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Answers Belgium
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The answers to the following questions reflect an ongoing thought process on the part of the national rapporteur and should be construed as such. Over time, these answers may benefit from new insights and further in-depth research. To a certain extent, these answers reuse parts of prior publications by the author, most notably Jozefien Vanherpe, 'AI and IP: Great Expectations' in Jan De Bruyne and Cédric Vanleenhove (eds) *Artificial Intelligence and the Law* (2nd ed, Intersentia 2023) 233–267.

Artificial intelligence, copyright and related rights
The contours of the relationship

1. Understanding

1.1 – Has your national or regional law adopted a legal definition of AI?

No. The prior conceptualisation of "AI" by the European Commission in Communication COM(2018) 237 final, which emphasises the central role of an AI system's *autonomy*, may serve as a tool for understanding this technology as well as its legal implications.[1]

1.2 – Can you provide some examples of current uses of AI and its productions in the cultural sector of your country?

At the time of writing, the use of AI in the Belgian cultural sector is clearly on the rise.
Recent examples include the following[2]:

- Since 2020, the Belgian project "VKC Enriched" has been focusing on the automated enrichment of digital collections in the context of visual arts museums.[3]

[1] Commission, 'Artificial Intelligence for Europe' (Communication) COM(2018) 237 final. See extensively Maarten Herbosch, *Intelligent contracteren. Het precontractueel gebruik van systemen op basis van artificiële intelligentie* (PhD thesis KU Leuven 2023) 13-19.
[2] See for more examples <https://bit.ly/44s8XYp>.
[3] See <https://bit.ly/3NEO32f>.

- Since 2021, KMSKB and IDLab UGent have been working together on a pilot project that focuses on the automatic detection and annotation of saints in paintings.[4]
- Belgian artist Frederik De Wilde uses AI technology in his artwork. For "HALzheimer", he uses machine learning algorithms to create projected and synthetic images, whereafter the same network gradually forgets what the image looks like.[5] For "The Face of Your Voice", he uses short voice recordings to reconstruct a person's face.[6]
- In 2021, an exhibition in BOZAR in Brussels entitled "*Secrets. Artificiële Intelligentie en Luc Tuymans*" questioned the relationship between AI and art.[7]
- The exhibition "ARTificieel", which opened in April 2023 in Herentals, presents AI artwork.[8] The artist behind the exhibition is Carlo Van Tichelen.
- Similarly, the second edition of the art festival "NAFT" in Sint-Niklaas brings together twenty local and international artists who showcase their art, consisting of illustrations, videos and installations that deploy AI-driven technology.[9]
- AI technology was used to transform the sketches of the famous Belgian artist Victor Horta into finalised artwork. The result was showcased in the Sint-Gorikshallen in Brussels in April and May 2023.[10]
- Tech company "Metaphysic", with Belgian CEO Chris Umé, offers technology that allows the creation of generative AI video that looks rather real.[11] Prior projects include a deepfake of Tom Cruise and a successful participation in the US TV show America's Got Talent. In January 2023, it was made known that Metaphysic's AI-driven tool would be used to de-age the cast members of Robert Zemeckis' upcoming film "Here".[12]
- At the time of writing, also in the Belgian cultural sector, increasing use is being made of platforms that deploy generative AI, such as Dall-E 2[13], Midjourney[14] and ChatGPT[15].

1.3 – (Optional) What are the issues that have been exposed in your country on this subject: stakes, difficulties, orientations, proposals...?

At the time of writing, the public debate on these issues is still evolving. No issues that are specific to the Belgian territory have been uncovered so far.

[4] See <https://bit.ly/3HDWmY9>.
[5] See <https://bit.ly/4255VI2>.
[6] See <https://bit.ly/3HGbJj3>.
[7] See <https://bit.ly/42H9WT1>.
[8] See <https://bit.ly/44qWQLc>.
[9] See <https://bit.ly/3LVCPVG>.
[10] See <https://bit.ly/3NEUi6g>.
[11] See <https://www.metaphysic.ai>.
[12] See <https://bit.ly/414KjtZ>.
[13] See <https://bit.ly/3oYf06D>.
[14] See <https://midjourney.com/home>.
[15] See <https://chat.openai.com>.

1.4 – Are there any initiatives in your country or region aimed at regulating the use of AI in the cultural sectors?

No specific initiatives have been uncovered so far. More general policy initiatives are available on the website of the OECD.[16] Reference may be made to "Digital Wallonia 4 AI"[17], as well as the Flemish action plan "AI voor Vlaanderen"[18]. In the context of the latter, the establishment of the "Kenniscentrum Data & Maatschappij" is noted.[19] Among many other things, this knowledge centre conducts in-depth research on intellectual property (IP) law issues pertaining to AI technology, albeit not specific to the cultural sector(s). In addition, "AI4Belgium" was established: a consortium that seeks to foster the responsible development and uptake of AI technology.[20] However, the appropriate regulation of the use of AI in the cultural sector(s) and the IP issues that this entails do not appear to be a central objective of AI4Belgium.[21]

2. Understanding the upstream

2.1 – Are the AI system or its components likely to be protected by intellectual property rights (copyright and/or industrial property – patents, trade secrets…) ?

Yes, companies may protect innovation relating to an AI system or its components through patent law and/or copyright law. In addition, **trade secret** protection may offer an alternative (or, in some cases, complementary) avenue for protection. Below, additional observations are offered in relation to both patent law and copyright law.

There are certain hurdles to the **patentability** of AI-related innovation:

- First, the list of excluded subject matter under the European Patent Convention (EPC) as well as under the Belgian Code on Economic Law (BCEL) includes ideas that are deemed too abstract, such as computer programs as such, methods for performing mental acts and mathematical methods.[22] Pure abstract algorithms, which are essential to AI systems, qualify as a mathematical method and are thus ineligible for patent protection *as such*.[23] However, this does not exclude patent protection for computer-implemented inventions such as technology related to AI algorithms, especially given the lenient interpretation of the 'as such' proviso in practice. If the invention has a technical effect beyond its implementation on a computer—a connection to a material object in the 'real' world—patentability may yet arise.[24] This will for example be the case for a neural network used 'in

[16] See <https://oecd.ai/en/dashboards/countries/Belgium>.
[17] See <https://digitalwallonia4.ai>.
[18] See <https://bit.ly/3VF0htF> and <https://bit.ly/419QcGe>.
[19] See <https://data-en-maatschappij.ai>.
[20] See <https://ai4belgium.be>.
[21] The 2023 policy plan of AI4Belgium is available in Dutch at <https://bit.ly/3LvrgTT> and in French at <https://bit.ly/3NE7lVj>.
[22] See Art 5.2 EPC and Art XI.3 BCEL.
[23] EPO, 'Guidelines for Examination, Part G, Chapter II, 3.3.1', 2018, <https://bit.ly/3BQb8W9>.
[24] EBA Decision 10 March 2021 re patent application 03793825.5, G 0001/19, <https://bit.ly/31o8x9g>.

a heart monitoring apparatus for the purpose of identifying irregular heartbeats', as well as—in certain circumstances—methods for training AI systems.[25]

- Further, a patentable invention must satisfy a number of substantive conditions: it must be novel and inventive as well as industrially applicable.[26] Both the novelty and industrial applicability requirements do not appear to pose any challenges specific to AI-related innovation. However, the inventiveness analysis only takes account of the patent claim features that contribute to the 'technical character' of the invention, to the solution of a technical problem. Conversely, non-technical features (such as the abstract algorithm) are removed from the equation.[27]
- The 'patent bargain' between patentee and issuing government may lead to another obstacle. This implies that a prospective patentee must disclose their invention in a way that is sufficiently clear and complete for it to be carried out by a person skilled in the art, in return for patent protection.[28] This requirement of disclosure may be at odds with the apparent 'black box' nature of many forms of AI technology, particularly in a deep learning context. This refers to a situation where we know which data were provided to the system (input A) and which result is reached (output B), but where it is unclear what exactly makes the AI system go from A to B.[29] Arguably, such AI-related inventions cannot be explained in a sufficiently clear and complete manner, excluding the procurement of a patent therefor. However, experts will generally be able to disclose the AI system's structure, the applicable parameters and the basic principles to which it adheres.[30] It is plausible that patent offices will deem this to be sufficient. The risk of being excluded from patent protection constitutes an additional incentive to invest in so-called 'explainable' and transparent AI.[31] Simultaneously, an overly strict assessment of the requirement of disclosure may push innovators towards trade secrets as an alternative way to protect AI-related innovation.[32]

It is often difficult to predict the outcome of the patenting process of AI-related innovation. This uncertainty does not seem to deter prospective patentees, as evidenced by the rising number of AI-related patent applications.[33] Since the 1950s, over 300.000 AI-related patent applications have been filed worldwide, with a sharp increase in the past decade: in 2019, it was noted that more than half of these applications had been published since 2013.[34]

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[25] EPO, 'Guidelines for Examination, Part G, Chapter II, 3.3.1', 2018, <https://bit.ly/3BQb8W9>.
[26] Arts 52 *juncto* 54–57 EPC and Arts XI.3 *juncto* XI.6-6 BCEL.
[27] EBA Decision 10 March 2021 re patent application 03793825.5, G 0001/19, in particular paras 106-138; Timo Minssen and Mateo Aboy, 'The Patentability of Computer-Implemented Simulations and Implications for Computer-Implemented Inventions (CIIs)' (2021) 16 JIPLP, 633–35.
[28] Art 83 EPC and Art XI.18 BCEL.
[29] Mizuki Hashiguchi, 'The Global Artificial Intelligence Revolution Challenges Patent Eligibility Laws' (2017) 13 J Bus & Tech L, 29–30.
[30] Brian Higgins, 'The Role of Explainable Artificial Intelligence in Patent Law' (2019) 31 Intell Prop & Tech LJ 3, 7.
[31] See eg Wojciech Samek and others (eds), *Explainable AI: Interpreting, Explaining and Visualizing Deep Learning*, vol 11700 (Lecture Notes in Computer Science, Springer International Publishing 2019).
[32] Cf. Katarina Foss-Solbrekk, 'Three Routes to Protecting AI Systems and Their Algorithms under IP Law: The Good, the Bad and the Ugly' (2021) 16 JIPLP 247, 256–58.
[33] WIPO Technology Trends 2019 – Artificial Intelligence, 2019, 14 <https://bit.ly/3wlRQH5>.
[34] WIPO Technology Trends 2019, 13; 'WIPO Technology Trends 2021, Assistive Technology', 2022 <https://bit.ly/3EO8T7z>.

AI-related innovation may also enjoy **copyright** protection. The validity conditions for copyright are the requirement of concrete form and the requirement of originality. First, copyright protection is not available to mere abstract ideas and principles; these must be expressed in a concrete way.[35] Second, the condition of originality implies that the work must be an intellectual creation of the author(s), reflecting their personality and expressing free and creative choices.[36] Applied to AI-related works, the functional algorithm in its purest sense does not satisfy the first condition and is therefore not susceptible to copyright protection.[37] However, the object and source code of the computer program expressing this idea are sufficiently concrete, allowing for copyright protection once the condition of originality is fulfilled.[38] Given the low threshold set for originality in practice, software that implements AI technology is likely to receive automatic protection as a computer program under copyright law upon its creation.[39]

2.2 – Can rights under copyright be enforced against the use of protected contents by AI training? Does the insertion of a pre-existing work into the computer system implicate rights under copyright? If so, in order to avoid a finding of infringement, are the copying or storage covered by an exception?

Belgian statutes and regulations do not expressly treat the potential enforcement of rights under copyright against the use of protected contents in the context of AI training. Relevant case law that may provide clarification on this particular topic is not available yet.

In determining the outcome of this question, the relevant reference text will be Article XI.165 BCEL, which sets forth the right of reproduction under Belgian copyright law.[40] It is the position of the national rapporteur that the insertion of a pre-existing work into an AI system for training purposes implicates the right of reproduction under copyright law. It is believed that the exception for temporary reproductions (Article XI.189, §3 BCEL) is unlikely to cover such insertion. The concrete effects of the text and data mining (TDM) exceptions under Belgian law (Articles XI.190, 20°, XI.191/1, 7° and XI.191/2, 3° BCEL[41]), as amended in 2022 under the impulse of Articles 3 and 4 CDSM Directive[42], are yet to be awaited.[43] In the context of the TDM exception that finds its basis in Article 4 CDSM Directive, the potential opt-out by rightholders is noted.

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[35] Article 9(2) TRIPS Agreement.
[36] Case C-5/08 *Infopaq* [2009] ECLI:EU:C:2009:465; Case C-393/09 *BSA* [2010] ECLI:EU:C:2010:816; Case C-145/10 *Painer* [2011] ECLI:EU:C:2011:798.
[37] Case C-406/10 *SAS Institute* [2012] ECLI:EU:C:2012:259.
[38] Case C-393/09 *BSA* [2010] ECLI:EU:C:2010:816.
[39] See Katarina Foss-Solbrekk, 'Three Routes to Protecting AI Systems and Their Algorithms Under IP Law: The Good, the Bad and the Ugly' (2021) 16 JIPLP 3, 249–253; Begoña Gonzalez Otero, 'Machine Learning Models Under the Copyright Microscope: Is EU Copyright Fit for Purpose?' (2021) 70 GRUR International 1043, 1–13.
[40] See eg Frank Gotzen, 'Art. XI.165' in Fabienne Brison and Hendrik Vanhees (eds), *Hommage à Jan Corbet Huldeboek* (3rd edn, Larcier 2018) 47–66. The equivalent provision in the context of neighbouring rights protection under Belgian law is Art XI.205 BCEL, see eg Fabienne Brison, 'Art. XI.205' in Fabienne Brison and Hendrik Vanhees (eds), Hommage à Jan Corbet Huldeboek (3rd edn, Larcier 2018) 359–64.
[41] See as to neighbouring rights under Belgian law: Arts XI.217, 19° and XI.217/1, 6° BCEL.
[42] Directive (EU) 2019/790 copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC [2019] OJ L130/92.
[43] See on this topic in detail Thomas Margoni and Martin Kretschmer, 'A Deeper Look into the EU Text and Data Mining Exceptions: Harmonisation, Data Ownership, and the Future of Technology' (2022) 71 GRUR International 8, 685–701.

On a practical level, several tools are already available for rightholders to check whether their work has been used as training material for an AI system. By way of example, reference may be made to "Have I Been Trained", which may be used to check whether a work has been included in "LAION", the Stable Diffusion V3 database.[44] "Spawning", a related tool, appears to allow the user to make an opt-out request that would lead to the removal from the database.[45]

2.3 – In your country, are there any proposals to change the law and in which direction? For example, by deeming that the incorporation of pre-existing works into AI systems does not create an actionable "reproduction" of the works? Or by creating a new exception? Or by implementing a compulsory licensing system? Other solutions?

At the time of writing, no official legislative proposals to change the law have been made by the Belgian legislator.

However, the Belgian legal order will be subject to the AI Act, for which the legislative process at the EU level is ongoing at the time of writing.[46] At the end of April 2023, news broke that the European Parliament seeks to add a provision to the AI Act concerning this issue. In particular, a transparency requirement would force companies that deploy generative AI tools to disclose their use of any copyrighted training data.[47]

2.4 – Do the "terms of service" of the platforms available in your country authorize the copying and storage for the purpose of constituting "training data" and the creation of "AI outputs" of the works posted by the users of the platform? If so, give examples of the relevant Terms of Service.

The Terms of Service of two art platforms that are available in Belgium offer artists the possibility to opt out of the use of their work by AI-driven technology.

First, the Terms of Service of art platform **DeviantArt** contain a detailed policy regarding the use of works uploaded to the DeviantArt platform. Article 24 ('Data Scraping & Machine Learning Activities') provides as follows:

> '*DeviantArt is a community of creators that invests significant time and resources to protect its users and foster a cooperative and collaborative environment. Out of respect for its users' choices, DeviantArt has developed clear directives to communicate when its users do not consent to their Content being downloaded and used by third parties for the purposes of developing or operating artificial intelligence or other machine learning systems ("Artificial Intelligence Purposes"). Unless you actively give your consent, for Artificial*

[44] See <https://haveibeentrained.com>.
[45] See <https://spawning.ai>. See also <https://tcrn.ch/4283Dry>.
[46] Commission, '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. See <https://bit.ly/3NCPsGs>.
[47] See eg Supantha Mukherjee, Foo Yun Chee and Martin Coulter, 'EU proposes new copyright rules for generative AI' (*Reuters*, 28 April 2023) <https://reut.rs/3VwryOQ>.

Intelligence Purposes, DeviantArt will include a robots meta tag with the "noai" or "noimageai" directive in the head section of the HTML page associated with that Content on the Site, and will include an X-Robots-Tag HTTP response header with the "noai" directive when media files associated with that Content are downloaded from the Service. DeviantArt encourages adoption of these directives across other creative platforms, so that creators are able to share their artistic creations with online audiences without fear of losing control of their own works.

DeviantArt expects all users accessing the Service or the Site to respect creators' choices about the acceptable use of their Content, including for Artificial Intelligence Purposes. When a DeviantArt user does not consent to third party use of their Content for Artificial Intelligence Purposes, other users of the Service and third parties accessing the Site are prohibited from using such Content (labeled as "noai" and/or "noimageai") (i) to train an artificial intelligence system, (ii) as input into any previously trained artificial intelligence system, or (iii) to make available any derivative copy unless usage of that copy is subject to conditions at least as restrictive as those set out here. Automated systems or users that fail to respect these choices will be considered to have breached these Terms.

DeviantArt provides no guarantees that "noai" or "noimageai" directives will be present each time Content is accessed, even if the creator does not consent to use of that Content for Artificial Intelligence Purposes; and absence of such directives does not imply creator consent has been granted.

Users acknowledge that by uploading Content to DeviantArt, third-parties may scrape or otherwise use their works without permission. DeviantArt provides no guarantees that third parties will not include certain Content in external data sources, or otherwise use a creator's work for Artificial Intelligence Purposes, even when such directives are present. By prohibiting such conduct, DeviantArt makes no guarantees that it will pursue each unauthorized use of the Service, and the owners of the works are responsible for policing their own works to the extent permitted by law.'[48]

Second, the detailed policy of platform **ArtStation** is noted.[49] Article 46 of the Terms of Service of ArtStation provides as follows:

'*(a) Identifying where Your Content should not be used with Generative AI Programs*

We care about protecting artists and providing the tools to protect their art. You are able to tag your projects containing Your Content with "NoAI" if you would like Your Content to be prohibited from use (a) in datasets utilized by Generative AI Programs, (b) in the development of Generative AI Programs, or (c) as inputs to Generative AI Programs. This tag will not be applied to your projects or Your Content by default; you must actively designate your projects containing Your Content for the "NoAI" tag to apply. Any content uploaded to the Site that has been tagged, labeled, or otherwise marked "NoAI" via the functionality provided by the platform will be known as "NoAI Content."

For purposes of this Agreement, "Generative AI Programs" means artificial intelligence, machine learning, deep learning, neural networks, or similar technologies designed to automate the generation of or aid in the

[48] See <https://www.deviantart.com/about/policy/service>.
[49] See <https://bit.ly/44xDAMe>.

creation of new content, including but not limited to audio, visual, or text-based content. You shall not collect, aggregate, mine, scrape, or otherwise use NoAI Content (a) in datasets utilized by Generative AI Programs; (b) in the development of Generative AI Programs; or (c) as inputs to Generative AI Programs.

Epic agrees, whether or not Your Content is NoAI Content, not to use any of Your Content or to license any of Your Content to third parties for use (a) in datasets utilized by Generative AI Programs, (b) in the development of Generative AI Programs, or (c) as inputs to Generative AI Programs.

(…)'.[50]

Finally, music streaming platform **Audius**[51] is taking a different approach. In May 2023, it unveiled its plans to give artists the option to opt-*in* to their voice and music being used for AI purposes.[52]

As the landscape is evolving quite rapidly, it is possible that, after having finalised the answers to this questionnaire, additional platforms have decided to amend their Terms of Service under the impulse of evolutions in the AI sphere.

2.5 – Are you aware of the conclusion of individual or collective licenses on this point? If yes, in which fields of creation? Under what conditions? If so, give examples.

No, albeit with the exception of the apparent plans of music streaming platform Audius referenced in the answer to the previous question.

3. Using AI as a tool for rights management and administration

3.1 – To what extent is AI used to locate or identify protected content, to moderate it, or even to fight against infringement?

Below, the logos of a number of companies that offer services that use AI as a tool for rights management and administration are listed (upon clicking the logo, the website of the company at issue may be accessed):

VIDENTIFIER

PEX

ACAMAR

RIGHTSLEDGER

MATCHTUNE

[50] See <https://www.artstation.com/tos>.
[51] See <https://audius.co>.
[52] See <https://bit.ly/3HFlo9g>.

In addition to such private initiatives, Belgian collective management organisations (CMOs) such as SABAM[53] have shown express interest in mining the potential of AI technology in the context of copyright management.

3.2 – If computer tools are used for this identification, are there rules to allow the evaluation of the tools used in order to verify the relevance of the results produced by the AI system? (For example, in the framework of the European Digital Services Act, platforms have an obligation of transparency, notably on the tools used and the results they produce – art. 15). If the answer is yes, are these rules derived from practice (usages, contracts, soft law, ...) or imposed by legislation or regulation, or by case law?

From 17 February 2024 onwards, the Digital Services Act (DSA) will apply on the Belgian territory.[54] This will lead to the applicability of the transparency obligations established by Articles 14 and 15 DSA.

In addition, the general rules pertaining to contractual and extra-contractual liability apply (see answer to question 6.1 below).

Finally, the ongoing legislative process at the EU level that will lead to the promulgation of the AI Act is likely to lead to the establishment of additional relevant rules specific to the use of AI tools.

3.3 – To what extent is AI used as a tool to recommend protected content? For example, the proposal of "playlists" by Pandora or any other online communication service making recommendations of works.

Many online content platforms that are available in Belgium, including Netflix, Spotify, TikTok and YouTube deploy AI algorithms to recommend content to their users in a personalised way.[55]

[53] See <https://www.sabam.be>.
[54] Regulation (EU) 2022/2065 on a Single Market For Digital Services and amending Directive 2000/31/EC [2022] OJ L277/1.
[55] See in detail Valérie-Laure Benabou and Joëlle Farchy, *Rapport de Mission: Les dispositifs de recommandation des œuvres audiovisuelles et musicales sur les services en ligne* (2021) <https://bit.ly/3AUieLb>.

3.4 – Should we fear, through this recommendation, a risk of dilution of contents and revenues due to a possible opacity of the system?

Yes, the national rapporteur is of the position that this should be a central concern for researchers and policy makers. Many risks associated with recommender algorithms are treated in detail in the report by Valérie-Laure Benabou and Joëlle Farchy referenced in footnote 55 above. In addition, by way of an example of revenue dilution due to the deployment of recommender algorithms, reference may be made to Spotify's 'Discovery Mode'. This tool allows rightholders to influence the algorithm that Spotify uses for personalised music choice via algorithmic playlists.[56] Artists who use Discovery Mode may accept a lower per-stream rate in exchange for favourable treatment by the Spotify algorithm. When you turn on Discovery Mode, it acts as a kind of spotlight on the music in question; listeners who are open to this (as evidenced by their use of Spotify Autoplay and/or Radio) are more likely to discover the music at issue. In addition, for all streams that occur when Discovery Mode is turned on, Spotify charges a commission as a marketing expense—a percentage of the revenue generated by the streams in question. Consequently, royalties received under the Discovery Mode program may be up to 30 and even 50 percent lower than what would otherwise be the case. This may have negative follow-on effects for independent artists, who may not have the (financial) margin to accept a lower per-stream rate, and, thus, for musical diversity on streaming platforms in the medium to long term.

3.5 – Does your national or regional law contain transparency obligations on the use of an AI system for rights management in your national or regional law? What are they?

A first relevant transparency obligation stems from Article 19 CDSM Directive and was implemented into Belgian law in 2022, in Articles XI.167/2 and XI.205/2 BCEL.[57] This provision requires artists' primary commercial counterparties to provide them with relevant and comprehensive information on the exploitation of their works and performances from the parties to whom they have licensed or transferred their rights, or their successors in title, in particular as regards modes of exploitation, all revenues generated and remuneration due. In addition, certain obligations are implied on the part of third-party platforms, such as streaming services who have obtained a (sub)license to exploit certain protected content. Artists must be able to receive from sub-licensees additional information in the event that their first contractual counterpart does not hold all the necessary information. Thus, platforms will have to comply with requests for additional information from artists. It may be argued that the concept of 'relevant and comprehensive information on the exploitation' includes the question whether (and, if so, how) an AI system was used in the context of rights management in relation to the exploitation at issue.

[56] See Christopher Buccafusco and Kristelia García, 'Pay-to-Playlist: The Commerce of Music Streaming' (2022) 12 UC Irvine L Rev 805; Justine Haekens and Jozefien Vanherpe, 'Spotlight op Spotify: een analyse van de samenstelling van playlists door de lens van het auteurs- en mededingingsrecht' (2023, forthcoming) IRDI.
[57] See in more detail Hendrik Vanhees, 'De vernieuwde regels voor contracten gesloten door auteurs en uitvoerende kunstenaars' (2022) IRDI 4.

Second, once the DSA applies, the abovementioned transparency obligations set forth in Articles 14 and 15 DSA will bear relevance. In addition, Article 27 DSA may be noted, as this provision requires providers of online platforms that use recommender systems to 'set out in their terms and conditions, in plain and intelligible language, the main parameters used in their recommender systems, as well as any options for the recipients of the service to modify or influence those main parameters'.

Third, in case AI tools are used by CMOs, such use will be subject to the detailed governance and transparency rules that apply to CMOs under Articles XI.246-XI.288 BCEL, in implementation of the EU Collective Rights Management Directive.[58]

Finally, the ongoing legislative process at the EU level that will lead to the promulgation of the AI Act is likely to lead to the establishment of additional relevant rules specific to the use of AI tools.

3.6 – In general, do these tools have to comply with rules in terms of product safety or conformity? Are there procedures for certification of these tools by an authority or by professional associations? Are suppliers subject to specific due diligence obligations?

At the time of writing, the general rules of Belgian law on product safety and conformity do not provide for express rules concerning AI tools. However, the promulgation of the AI Act is likely to set specific due diligence obligations in this context. For an extensive analysis of Belgian liability law in an AI context, including in terms of product safety, the reader is referred to the work of Jan De Bruyne, Elias Van Gool and Thomas Gils.[59]

In terms of certification, no particularly relevant procedures have been uncovered. However, it is noted that the OECD platform provides an extensive 'Catalogue of Tools & Metrics for Trustworthy AI'.[60] In addition, reference may be made to the ongoing activities of AI4People, which is set to unveil the 'AI Global Mark of Compliance' in December 2023.[61]

[58] Directive 2014/26/EU on collective management of copyright and related rights and multi-territorial licensing of rights in musical works for online use in the internal market [2014] OJ L84/72.
[59] Jan De Bruyne, Elias Van Gool and Thomas Gils, 'Tort Law and Damage Caused by AI Systems' in Jan De Bruyne en Cédric Vanleenhove (eds), *Artificial Intelligence and the Law* (2nd ed, Intersentia 2023) 395–447.
[60] See <https://oecd.ai/en/catalogue/tools>.
[61] See <https://www.eismd.eu/ai4people>.

Artificial intelligence and literary and artistic property
The contours of protection
The status of AI Outputs

4. Access to protection

- ***Characterization of the AI output as a "Work" of authorship***

4.1 – Does a "Work" always imply the presence of a physical person?

It is the position of the national rapporteur that this is not the case. The condition of a "work" does not in itself require the presence of a physical person. Instead, the required presence of a physical person stems from the condition of originality. In accordance with established case law of the Court of Justice of the European Union, the condition of originality implies that the work must be an intellectual creation of the author(s), reflecting their personality and expressing free and creative choices.[62] As the law stands, such effort and/or choices can only be made by one or multiple physical persons.

Indeed, copyright law requires the work at issue to show *authorship,* ie the personal stamp of the author. This author is a being that is traditionally considered to be a physical person, especially in the civil law '*droit d'auteur*' tradition, where copyright protection is viewed as a natural right, granted to the author to protect emanations of their personality. As the name suggests, the '*droit d'auteur*' tradition (in Dutch '*auteursrecht*' and in German '*Urheberrecht*') places the idea of the romantic author squarely at its centre. Creativity is hereby viewed as a quintessentially human faculty, whereby a sentient being expresses its personality by making free, deliberate choices.

The need for human intellectual authorship is ingrained in our system.[63] The pivotal role of the author as a (sometimes starving) artist whose interests deserve to be protected, pervades all aspects of copyright law. First and foremost, copyright laws grant first ownership of copyright in a certain work to its author.[64] Further, the term of protection is calculated from the death of the author.[65] In addition, provisions apply that expressly seek to protect the author, such as those included in copyright contract law as well as the resale right applicable to original works of art.[66] Moreover, certain copyright exceptions only apply if the author is acknowledged and/or if an equitable remuneration is paid to such author. The focus on the human author also explains the importance placed on moral rights protection, translated into the author's right to disclosure, integrity and

[62] Case C-5/08 *Infopaq* [2009] ECLI:EU:C:2009:465; Case C-393/09 *BSA* [2010] ECLI:EU:C:2010:816; Case C-145/10 *Painer* [2011] ECLI:EU:C:2011:798.
[63] Madeleine De Cock Buning, 'Autonomous Intelligent Systems as Creative Agents' (2016) 7 European Journal of Risk Regulation 2, 314–16; Daniel Gervais, 'The Machine as Author' (2019) 105 Iowa Law Review, 2072–2085.
[64] Art XI.167(1) BCEL. See also eg Art 2(6) Berne Convention, where copyright is conceptualised as a form of protection for the *author* and their successors in title.
[65] Art XI.166 BCEL.
[66] Arts XI.167-167/6 and XI.175 BCEL.

attribution, as well as the qualification of intellectual property rights such as copyright in the strict sense as a fundamental human right.[67]

Such a system simply leaves no room for authorship on the part of a non-human entity.[68] As succinctly formulated by Advocate General Maciej Szpunar, 'the origin of and justification for copyright, in the form of both moral and property rights, lies in the special relationship between the author and his work. Thus, where there is no author, there is no copyright, in the form of either moral or property rights.'[69] If there is insufficient human input, if the AI crosses a certain threshold of autonomy, copyright protection will be unavailable.[70]

4.2 – From what threshold is it possible to consider that there is a human intervention giving rise to an original work in the realization of an AI output? What types of intervention would allow to know if this threshold has been crossed?
4.3 – How can we distinguish between AI-assisted outputs and outputs generated by an AI?

It is felt that these questions are best answered jointly, as both questions may be linked with the need to look at AI output on a spectrum.

At the one end of the spectrum, we may find AI systems that function as a tool to assist and/or enhance human creativity. In such a context, the AI itself is not fully autonomous. Instead, it acts as a mere executer that lacks creative capabilities and thus cannot reasonably claim authorship.[71] We can compare this to the quill used by William Shakespeare, the paintbrush wielded by William Turner or the Sibelius music notation software used by contemporary composers.[72]

Further down the line, there are many forms of AI-exhibited creativity that still result from creative choices made by a human, where the output flows directly from the parameters set by the AI system's programmer or user, a person training the AI system through data input or by somebody who modifies and/or selects certain specific output deemed 'worthy' to disclose to the public.[73] Such AI activity may still be viewed as pure execution and should thus in any case fall outside the

[67] Art XI.165(2) BCEL; Art 17(2) Charter of Fundamental Rights of the European Union [2000] C364/1.
[68] See eg Andres Guadamuz, 'Do Androids Dream of Electric Copyright? Comparative Analysis of Originality in Artificial Intelligence Generated Works' (2017) IPQ, 173–74; JP Osha et al., 'AIPPI Summary Report on Copyright in Artificially Generated Works' (2019) 1 in *AIPPI Yearbook 2019 / I*; Peter Mezei, 'From Leonardo to the Next Rembrandt – The Need for AI-Pessimism in the Age of Algorithms' [2020] UFITA, 11–16 of draft, <https://ssrn.com/abstract=3592187>.
[69] Opinion AG Szpunar Case C-469/17 *Funke Medien* [2018] ECLI:EU:C:2018:870, para. 60.
[70] Daniel Gervais, 'The Machine as Author' (2020) Iowa L Rev, 2062, 2098–2101, 2106. See regarding the requisite degree of human input among others JP Osha et al., 'AIPPI Summary Report on Copyright in Artificially Generated Works' (2019).
[71] James Grimmelmann, 'There's No Such Thing as a Computer-Authored Work – And It's a Good Thing, Too' (2016) Colum JL & Arts, 403, 406–08; Samantha Hedrick, 'I "Think," Therefore I Create: Claiming Copyright in the Outputs of Algorithms' (2019) JIPEL, 329; Daniel Gervais, 'The Machine as Author' (2020) Iowa L Rev, 2069.
[72] cf Margot Kaminski, 'Authorship, Disrupted: AI Authors in Copyright and First Amendment Law' (2017) UCD L Rev, 595.
[73] Samantha Hedrick, 'I "Think," Therefore I Create: Claiming Copyright in the Outputs of Algorithms' (2019) JIPEL 353, 358–60.

scope of 'true' creativity and ensuing copyright protection on the part of the AI system. In such cases, copyright is and should be reserved to the human actor behind the machine.

At the far end of the spectrum, finally, we could find a hypothetical, more autonomous AI, having transcended its role as an instrumentality and having independently created a work that exhibits the requisite creativity, which experts and non-experts alike cannot distinguish from a work generated by a human. Today, such a distinction by experts is often still possible. By way of example: for the trained ear, piano music composed and performed by Google's 'DeepMind' AI[74], sounds wholly artificial and quite contrived. However, it is becoming increasingly difficult to distinguish output in the creation of which AI played a certain role from creations that were made solely by a human author.[75] If this distinction is no longer possible – and some argue that this already has occurred or that it will soon[76] – our current copyright framework will come under even more vigorous attack, since the supposedly 'creative' AI only really comes to the fore in such cases.

Even so, given that every piece of AI-generated output is, in one way or another, the result of prior input, it may be argued that there is no real act of 'conception' in the AI system (and that there will never be). Arguably, precisely this act, the *process* of creation, is the essence of creativity – not the eventual, possibly creative end result. As long as the human thought process cannot be formulated as an algorithm that may be implemented by a computer, this process is and will remain quintessentially human. This would exclude the possibility of 'creativity' and, thus, authorship, on the part of an AI system. Then again, the 'prior input' argument also applies *mutatis mutandis* to humans, who create literary and artistic works while 'standing on the shoulders of giants'.[77] Given the ever-expanding corpus of works, it might even be questioned whether anybody can ever be fully original.[78] This could render the 'act of conception' argument against AI authorship moot, as could choosing the end result and thus the originality of the output as a (functionalist) focal point instead of the creative process.

4.4 – In some countries, it is asserted that there can only be a work of authorship if the form obtained is the result of creative work by the author in the sense that the latter is aware of the result (work) he wants to achieve even if this result is a little different from his hope/expectations. This requirement, for example, would exclude the quality of author of a person deprived of discernment (for example, an insane person, a very young child, a somnambulist...) or would entail the refusal of protection of a production which would be only the fruit of random forces. Does this condition exist in your country?

[74] Video available at <youtu.be/Y8UawLT4it0>.
[75] See eg Jani McCutcheon, 'The Vanishing Author in Computer-Generated Works: A Critical Analysis of Recent Australian Case Law' (2013) Melb U L Rev, 950.
[76] Samantha Hedrick, 'I "Think," Therefore I Create: Claiming Copyright in the Outputs of Algorithms' (2019) JIPEL, 328.
[77] 'If I have seen further, it is by standing upon the shoulders of Giants.' – Sir I. Newton in a letter to his rival R. Hook (1675).
[78] cf Jozefien Vanherpe, 'Stealing Good Steals – A Plea for Realism in Music Copyright' in KU Leuven Centre for IT & IP Law (ed.), *Rethinking IT and IP law. Celebrating 30 Years CiTiP* (Antwerp/Cambridge: Intersentia, 2019) pp. 153–158.

No, copyright protection may be available to works that result from coincidence or even dumb luck.[79] The analogy between the intervention of AI systems and serendipity may be strenuous at first sight, but, if we take a step back, both may be considered as a factor outside the scope of human control, as an unknown and even unknowable actor in the creative/inventive process. Jackson Pollock's paintings clearly reflect his personal choices as an artist, regardless of the aspects of randomness that they are imbued with, given the significant and inherent role that chance plays in Pollock's creation process.

4.5 – Are the criteria traditionally considered to be irrelevant (such as merit, or purpose) taken into account in the framework of protecting an AI output?

No. Under Belgian law, no such specific criteria play a role in the assessment of the potential protection of AI output by copyright.

- ***Characterization of a performer's performance***

4.6 – In order to be vested with a neighbouring right, does the performer necessarily have to be a natural person? In other words, is an "interpretation" from an artificial intelligence protectable under neighbouring rights?

This issue has been the subject of much less research than is the case in relation to the corresponding question under copyright in the strict sense. Belgian law does not expressly require a performer to be a natural person. Regardless, it is believed that such a requirement is implicit in the legal framework, albeit in a less clear way than is the case for the requirement of human authorship (see above, answer to question 4.1). Several considerations may be highlighted here. First, first ownership of the neighbouring right relating to (the fixation of) a performance is vested in the performer.[80] In addition, provisions apply that expressly seek to protect the performer, such as those included in copyright contract law.[81] Moreover, certain copyright exceptions only apply if the author is acknowledged and/or if an equitable remuneration is paid to such author. The focus on the human performer also explains the importance placed on moral rights protection, translated into the performer's right to integrity and attribution, as well as the qualification of intellectual property rights such as the neighbouring right of performing artists as a fundamental human right.[82]

[79] James Grimmelmann, 'There's No Such Thing as a Computer-Authored Work – And It's a Good Thing, Too' (2016) Colum JL & Arts, 413.
[80] Art XI.205(1) BCEL.
[81] Art XI.205-205/6 BCEL.
[82] Art XI.204 BCEL; Art 17(2) Charter of Fundamental Rights of the European Union [2000] C364/1.

4.7 – In order to be vested with a neighbouring right, must the performer necessarily interpret a work created by a natural person? In other words, is the interpretation, by a human being, of a production of artificial intelligence protectable under neighboring rights? (Suppose an AI-generated musical composition: if performed by a human being, would the performance be protectable?)

Under Article XI.205 BCEL, a performer can only obtain a neighbouring right if the performance relates to a literary or artistic work. As noted in the answer to question 4.1 above, it is the position of the national rapporteur that the concept of "work" under copyright law does not in itself require the presence of a human author. Therefore, it is believed that the work interpreted by a performer must not necessarily be created by a natural person in order for neighbouring rights protection to arise.

- ***If the AI output does not qualify for copyright protection***

4.8 – Are the productions generated by AI, that are not covered by copyright, in the public domain?

Not necessarily, as such productions may be subject to other exclusive rights, such as trademark registrations.[83]

4.9 – In your country, could the productions generated by AI be qualified as "commons" (it being understood that, in some countries, the notion of "commons" has a different meaning than "public domain")? Under what conditions or according to what criteria?

The national rapporteur is unaware of any difference in meaning between the notion of "commons" and "public domain" under Belgian law. In view of this, the answer given to question 4.8 is repeated here.

4.10 – How can we be sure that the creation presented as realized by an author is not an artificial production?

See joint answer to questions 4.2 and 4.3 above.

[83] As regulated in the Benelux Convention on Intellectual Property (trademarks and designs) <https://bit.ly/3HIKHrn> and the Regulation (EU) 2017/1001 on the European Union trade mark (codification) [2017] OJ L154/1.

4.11 – Usually, a collective management organization (CMO) manages a catalog attached to an author without making distinctions between "works" / "productions". How to manage the case of an author whose usual works belong to his repertoire but who would also use an AI system to generate other "productions"?

In view of the answer to question 4.1 above, it is believed that AI output also qualifies as a "work", albeit not a work that may satisfy the condition of originality. However, this does not detract from the need for CMOs to manage cases of authors who deploy AI-driven technology. In this context, the wide spectrum of AI output (ranging from AI-assisted to fully AI-generated content) should be taken into account. An obligation of transparency, as discussed in the answer to question 7.1 below, may contribute to a workable solution.

In addition, inspiration may be drawn from the choices made in the Terms of Service of online platforms. By way of example, reference may be made to Article 46 of the Terms of Service of ArtStation:

> '*(…) (b) Identifying where Your Content is created with Generative AI Programs.*
>
> *Where Your Content is sold as a Digital Product in the Marketplace and is created using Generative AI Programs, you must tag Your Content using the "CreatedWithAI" tag. Where Your Content is not being sold as a Digital Product in the Marketplace and is created using Generative AI Programs, we recommend using the "CreatedWithAI" tag. Any content uploaded to the Site that has been tagged, labeled, or otherwise marked "CreatedWithAI" via the functionality provided by the platform will be known as "CreatedWithAI Content." Epic will not apply the "CreatedWithAI" tag to Your Content; you are solely responsible for complying with the requirement to tag your Digital Products in the Marketplace.*
>
> *Under this Agreement, Your Content is considered to be created using Generative AI Programs where a material portion of Your Content is generated with Generative AI Programs, whether characters, backgrounds, or other material elements. Your Content is not considered to be created using Generative AI Programs merely for use of features that solely operate on Your Content (e.g., content-aware fill) or that don't introduce material Generative AI elements into your work (e.g. AI based image upscaling).*'[84]

5. The rights regime

- ***The choice of the right (nature, ownership, regime, limitations)***
  * *As your legislation currently stands:*

5.1 – Is the output generated by an artificial intelligence system likely to be protected by copyright in your country?

See answer to question 4.1 above.

[84] See <https://www.artstation.com/tos>.

5.2 – If applicable, does the production generated by an artificial intelligence system benefit from a full copyright, in particular as regards the duration and scope of the rights, or from a modified or special right?

See answer to question 4.1 above. In addition, no modified or special right has been foreseen for productions generated by an AI-driven system.

5.3 – If there is a protection by an adapted or special copyright (as it exists sometimes for certain works, as for example, in Europe, concerning computer programs), what are the modifications or adaptations?

Not applicable.

5.4 – Who is the author? Who would be the owner of the rights? Could the output be considered a joint work? If so, between whom and in what cases?

In summary, this question has garnered a substantial amount of research in recent years, with various authors arguing for (and against) a wide range of possible answers, including the programmer, the user, the owner of the data and/or some form of joint ownership between these actors. Alternatively, it could be argued that AI-generated output should not accrue to any entity and should thus automatically fall into the public domain.

As long as there is a physical person who commands the AI system and maintains the requisite level of control over its output, the intervention of a creative AI system does not exclude *any* kind of human authorship (and thus ownership). In such a case, IP rights may fulfil their role of protecting the interests of creators as well as provide an indirect incentive for future creation and/or innovation. However, if there is no sufficient causal relationship between the (in)actions of a creative and/or inventive human and the end result—in other words, if the AI becomes more than an assisting tool wielded by a human—, the argument in favour of a human author and/or inventor becomes simply untenable. Then again, what exactly constitutes "sufficient" control is particularly tough to establish, given the wide spectrum that exists between different types of AI, between output that is merely AI-assisted and output that is purely AI-generated (see joint answer to questions 4.2 and 4.3 above). Moreover, different categories of people involved in AI systems may stake a claim in this regard.

First in line are the initial programmer(s), designer(s) and/or producer(s) of the AI system – or, in many cases, the legal entity that employs them (hereinafter collectively referred to as "AI **creators**"). By creating the AI system itself, these actors play an undeniably substantive role in the production of AI-generated output. Put simply: without them, no AI system and without AI system, no AI-generated output. The argument in favour of granting ownership rights to the AI creators has the advantage of precedent, at least in the field of copyright law. Already in the '80s, the UK legislator included a provision in its IP act designed to cater for works generated by a

computer and without a human author – so-called 'computer-generated works'.[85] In such a case, the author of the work (for copyright purposes) would be deemed to be 'the person by whom the arrangements necessary for the creation of the work are undertaken'.[86] Several authors argue in favour of applying this criterion to AI output, leaving the AI creator as the logical choice. However, the UK provision regarding computer-generated works entirely delinks copyright ownership from the creative process.[87] It does not matter whether any human creativity is exhibited at any stage: what matters is who made the creation possible. This approach is difficult to reconcile with continental copyright's traditional focus on the act of conception and the author's creative effort.

Further and regardless of the analogy with chance creations/innovations, the allocation of ownership rights to the creator sits uneasily (at least to a certain extent) with the unpredictable nature of AI-generated output.[88] Indeed, it could be argued that the AI's intervention cuts the requisite direct link between the programmer's actions and the AI-generated output. While the AI creator's choices and parameters define the AI system, they do not define the "final form of the work" as such. This argument gains in strength the more autonomous the AI algorithm becomes.[89] Then again, a programmer who is somehow dissatisfied with the AI's initial output may tweak the AI's algorithm at a later stage, thus manipulating and shaping further output, as well as curate the AI output based on their own, personal (perhaps creative and/or innovative) choices. Could these be the steps necessary for a programmer to rightfully claim control over and, thus, ownership of the AI's output? A generalised answer to this question is, at present, impossible to give.[90]

In any case, a rather strong economic argument against granting the creator ownership rights in AI-generated output is that this may lead to "double-dipping". For example, this would be the case if the creator also holds ownership rights in a patent or multiple patents granted in relation to the AI system or the copyright therein, or if the AI system is acquired by a third party for a (presumably rather significant) fee and the original and/or inventive output at issue postdates this transfer.[91] In both cases, the creator would obtain two separate sources of income for essentially the same thing. This would arguably be an unfavourable outcome. In addition, we must consider the user's right to data protection, as well as practical aspects, such as issues of enforceability. Enforcing ownership rights on the part of the AI creator would be problematic if the AI system generates the output at issue after a third party has started using it. Indeed, knowing that ownership rights would be allocated to the creator, the subsequent user would have strong incentives not to report back on the (modalities of) creation of protectable output.[92] Effective enforcement of such rights would moreover risk negatively impacting potential users' incentives to purchase AI-driven systems.

A similar claim to the AI system's creator (especially the programmer who alters the algorithm in a

[85] See Article 178 Copyright, Designs and Patents Act 1988 (hereinafter: UK CDPA).
[86] Article 9(3) UK CDPA. Such a work is protected for a shorter period of 50 years (Article 12(7) UK CDPA). No moral right protection applies (Articles 79, 81 UK CDPA regarding right to paternity and integrity respectively).
[87] Andres Guadamuz, 'Do Androids Dream of Electric Copyright? Comparative Analysis of Originality in Artificial Intelligence Generated Works' (2017) IPQ, 176.
[88] Pamela Samuelson, 'Allocating Ownership Rights in Computer-Generated Works' (1986) U Pitt L Rev, 1209.
[89] Samantha Hedrick, 'I "Think," Therefore I Create: Claiming Copyright in the Outputs of Algorithms' (2019) JIPEL, 354, 362.
[90] See on this topic JP Osha et al, 'AIPPI Summary Report on Inventorship' (2019) 9–13.
[91] Pamela Samuelson, 'Allocating Ownership Rights in Computer-Generated Works' (1986) U Pitt L Rev, 1207–1208, 1225.
[92] Ibid, 1208.

way that influences future output) may be made by the AI's **trainer** who feeds input to the AI system with the aim of achieving a certain result. Alternatively, also the **user** who has contributed substantially to the original elements of the AI system's output at issue may claim ownership. An economic argument in favour of the latter solution is that this would incentivise the user to further distribute the output.[93] Again, however, it is unclear how much input (and ensuing influence on output) exactly would be required for them to be able to validly stake a claim in the output. Merely pressing the "on"-button that brings the AI system into action would definitely be insufficient, while making creative choices in the selection and editing of the AI system's output would arguably be enough.[94] Then again, it might be near impossible to properly distinguish button-pushers from genuine user-authors/inventors in practice.

The list of stakeholders continues with the **investor**, the **owner** of the AI system and/or the data used to train the algorithm, the **publisher** of the work, the **general public** and even the **government**. Moreover, some form of **co-ownership** may be envisaged between two or more of the actors mentioned above, such as the user and the creator of the AI. However, this would entail other theoretical and practical issues, such as (respectively) an unnecessary fragmentation of ownership rights and difficulties in proving (the extent of) the claims of wannabe right holders.[95] It could even be argued that, in view of the ever-rising number of players involved, no individual entity can rightfully claim to have made a significant contribution 'worthy' of IP ownership.

As of yet, therefore, no solution to the ownership conundrum appears to be wholly satisfactory. Moreover, it is unlikely that this question will be definitively resolved any time soon. It could even be argued that a catch-all solution would be both impossible and undesirable and that a case-by-case assessment of ownership claims will remain warranted. The void left by this lingering uncertainty will likely be filled with **contractual solutions** between the relevant parties.[96] As a result of unequal bargaining power, Coasean bargaining may be prevented and instances of unfair ownership and licensing arrangements are to be expected.

A more preferable solution could be to not allocate ownership in AI-generated output to anyone at all and instead allot such output to the **public domain** (see answer to question 4.8 above). Indeed, without a human author and/or inventor, how can any human actually be motivated to create and what would the point of granting any IP right be? Arguably, the relevant stakeholders could sufficiently protect their investment in AI-related innovation by relying on patent and/or copyright protection for the AI system itself (see answer to question 2.1 above), first-mover advantage, trade secret law, contractual arrangements and technological protection measures as well as general civil liability and the law of unfair competition.

[93] Ibid, 1226.
[94] See regarding the possible originality of a selection process Case C-5/08, *Infopaq* [2009] ECLI:EU:C:2009:465.
[95] Pamela Samuelson, 'Allocating Ownership Rights in Computer-Generated Works' (1986) U Pitt L Rev, 1221–24; Jani McCutcheon, 'The Vanishing Author in Computer-Generated Works: A Critical Analysis of Recent Australian Case Law' (2013) Melb U L Rev, 949.
[96] Samantha Hedrick, 'I "Think," Therefore I Create: Claiming Copyright in the Outputs of Algorithms' (2019) JIPEL, 348.

5.5 – Is there a special ownership rule (presumption, or even fiction, as it exists in some countries for computer-generated creations; see for example, art. 9 (3) Copyright, Designs and Patents Act (CDPA) in England)?

No.

** In the event of a possible legislative change:*

At the time of writing, no legislative change is foreseen under Belgian law. Moreover, it is the position of the national rapporteur that such change should not occur.

The main argument in favour of granting copyright protection to such (quasi-)independently created works is that it may stimulate further creative efforts on the part of AI systems. This appears to be in line with the economic, utilitarian rationale of copyright.[97] However, copyright seeks to incentivise human creators, not AI systems, as prescribed by the anthropocentric paradigm of natural justice that underlies continental EU copyright law.[98] Moreover, it is difficult if not impossible to see how AIs may respond to incentives in the absence of human consciousness.[99] Without convincing economic evidence in this regard, caution is advised against tearing down one of the fundamental principles of copyright law.[100] The mere fact that we can create certain incentives does not in itself imply that we should. Further, if we were to allow AI authorship, we must be prepared for an upsurge in algorithmic creations and even a saturation of the range of possible creations in case artificial superintelligence (ASI) were to be attained. This could have drastic and unforeseen effects on the freedom to create on the part of humans, both with regard to the standard of protection and copyright infringement. Indeed, such a proliferation in AI-generated works might not only aggravate the risk of copyright infringement by humans, but could also make it more difficult for them to attain the requisite standard of originality. Put somewhat provocatively, this leads to the following (as of yet unanswered) question: if we grant authorship to AIs, will human authors still be able to compete? All things considered, it is submitted that AI authorship would be a bridge too far.

The risk of extending authorship to AI systems could be mitigated by instead establishing either a neighbouring or *sui generis* right to AI-generated works and thus provide a limited degree of exclusivity in order to protect investments and incentivise research in this area. Such a right could be modelled in a similar way to the *sui generis* database right established by the EU in 1996, e.g. requiring a substantial investment for protection to be available.[101] Arguably, however, such a right

[97] See e.g. Jani McCutcheon, 'The Vanishing Author in Computer-Generated Works: A Critical Analysis of Recent Australian Case Law' (2013) Melb U L Rev, 954.
[98] Margot Kaminski, 'Authorship, Disrupted: AI Authors in Copyright and First Amendment Law' (2017) UCD L Rev, 598; Frank Gotzen and Marie-Christine Janssens, 'Kunstmatige Kunst. Bedenkingen Bij de Toepassing van Het Auteursrecht Op Artificiële Intelligentie' [2019] AM, 332.
[99] Pamela Samuelson, 'Allocating Ownership Rights in Computer-Generated Works' (1986) U Pitt L Rev, 1185, 1199; Garry Gabison, 'Who Holds the Right to Exclude for Machine Work Products?' (2020) IPQ, 20, 37.
[100] cf Frank Gotzen and Marie-Christine Janssens, 'Kunstmatige Kunst. Bedenkingen Bij de Toepassing van Het Auteursrecht Op Artificiële Intelligentie' [2019] AM, 332.
[101] See Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases [1996] OJ L77/20. See extensively on what form such a *sui generis* right could take S Blair et al., 'AIPPI Study Question – Copyright in Artificially Generated Works – United Kingdom' (2019) 9–13.

would suffer similar defects in practice as an extended authorship concept would: granting additional IP rights in AI-generated output would inevitably entail an even steeper increase in AI-generated output. This could in turn be unfortunate for human authors. The creation of a new right, even if limited in scope, would moreover lead to further and arguably undesirable fragmentation of IP law.[102] In addition, it is questionable whether the scope of IP protection should be further increased, not only in view of the crisis in public opinion IP has had to face over the past few decades, but also in view of economic considerations. Before establishing yet another IP right, we should ask ourselves whether such a right would actually overcome a market failure—in other words, whether an additional property incentive to R&D in the field of AI is actually necessary.[103] In conclusion, while valid points may be raised on all sides of the argument, it is submitted that we should not unreservedly start tearing down the foundations of IP law purely for the sake of additional—and moreover in reality merely indirect—incentive creation.

- ***AI and violation of rights: the choice of remedy***

6.1 – Can an AI output infringe, and to what extent? Who would be liable?

Yes, AI output can infringe, to the same extent as non-AI output can infringe. An AI system cannot be liable in itself, as it lacks the requisite legal personality. Tort liability for AI activity under Belgian law has been the subject of extensive research by Jan De Bruyne, Elias Van Gool and Thomas Gils.[104] As noted by them, 'the application of tort liability regimes may prove to be challenging in an AI-context. Fault-based liability, for instance, in most cases requires a comparison between the intrinsically human standard of the general duty of care and the highly technical and opaque factual context of AI systems. (…) The core of Belgian tort liability is still formulated as rules based on six articles in the OBCC (Articles 1382–1386bis) and some additional legislation. However, these provisions are very vague, leaving most of the task of deciding the content of the rules to judges. Arguably, judges will play an (even more) important role to determine the scope of application of these concepts within an AI-context. Policy-makers may also have to addresses several issues in the future, for instance regarding the further refinements of the burden of proof when damage is caused by AI systems.'[105] At present, therefore, significant uncertainty remains, especially in cases where the AI system acts as an autonomous decider and there is insufficient human intervention.[106]

[102] cf Frank Gotzen and Marie-Christine Janssens, 'Kunstmatige Kunst. Bedenkingen Bij de Toepassing van Het Auteursrecht Op Artificiële Intelligentie' [2019] AM, 333–334.
[103] See re the (limited) economic impact of the Database Directive among others 'Study in support of the evaluation of Directive 96/9/EC on the legal protection of databases' (2018) <https://bit.ly/2ZZB1pD>.
[104] Jan De Bruyne, Elias Van Gool and Thomas Gils, 'Tort Law and Damage Caused by AI Systems' in Jan De Bruyne en Cédric Vanleenhove (eds), *Artificial Intelligence and the Law* (2nd ed, Intersentia 2023) 395–447.
[105] Ibid, 446.
[106] See in relation to liability for IP infringement in an AI context in particular Camille Vermosen, 'Copyright, Liability and Artificial Intelligence: Who is Responsible When an Artificial Intelligence System Infringes Copyright in the Context of the EU?' (master thesis KU Leuven 2017).

In view of this, the ongoing legislative process at the EI level in the context of the draft AI Liability Directive[107] and the revision of the Product Liability Directive[108] deserves to be closely monitored. Arguably, a risk management approach may be advocated, which places liability with the person who is in the best position to minimise the negative effects and the risks associated with the faulty operation of the AI system at issue, potentially coupled with a (mandatory) insurance for damage caused by an AI system. Awaiting further legislative action, contractual solutions to mitigate risks are desirable.[109]

6.2 – Are there other legal means (e.g. unfair competition, parasitism) to engage the liability of the person responsible for the AI output? (Who would that person be?)

In addition to the general rules on contractual and extracontractual liability, Belgian law provides an extensive legal regime that delineates the boundaries of (un)fair competition in both a B2B and B2C context. While no relevant case law has been uncovered so far, it is believed that the application of Article VI.104 BCEL may be envisaged in such a context. This provision prohibits any act contrary to honest commercial practices whereby a company harms or may harm the professional interests of one or more other companies. Provided that a company may be held accountable for certain harmful AI output, as discussed in the answer to question 6.1 above, such output may contribute to an act of unfair competition in the sense of Article VI.104 BCEL.

6.3 – Beyond copyright, can personality rights prevent the realization by an AI of a production using the voice or physical aspect of another person?

Yes. Under Belgian law, physical persons have a right to control the use of their voice as a physical expression of their personality, independently of any message conveyed. This right is a personality right that exhibits the same characteristics as a person's right to image and name. The scope of these rights under Belgian law has been extensively researched by Dr Nicolas Debruyne during his PhD research at KU Leuven.[110]

[107] Commission, 'Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive)' COM(2022) 496 final.
[108] Commission, 'Proposal for a directive of the European Parliament and of the Council on liability for defective products' COM(2022) 495.
[109] Bridget Watson, 'A Mind of Its Own – Direct Infringement by Users of Artificial Intelligence Systems' (2017) IDEA 31.
[110] This doctoral dissertation was published as: Nicolas Debruyne, *Commerciële Exploitatie van de Menselijke Afbeelding, Naam en Stem* (Recht en Onderneming 54, die Keure 2021). It is available via <https://bit.ly/3AVjNZm>.

- ***Question of transparency and remuneration***

7.1 – In your country, is there a requirement (legal, administrative, jurisprudential, arising from practice) that AI-generated content in general be declared as such (see for example in Europe, the AI Act of April 21, 2021[111] and the more nuanced position of the Council of the European Union of November 2022[112])?

Not at present. However, as noted in the question, reference may be made to transparency obligations such as those proposed in the draft AI Act regarding, for example, chatbots.

As noted above, it is increasingly difficult to distinguish output in the creation of which AI played a certain role from creations that were made solely by a human author. While this issue could in theory be remedied by requiring aspiring IP owners to disclose AI intervention in the creation and/or innovation process, the practical application of such a requirement would be problematic.[113] Indeed, the prospect having a work be "banished" to the public domain would provide stakeholders seeking a return on investment with strong incentives to keep quiet on this point. Thus, this could invite misleading statements on authorship and/or inventorship of AI-generated output in the future.

7.2 – If applicable, how is the sharing and payment of remuneration carried out when AI is involved in the creative process?
7.3 – If applicable, how is the sum linked to the AI allocated (cultural action? payment to other rights holders...)

It is felt that these questions are best answered jointly. There is no existing express solution for either issue under Belgian law.

Internal distribution mechanisms used by CMOs that quantify performers' contributions by using a proportionate division drawing from a points-based system may fulfil a clarifying role in this regard. By way of example, in the context of the division of remuneration rights, the Belgian performer CMO PlayRight accords 15 points to both featured artists and conductors of groups that exceed 12 musicians, while session musicians are granted 5 points per instrument group[114] to which their performance relates, with a maximum of 3 instrument groups.[115] After the points have been added, a proportionate division takes place, with a minimum guarantee of 30 percent to the benefit of featured artists and conductors.[116] An analogue solution that takes account of the contribution of an AI system could be envisaged.

[111] See <https://bit.ly/425Igav>.
[112] See <https://bit.ly/42eNwss>.
[113] Brian Higgins, 'The Role of Explainable Artificial Intelligence in Patent Law' (2019) 31 Intell Prop & Tech LJ 6, 34–35.
[114] The seven instrument groups referred to are keyboard, string and wind instruments, percussion, melodic percussion, mechanical instruments and vocals.
[115] Art 26 *Algemeen Reglement PlayRight* (2020) <https://bit.ly/3lM9iQ2>.
[116] ibid.

Another option could be to undertake a comparative assessment that takes account of the nature and extent of the contribution(s) of the AI system. By way of example, in the music industry, musicology experts may have an important role to play in this context. These expert witnesses draft extensive reports containing detailed analyses of the music at issue as well as historical and conceptual arguments. Thus, they seek to objectify the creative process to the largest possible extent, through both a quantitative and qualitative assessment. This could also constitute a potential avenue for the determination of the appropriate distribution of revenues between non-AI stakeholders and their AI-powered counterparties.

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