) (Berne Convention).

(databases) in copyright and reaffirmed the idea-expression dichotomy.² It also introduced several essential changes, including the imposition of certain standards of protection on WTO member states, but did not explain the concept of ‘work’ in any way. The most recent copyright treaty, the WIPO Copyright Treaty, was adopted in 1996 as a special agreement under Article 20 of the Berne Convention.³ It was intended to respond to the challenges of the internet by introducing, among other things, the right of communication to the public and provisions on technological measures for the protection and management of rights. However, it did not clarify in any way what a work is.

Although the Berne Convention forms the foundation of the international copyright protection system, it is important to note that the convention itself does not explicitly define the concept of a ‘work.’ Instead, it introduces the general principle that ‘literary and artistic works’ are protected, without specifying detailed criteria that a work must meet in order to be covered by protection. The Berne Convention basically only mentions that any literary, scientific or artistic production is protected, regardless of the manner or form of its expression. It further provides examples of such products, including books, pamphlets and other writings, lectures, choreographic works, musical compositions or works of drawing, painting, architecture, sculpture, engraving and lithography.⁴ However, all of these are protected by virtue of their form of expression, not their content. The content of the work is never a condition of protection (Masouyé, 1978, p. 12), making it unclear what production or form of expression means. Only Article 2(5), which states that collections of works must constitute ‘intellectual creations,’ provides some guidance.⁵ This is also confirmed by the preparatory documents, which show that the addition of terms such as ‘personal creation,’ ‘intellectual creation’ or the replacement of the term ‘production’ by ‘creation’ was abandoned. It was clear to the drafters of the Berne Convention that the phrase ‘literary and artistic works’ meant in itself speaking about ‘personal creation or about an intellectual creation within the sphere of letters and the arts’ (Ricketson & Ginsburg, 2022, pp. 406-407).

The lack of a precise definition allows member countries significant flexibility in determining what constitutes a work within their own legal systems. As a result, the interpretation of this concept may vary slightly between countries, reflecting the cultural and legal traditions of each nation. In practice, however, despite the lack of a definition in the Berne Convention, both the EU and the US law commonly accept that, to be considered a work within the meaning of copyright law, it must meet two basic criteria: creativity and originality (Abrams, 1992, Shtefan, 2021, Rahmatian, 2013).

The most extensive protection criteria seem to be found in EU law. Copyright law has been harmonised in the EU at the level of directives, which must be transposed into the legal systems of the Member States. Directives are characterised by a sectoral, problem-based and exceptionally general approach (Barta & Markiewicz, 2021, p. 236). The sectoral nature of directives, where the focus is on regulating specific ‘segments’ of copyright protection, such as specific exclusive rights, comes to the forefront. Although directives do not have direct effect in the Member States of the EU, they provide binding interpretations of national law. Therefore, the case law of the Court of Justice of the European Union (CJEU) plays an important role in the harmonisation of copyright law within the EU. Through the CJEU's rulings, important aspects have been unified, including the criteria for qualifying a work as a copyrightable subject, particularly regarding the creative and original nature of the work (the author’s own intellectual creation) (Hutukka, 2023, p. 1052, Barta & Markiewicz, 2021, pp. 237-239).

One of the most important rulings of the CJEU in this area came in case C-5/08 *Infopaq International A/S v. Danske Dagblades Forening*.⁶ Infopaq was involved in processing third-party press materials by scanning the articles

² Agreement on Trade-Related Aspects of Intellectual Property Rights 1994 (TRIPS).

³ WIPO Copyright Treaty 1996 (WCT).

⁴ Berne Convention, Article 2(1)(1).

⁵ Berne Convention, Article 2(5).

⁶ ECLI:EU:C:2009:465.

and then processing them using Optical Character Recognition software (OCR). The Infopaq software was employed to extract excerpts from the articles, in accordance with the specifications set out by the client. These excerpts included the keyword that was requested, as well as a five-word sequence preceding and following that keyword.⁷ Incidentally, it is worth noting that the facts of the case are interesting in that they can serve to draw an analogy with the works used by artificial intelligence in the process of learning and generating its outputs.⁸ Infopaq's process for capturing data from publications involved several steps. First, the staff registered the relevant publications in a database, then the physical pages were scanned to create TIFF image files. These files were processed by an OCR server to convert the images into text data. The text was then searched for pre-defined keywords and, if a match was found, details of the match, including a snippet of the surrounding words, were stored. Finally, a cover sheet summarising the search results was printed and the text file deleted.⁹

Similar temporary copying occurs in AI model training, as recently analysed in the landmark ruling of the Hamburg Regional Court in the *LAION vs. Kneschke* case.¹⁰ This case is particularly significant, as it represents one of the first judicial interpretations of text and data mining exceptions in the context of AI training datasets. The court ruled that LAION, a German non-profit organisation managing the LAION-5B training dataset, was covered by the text and data mining (TDM) exception for scientific research purposes, introduced in Article 3 of the DSM Directive.¹¹ The Hamburg Court concentrated on the legality of the training process itself. In its decision, the court adopted a detailed approach to analysing scientific research, defining it as the 'methodical and systemic pursuit of new knowledge' (Goldstein et al., 2024). Significantly, the court held that preparatory activities, such as dataset creation, also qualify as scientific research, as long as they are aimed at subsequent knowledge acquisition.

The court rejected arguments about LAION's insufficient independence from commercial entities, emphasising that the key factor is the non-commercial nature of the research activity itself, rather than organisational structure or funding (Keller, 2024). This approach aligns with the broader trend in EU copyright law, which focuses on the purpose and nature of the activity, rather than the status of the entity performing it. The fact that commercial entities later use the dataset for AI model training does not affect the assessment of the non-commercial nature of LAION's research. Drawing parallels with the Infopaq decision's analysis of temporary reproduction, the court also considered, but ultimately rejected, the application of the temporary reproduction exception, finding that LAION's process of downloading and analysing images meets neither the criteria for transient nor incidental reproduction under Article 5(1) of the InfoSoc Directive in accordance with CJEU case law (Goldstein et al., 2024). This distinction is crucial because it establishes that the collection of AI training data in the EU requires specific exceptions, such as TDM, rather than relying on general copyright exceptions.

However, this analysis is concerned with the outputs of AI, and the above is more relevant to understanding the training phase of the process of developing AI model. Returning to the core, the CJEU has considered the concept of a protected work extensively and has given it an autonomous meaning.¹² Firstly, the CJEU held that a work consisting of eleven words can be covered by copyright protection, provided that it exhibits the author's own intellectual creation. The CJEU derives this characteristic from Article 2 (the right to reproduce the work) of Directive 2001/29/EC¹³ and its interpretation in light of the Berne Convention. The CJEU states that literary works

⁷ Case C-5/08, paras 13–16.

⁸ See also Case C-302/10 Infopaq International ECLI:EU:C:2012:16.

⁹ Case C-5/08, paras 17–21.

¹⁰ See LG Hamburg, Urteil vom 27.09.2024 - 310 O 227/23.

¹¹ Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC [2019] OJ L130/92.

¹² Case C-5/08, para. 27.

¹³ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10.

consist of words, which are protected only by ‘the choice, sequence and combination of those words that the author may express his creativity in an original manner and achieve a result which is an intellectual creation.’¹⁴ The CJEU’s ruling aligns more closely with the continental legal tradition and has therefore been criticised by British academics (Guadamuz, 2013, p. 6).

The CJEU, however, did not depart from the established case law.¹⁵ On the contrary, it consolidated and even extended it, as shown by the CJEU’s decision in case C-145/10, *Eva-Maria Painer v. Standard VerlagsGmbH and others*.¹⁶ The CJEU stated that ‘a portrait photograph can, under Article 6 of Directive 93/98, be protected by copyright if ... such photograph is an intellectual creation of the author reflecting his personality and expressing his free and creative choices in the production of that photograph.’¹⁷ In photography, this includes the author’s choice of framing, angle of view, or even the use of computer software to create the final image (Rahmatian, 2013, p. 6).

In qualifying an object as a ‘work’, EU law relies in particular on the Berne Convention’s requirement that the author must be a natural person (Quintais, 2021, p. 1195). It is currently difficult to find possibilities to qualify as a ‘work’ anything that comes from an animal or non-human entity’s interpretation of the world. The issue of attributing authorship to an animal, specifically a selfie taken by a macaque monkey, was decided by the United States Court of Appeals for the Ninth Circuit in California, which held that an animal cannot be recognised as an author within the meaning of copyright law (Guadamuz, 2016).¹⁸ While this decision is not binding in the EU, given the similar underlying principles regarding authorship in both jurisdictions, it can be assumed that, if a similar issue were to be adjudicated by the CJEU, the decision would be identical to that of the American court.

In the UK, the Copyright, Designs and Patents Act (CDPA) sets out the scope of protection, which includes ‘(a) original literary, dramatic, musical, or artistic works, (b) sound recordings, films or broadcasts, and (c) the typographical arrangement of published editions.’¹⁹ From the perspective of this article, however, the most important issue concerns computer-generated works that do not have a human author.²⁰ While, in the case of the ‘traditional’ works listed in Section 1 of the CDPA, ownership belongs to the author(s),²¹ the situation is different for computer-generated works. The author of any type of computer-generated work is the person who undertook ‘arrangements necessary for the creation of the work.’²² This approach departs from the ‘classic’ criteria of a work in ‘assimilated EU case law.’²³ Some authors argue that this is not a real problem, because the provisions on computer-generated works constitute a kind of statutory exception to originality (Guadamuz, 2021, pp. 157–160). However, doubts remain regarding to whom the authorship of the work can be attributed. It should be noted that the range of who could be considered an author could be wide – from the creator of the AI system itself, through its trainer or user, to even mixed concepts allowing for co-authorship of the work. The definition of the author of a computer-generated work is so vague that any of the above constructions is possible. The dominant view is to grant copyright protection for computer-generated works to the user of the AI (Glasser, 2021, p. 6, Söğüt, 2024, pp.

¹⁴ Case C-5/08, para. 45.

¹⁵ See, for example, Case C-833/18 *Brompton Bicycle* ECLI:EU:C:2020:461; Case C-683/17 *Cofemel* ECLI:EU:C:2019:721; Case C-469/17 *Funke Medien NRW* ECLI:EU:C:2019:623; Joined Cases C-403/08 and C-429/08 *Football Association Premier League Ltd and others* ECLI:EU:C:2011:631; Case C-393/09 *Bezpečnostní softwarová asociace – Svaz softwarové ochrany v. Ministry of Culture* ECLI:EU:C:2010:816.

¹⁶ ECLI:EU:C:2011:798

¹⁷ *Ibidem*, para. 94.

¹⁸ *Naruto v. Slater*, 888 F.3d 418, 426 (9th Cir. 2018).

¹⁹ Copyright, Designs and Patents Act 1988, s 1(1).

²⁰ ‘Computer-generated’, in relation to a work, means that the work is generated by computer in circumstances such that there is no human author of the work’ CDPA, s 178.

²¹ CDPA, s 11(1).

²² CDPA, s 9(3).

²³ European Union (Withdrawal) Act 2018, s 6(3), (7).

47–49). Nonetheless, this regulation is criticised as being inconsistent with the harmonised copyright law adopted in the EU and the case law of the CJEU (Hugenholtz & Quintais, 2021). Thus, computer-generated works could, at most, be a related right to protect the results of machines, including artificial intelligence (Goold, 2021, p. 129).

II. UNDERSTANDING AI-GENERATED OUTPUTS

The concept of an ‘AI’ underpins our examination of AI-generated outputs. At the heart of any AI is what is known as the ‘model’, i.e. the algorithm responsible for interpreting the input data and generating a result from it. Models used to generate content (called generative models) typically try to capture the joint probability distribution $P(X, Y)$ (Wyczik, 2023). A generative model tries to capture the distribution of the data itself and determines the probability of an example occurring. For example, models that predict the next word in a sequence (such as GPT) are usually generative models because they can assign a probability to a sequence of words and then draw a word to use based on that probability (3Blue1Brown, 2024).

Legal definitions are not usually helpful in this analysis. For example, the term ‘AI system’, as defined by the AI Act, captures the essence of AI as a machine-based system characterised by its operational autonomy, adaptability and capacity for inference.²⁴ More importantly, it is crucial to recognise that AI systems are not static repositories of encoded instructions, but dynamically interact with their input data to infer and construct outputs. Such outputs may range from predictions and content to recommendations and decisions, each potentially having a significant impact in both tangible and intangible realms. In the context of IP, they lead to the question of whether such creations are ‘works’ and, if so, who holds the authorship (for patents, see Hattenbach & Glucoft, 2015).

Generative AI systems are pushing the copyright paradigm towards a glass ceiling. These sophisticated algorithms are designed to analyse data and synthesise new content, which can emulate creativity. From composing music to drafting text, generative AI applications can produce output that resonates with human cultural expressions. This phenomenon requires a sophisticated legal comprehension, which differentiates between the mechanical reproduction of existing patterns and the emergence of novel outputs that could, arguably, be ascribed with artistic or literary value. As we progress further into the age of AI, the intersection of generative systems and IP law becomes fertile ground for academic and legislative scrutiny, balancing the need to incentivise innovation with the imperative to protect human creativity (Hristov, 2017).

Central to understanding AI-generated outputs is what defines a ‘work’ in this context. Unlike traditional creative processes, where human intention and effort are primary, AI-generated outputs blur the lines between human and machine contributions. While human input may guide AI systems’ training and parameters, the outputs often emerge autonomously. To understand the unique nature of AI-generated output, it is essential to look at the individual technologies that enable its existence. AI systems, particularly those employing deep learning algorithms, analyse vast datasets to recognise patterns and generate outputs. These systems are trained on diverse sources of information, absorbing styles, genres and forms from the data they process. Consequently, AI-generated outputs exhibit a fusion of influences, blending elements from various sources into new and sometimes surprising compositions (Cuntz et al., 2024).

A prime example of this complexity can be found in the Stable Diffusion system, which requires at least three key components to function fully: the U-Net, a neural network responsible for refining the image step by step by predicting and reducing noise; the Variational Autoencoder (VAE), which converts images into latent space and back, helping to encode and decode image data; and the text encoder (here CLIP), which translates input text into

²⁴ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (Text with EEA relevance) [2024] OJ L2024/1689, Article 3(1).

tokens that guide image generation. Stable Diffusion typically generates images by starting with random noise, which is transformed into a latent space representation through tokenisation. The process of generating an image, called ‘diffusion’, is usually guided by a textual description provided by the user. At each step, the model uses its learned understanding of the relationship between words and visual elements to progressively remove noise and add detail to the image. The process continues through several stages until the generated image matches the input description as closely as possible (typically determined by a number of ‘steps’ selected by the user, or until the stop button is clicked). Stable Diffusion’s architecture can also be extended with additional models such as ControlNet, which allows users to have more control over composition, style or reference image inputs during the diffusion process (Andrew, 2024).

Moreover, the concept of ‘originality’ in AI outputs raises intriguing questions. Can an AI-generated output be considered truly original if it synthesises ideas derived from human works? Does the absence of human intention in the creation process diminish its status as a product of art or literature? These questions underscore the need for a nuanced approach.

III. LEGAL STATUS: RECENT DECISIONS AND RULINGS

It has become evident that traditional frameworks for defining ‘works’ may not fully capture the complexities of AI-generated outputs. Concepts such as ‘authorship’ and ‘ownership’ require fundamental re-examination considering AI’s capabilities. However, these challenges also present opportunities for innovation and new forms of expression. In this section, we will explore the legal status of AI-generated outputs, examining key decisions and rulings that shape the protection of these products. The objective is to identify the most significant criteria that define a ‘work’ generated using AI. By gaining a deeper understanding of AI’s creative potential and the challenges it presents to existing IP frameworks, we aim to pave the way for a more informed discussion on the art of ownership in AI outputs.

3.1. The United States

3.1.1. Thaler v. Perlmutter

In the *Thaler* case, both the USCO and the court held that the requirement of human authorship is crucial to the concept of a work.²⁵ In *Sarony*, the Supreme Court held that a photograph was subject to copyright, on the grounds that it was a human being, rather than a camera, who conceived of and composed the image, and then used the camera to capture the image.²⁶ Similarly, in *Mazer v. Stein*, the Supreme Court determined that a prerequisite for a creation to be considered a work is that it ‘must be original, that is, a tangible expression of the author’s ideas.’²⁷ Additionally, the *Goldstein* judgment posits the author as ‘he to whom anything owes its origin.’²⁸ Consequently, creations that originate from sources other than human beings are not afforded the same level of protection. For a work to be protected by copyright, it must qualify as an ‘original work of authorship,’ which excludes works created by non-humans. The argument that not all works meet this standard raises concerns about ‘ownership’, but as the

²⁵ Copyright Review Board, ‘Second Request for Reconsideration for Refusal to Register A Recent Entrance to Paradise (Correspondence ID 1-3ZPC6C3; SR # 1-7100387071)’ (14 February 2022); *Thaler v. Perlmutter*, Civil Action 22-1564 (BAH) (D.D.C. Aug. 18, 2023).

²⁶ See *Lithographic Co. v. Sarony*, 111 U.S. 53, 60 (1884).

²⁷ *Mazer v. Stein*, 347 U.S. 201, 214 (1954).

²⁸ *Goldstein v. California*, 412 U.S. 546, 561 (1973) (quoting *Sarony* at 58).

court noted, this is not troubling because it is the copyright law enacted by Congress and the Constitution that sets the limits.²⁹

3.1.2. Zarya of the Dawn

The *Zarya* decision shows that AI outputs can constitute a work only after humans transform them in creative ways.³⁰ This principle is well illustrated in the *Urantia Foundation* case, where the Ninth Circuit determined that a publication containing content attributed to non-human spiritual entities can be eligible for copyright protection only when there is evidence of ‘human selection and arrangement of the revelations.’³¹ In *Urantia*, the court asserted that ‘some element of human creativity must have occurred in order for the Book to be copyrightable,’ because ‘it is not creations of divine beings that the copyright laws were intended to protect.’³² Consequently, a comic strip comprising AI-generated images and human-generated text may be protected with respect to the creative juxtaposition of those elements. However, this protection does not extend to the AI-generated images themselves. This approach is further supported by the high-profile registration of the work ‘AI Machinations Tangled Webs and Typed Words’, which provides a ‘thin copyright’ through a claim based on the ‘selection, coordination and arrangement of text generated by artificial intelligence.’³³

3.1.3. Suryast

The *Suryast* case provides an instructive example of the potential issues that can arise when AI is used as a modifier of an earlier work.³⁴ In this case, an AI model was used to superimpose Van Gogh’s *Starry Night* on a photograph of a human. USCO reiterated its previous position, stating that there is no copyrightable work if the model ‘predict[s] stylizations for paintings and textures never previously observed.’³⁵ The predictive function depends on ‘the proximity of the [style image] to styles trained on by the model.’³⁶ Furthermore, the selection of a single number for the style represents a type of de minimis authorship that is not protected by copyright. USCO stated that the work does not possess sufficient human activity, as significant elements were generated by AI, not by Ankit Sahni. Although Sahni provided the AI with human inputs (an original photograph and style settings), these contributions did not amount to the creativity required for copyright protection. This decision by USCO confirms the principle that copyright protects works created by humans. This approach is consistent with the principles set forth in the Compendium of U.S. Copyright Office Practices (USCO, 2021, para. 909.3), which provides the example of digital edits that removed noise and ‘improved the color, tone, and temper’ of a photograph, as not being eligible for copyright protection.³⁷

²⁹ See Copyright Review Board, ‘Second Request for Reconsideration for Refusal to Register Théâtre D’opéra Spatial (SR # 1-11743923581; Correspondence ID: 1-5T5320R)’ (5 September 2023) pp. 7-8.

³⁰ Copyright Review Board, ‘Zarya of the Dawn (Registration # VAu001480196)’ (21 February 2023).

³¹ *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997).

³² *Ibidem*.

³³ USCO’s registration record TX0009377452. <https://publicrecords.copyright.gov/detailed-record/36317712>

³⁴ Copyright Review Board, ‘Second Request for Reconsideration for Refusal to Register SURYAST (SR # 1-11016599571; Correspondence ID: 1-5PR2XKJ)’ (11 December 2023).

³⁵ *Ibidem*, 8.

³⁶ *Ibidem*.

³⁷ See *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 742 (9th Cir. 1971) (holding that copyright in jewellery with bees was not infringed by other jewellery with bees because ‘[a] jeweled bee pin ... is an ‘idea’ that defendants were free to copy’).

3.2. The People's Republic of China:

3.2.1. *Li v. Liu*

The case of *Li v. Liu* was regarded as a significant legal precedent due to its detailed examination of the technical aspects of image creation using Stable Diffusion models.³⁸ The claimant presented a detailed workflow employed in the production of the disputed image before the court. The claimant asserted that his creative contribution was due to, among other things, selecting the appropriate model, choosing the most suitable prompts (using a general scheme: *art type + subject + environment + composition + style*) and setting the optimal system parameters. The court determined that these actions were sufficient to create a copyrightable work.³⁹ However, the case is highly controversial, as an analysis by Jakub Wyczik suggests that the user of the system did not necessarily fully influence the outcome (Wyczik, 2023). The facts demonstrate a contrast to the desired result. For example, the author used a special type of VAE model that imposes an anime style on the image that is not visible in the output. In addition, even the technical specifications of the models used demonstrate that the author's influence remained comparable to that analysed in the USCO cases mentioned above (Wyczik, 2023).

3.2.2. *Shenzhen Tencent v. Yinxun*

The court in the *Dreamwriter* case found that an article written by AI was copyrightable.⁴⁰ The court found that the only difference between the AI-generated article and a typical article was a time gap between the acts of selection and arrangement performed by the creative group and the act of writing executed by the software. The lack of this synchronisation was a function of the technical means used by the claimant. However, the test for originality focused on whether the selection and arrangement were an act of intellectual activity and whether that activity was directly related to the specific expression of the work. The court ruled that the operation of the algorithm merely gave technical effect to the group's creative work. The group of creators entered data, set trigger conditions and then selected and arranged templates and resources. These activities resulted in the creation of the work, according to the court.⁴¹

3.2.3. *Feilin v. Baidu*

On the other hand, in what is believed to be the first case involving AI-generated output, the Beijing Internet Court ruled that such content could not be protected by copyright.⁴² The output in question was a report containing drawings and text. The drawings and text were generated using AI and then manually modified by the claimant's staff. The process of creating such outputs was recreated in court. Based on the entered phrases, entities, dates and other data, the software generated a report describing the searched information, along with visualisations of the source data. While the results were not identical to those in the final report, the structure, types of figures and some content were similar or identical in both reports. However, the court determined that, according to Chinese law, elements generated by AI cannot be protected because their creator is not human.⁴³ This ruling was in line with the general line of jurisprudence in other countries, though it seems that Chinese utilitarianism ultimately prevailed over legal dogma.

³⁸ Beijing Internet Court Civil Judgment (2023) Jing 0491 Min Chu 11279.

³⁹ *Ibidem*.

⁴⁰ Shenzhen Nanshan District People's Court (2019) Yue 0305 Min Chu 14010.

⁴¹ *Ibidem*.

⁴² Beijing Internet Court Civil Judgment (2018) Jing 0491 Min Chu 239.

⁴³ *Ibidem*.

3.3. The European Union:

3.3.1. S. Š. V. Taubel Legal (the Czech Republic)

At the heart of this case is an image of two hands signing a business contract, which was created by S. Š. and was published by Taubel Legal on their website without S. Š.'s consent.⁴⁴ The claimant sought the removal of the image and a prohibition against further infringements. The court established that the image had indeed been created by AI and that the claimant had failed to prove that the conceptual input given to the AI constituted creative authorship.⁴⁵ Under Czech copyright law, authorship is reserved for works that are the unique result of human creative activity, expressed in any perceivable form.⁴⁶ The court concluded that an AI-generated image does not meet the requirements for copyright protection, as it lacks both originality and personal human creation. Additionally, the mere instruction given to the AI does not fulfil the criteria for a copyrightable work, being an idea rather than a tangible creative expression (Kicel, 2024, pp. 34–35). As a result, all the claims by the claimant were rejected, with the court emphasising that AI-generated products, without substantial human contribution, do not qualify for copyright under current legal standards. This decision underscores the ongoing challenges in IP law posed by the advent of AI in creative processes.

A synthesis of the above considerations and other pertinent decisions reveals that the primary issue is the concept of originality. The originality criterion is not an absolute condition for protection under international treaties, as evidenced by Claude Masouyé in the Guide to the Berne Convention (Masouyé, 1978, p. 18). However, it has now become a common condition for protection, replacing the sweat of the brow doctrine and other similar criteria. Therefore, unless one accepts a utilitarian legal fiction, as in China, it is more likely that in most cases the human contribution to the creation of AI outputs is insufficient to meet the criteria for authorship (at least under the Berne Convention). Sam Ricketson and Jane Ginsburg compare this in the offline world to simply commissioning a particular painting. Pope Julius II may have commissioned Michelangelo to paint the frescoes in the Sistine Chapel, but from the perspective of the Berne Convention, Michelangelo is still the author of the paintings (Ricketson & Ginsburg, 2022, p. 375). Consequently, it can be argued that academics and jurists have collectively contributed to this outcome by establishing vague criteria for protection that have **not** withstood the test of time.

IV. FUTURE DIRECTIONS AND CONCLUSION

Currently, for a creation to be qualified as a work in the sense of copyright law, it must be creative, meaning that the work, even to a minimal extent, differs from other results of the same activity. It must therefore be somewhat original and individual. The concept of originality serves to delineate the boundaries of copyright law (Litman, 1990). Individualism refers to the unique personal imprint of the creator embedded in the work, making it statistically unique. Nevertheless, this does not imply that the work must be distinct from its predecessors. In fact, two artisans carving an elephant in wood may create two original works, even if the two elephants are indistinguishable and there is no novelty (Masouyé, 1978, p. 18).

However, in the era of AI, where algorithms analyse vast datasets and generate outputs based on learned patterns, the notion of an author's 'own' creativity and individuality becomes nuanced. While AI systems may produce outputs that are novel and unexpected, the absence of human intervention in such results raises questions

⁴⁴ S. Š. v. Taubel Legal (2023) 10 C 13/2023.

⁴⁵ *Ibidem*, para. 11, p. 4

⁴⁶ *Ibidem*, para. 12, p. 4

about the source of this creativity. AI systems operate autonomously, generating outputs based on their programmed algorithms, training data and user's inputs. Determining the balance between human input and external (e.g. automated) processes is essential in assessing authorship in the context of AI-generated products.

The question, therefore, becomes one of the sources of the form of expression. If the source remains external to the human, for example, when specific colours, shapes and textures originate in nature, then they are not protected.⁴⁷ Even regulations on computer-generated works will not help, because they cannot be works if they do not originate from a human being (Aronsson-Storrier & Fairhurst, 2024). However, if humans utilise these elements in an original manner to express their ideas, they can create a work constituting the creative selection and arrangement of even non-human-made elements (known as a collage). But even then, if we examine the creative output of humanity, it can be argued that nothing, since we tamed fire, is truly new.⁴⁸ Rather, it is a kind of collage of previous works and underlying ideas.

Since nothing is new, it is even more difficult to say that something is original. Therefore, as Jakub Wyczik has suggested, one idea might be a reform of copyright and related rights that would introduce a kind of right to any representation of information, i.e. data (Wyczik, 2024, p. 369). It is clear that it will soon be increasingly difficult to objectively prove that the criterion of originality is met, since technology is now an integral part of almost every creative process. Thus, it seems reasonable to move away from subjective criteria in favour of a legal framework that is detached from the analysis of human contribution or originality. Rather than focusing on the result, it would be more productive to direct attention to the effort and resources invested in the production of that result, though without any requirement for 'substantial investment' or other meaningless criteria.

A reviewer of this article suggested the need for a more comprehensive clarification of this proposal, especially given the many arguments against the protection of AI-generated creations. However, it is impossible to do this in a short academic article, the understanding of which first requires clarification of the numerous inconsistencies in the interpretation of copyright and AI. However, as the author of this proposal, I feel compelled to provide at least a basic outline below. Of course, this is only a small part of a research article, so this is neither the time nor the place to act like a surgeon and instruct exactly where to cut.

Arguments against new rights are often raised in the literature, expressing fears that there will be no creativity left for humans, that we will produce vast amounts of new works (as if we are not already producing them today), or that incentivising AI-based creations will discourage human authors (Geiger, 2024, pp. 1142-1145). However, these arguments demonstrate, at best, a misunderstanding of the nature of copyright. Parallel creation is already possible in copyright law, as even the authors of the Berne Convention knew, as the above example of the independent protection of two indistinguishable sculptures of elephants shows (Masouyé, 1978, p. 18). Meanwhile, the proposed solution is not about solving the problem of AI outputs, but much more broadly about all data, whether created by humans or collected or generated by machines, and thus solving the problem of many overlapping intellectual property rights.

The essence of copyright infringement litigation is to establish the source of a substantial similarity between the creations being compared, and it is this source that should be determinative of a finding of infringement. It should be decisive to show where an element was taken from, rather than the mere fact of similarity, which can only support the court's conclusion that it was taken from the claimant's creation. Such a new data right should operate along these lines, so that there is absolutely no question of any negative impact on the remaining creative space. Any representation of information, like any work today, should be protected by an independent data IP right, as long as it has been created independently, like the elephant carvings mentioned above. The courts should have known long ago that mere similarity is not enough (Lemley, 2024, p. 44).

⁴⁷ *Kelley v. Chicago Park Dist*, 635 F.3d 290, 304 (7th Cir. 2011).

⁴⁸ See *White v. Samsung Electronics America, Inc.*, 989 F.2d 1512, 1513 (9th Cir. 1993).

Contrary to what some people believe, the purpose of copyright is not to encourage creation. All intellectual property, since the adoption of the TRIPS Agreement, must contribute to the promotion of technological innovation in a way that is conducive to social and economic welfare, ensuring a balance between the rights and obligations of producers and users.⁴⁹ Furthermore, intellectual property, like any other form of property, is never about absolutism or essentialism (Balganesh, 2009, p. 1134). Property rights are primarily designed to protect against unfair competition and to ensure the ability to benefit from the results of one's work. 'A man should be secured in the fruits of his ingenuity and labor ... And it seems difficult to draw a distinction between the fruits of mental and physical labor.'⁵⁰

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⁴⁹ TRIPS, Article 7.

⁵⁰ *Brooks v. Bicknell*, 4 F. Cas. 247, 251 (C.C.D. Ohio 1843).

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