

## Artificial Intelligence & Intellectual Property

### Theme 9 Artificial Intelligence & Intellectual Property: Creator of Robots and Creative Robots

#### Point of View

Alexandra Mendoza-Caminade  
University professor

#### **Will AI affect the traditional concepts of intellectual property? If so, how, and how will the law change?**

Major technological advances have enabled some artificial intelligence (AI) systems, called connectionist, to independently create things that previously only humans could. As rapidly changing AI and robotics technology have made AI systems more autonomous, we have given them abilities that radically change the creative process. The creations produced by these systems have qualities that are comparable to surpass those of human creations.

Compared to previous technological advances, the major difference with AI is that it is no longer simply a tool that helps people create, it creates by itself. It has become an intelligent system that, in some cases, creates without direct human intervention in the creative process.

Although this technological evolution is still in its infancy, the concept of creation must be reassessed. Whether we are talking about literary or artistic creation or industrial inventions, we must determine how intellectual property law should handle creations produced by AI systems and how it should assign rights among the parties involved: the designer of the AI system, the system's owner, and the system's user.

In particular, we must decide whether AI-generated artistic or literary creations can be classified as “intelligent creations” and protected by copyright, and whether AI-generated “inventions” can be protected under patent law. This has become a pressing issue with respect to patents. It would require granting an AI system the status of inventor—a status reserved to humans until now, just like the status of author for literary and artistic works. [A1]

The controversy is lively because copyright is a humanist law that protects the work of a human creator. For it to apply in an AI context, considerable efforts will have to be made to interpret and possibly revise the relevant concepts.

#### **Must we reform the intellectual property system in order to provide balanced protection for works and inventions produced by machines? What about protecting an AI system as a whole and the data it uses?**

AI is shaking things up in intellectual property law, which was developed with humans in mind and more specifically, with the belief that creativity and innovation are human traits. Autonomous AI is challenging that belief, forcing us to consider whether intellectual property law can be used to protect creations produced by AI. Doing so would distort the basic concepts of “original intellectual creation” and “patentable invention,” as well as the status of author and inventor. The transfer of rights over the creation would also cause problems.

#### **Should current intellectual property law be amended to maintain patent and/or copyright law “at all costs”?**

Incorporating AI-based creations into intellectual property law would distort that law. It would therefore be better to consider a different basis for legal protection. Since no appropriate law currently exists, a *sui generis* law could be an attractive way to increase value and strengthen protection for the companies concerned. Protection would be based solely on the result obtained by the AI system, using an objective definition of the creative process that does not refer to human beings. [A2]

*European and international institutions are currently working on these issues and the authorities will have to take a position on broadening intellectual property law to include AI-generated creations.*

## Artificial Intelligence & Intellectual Property

### Point of view

**Olivier Breillacq**

**Founder and Director, Octopize**

**There has been a lot of inflammatory talk about the data sets used by AI recently. Does the GDPR provide adequate protection?**

The General Data Protection Regulation (GDPR) does its job very well. It provides the personal data protection that people have a right to. There are two types of data uses. The first is personal and requires that individuals be identifiable. The second includes all the other uses, such as statistical analysis, data sharing to foster innovation, and the development of AI models. The problem is that personal data are used for both types of use, but only the first requires being able to identify people. In the second case only “non-personal” data are needed, but because it is easier for processors<sup>[A3]</sup>, personal data are used even for these uses. The result is what I call “the bad compromise” between data protection and use.

The GDPR recommends taking security measures such as pseudonymization to protect personal data, but pseudonymization is not protection. People can still be reidentified. The GDPR also encourages using anonymization to generate “non-personal data.”

Unfortunately, people often confuse pseudonymization and anonymization. Pseudonymized data have been stripped of their direct identifiers (such as first and last names and address), which are replaced by a code, but the indirect identifiers are kept (size, weight, heart rate, etc.). The data are thought to be anonymous, but that is not the case. An individual can be reidentified by accessing the database and comparing the data with information in the database. It's as easy as that. In some cases, however, such as in healthcare, using pseudonymization so that people can be reidentified is a good idea.

**How can personal data be protected while reconciling data sets? What balance should be struck between the GDPR and technological progress<sup>[A4]</sup>?**

I am convinced that there is currently no reason individuals should be at risk of being reidentified during AI analysis. The GDPR protects individuals' personal data and we can applaud that. The next step is to promote massive use of anonymization, which would make it possible to use data for the good of everyone while respecting everyone's rights.

The solution is to change mindsets, to say that it is high time we used personal data only for personal uses. For all other uses, we must stop using personal data and, therefore, implement mass anonymization. Today we can very well reconcile privacy with the development of AI models by using anonymized data.

It is an issue of ethics that our society must resolve with quickly. In 10 years, we will be shocked by how data is used today. Too often, data use takes precedence over individuals' privacy.

At Octopize, we have developed anonymization technology that uses personal data to generate synthetic (non-personal) data that we call avatars. This technique maintains the initial data quality but prevents reidentification. That means we can share data without revealing the identity of the people they came from—and can therefore use the data ethically. Using avatars also means that when data is analyzed, for example to produce statistics on a particular type of processing, to share data with a research institute, or to develop AI algorithms, the data is truly anonymous.

# Artificial Intelligence & Intellectual Property

By **Jonathan Rofé**, partner, DLA Piper  
and **Marion Barbezieux**, attorney

**2022:** The market for creative works offered in the form of non-fungible tokens (NFTs) is estimated at almost \$40 billion. Based on the blockchain technology underlying them, NFTs promise to guarantee the uniqueness and ownership of each work, even though most are created using artificial intelligence (AI).

At the same time, digital players are racing to develop ever-more powerful algorithms and increasingly “human” AI systems. Given how much they invest in research and development, these players are very concerned about protecting the fruit of those investments, and thus ensuring that their economic model is sustainable and their innovations are profitable.

Intellectual property law aims precisely to reward creators’ efforts by granting them protective rights, but it does not yet deal with AI in general. While a special regulation is pending, the European Parliament has recommended expanding traditional intellectual property law to include artificial intelligence.<sup>1</sup>

Creators of robots may therefore wonder to what extent the law protects (1) [A5] robots and (2) creations produced by robots.

## 1. Creators of robots: how does the law protect AI technology?

“Artificial intelligence” may refer to both a “software robot” composed of algorithms (like chatbots) and a “physical robot” that houses software robots in an animated structure (such as a humanoid). In fact, it is a set of technological components for which intellectual property law does not offer [one, unique kind of protection][A6]. Instead, a collection of specific protections may be combined. The protections covering the components of AI systems must be distinguished from protection of AI systems as a whole.

### 1.1. Protection of AI-system components

From its “brain” to its hardware cover, let us see how a robot’s components are protected.<sup>2</sup>

#### 1.1.1. Algorithms

Algorithms are central to our daily lives. From the Google search engine to Netflix’s recommendation system and the targeting tools that keep users on social media longer (such as on Tiktok) via videosurveillance with facial recognition, most recent technologies are run by specialized algorithms.

Wrongly viewed as a complex concept, an algorithm is actually pretty much like a recipe: a set of instructions to be followed to achieve a result. An algorithm is thus to AI as the neuronal network is to human beings.

Writing powerful algorithms that can efficiently exploit big data and master motricity have become the principal challenge for robot creators. [We are currently in an age of “governance by algorithms.”][A7]

The economic value of an algorithm is the reason algorithm developers—who are not necessarily the creators of the robots that house or use the algorithm—want legal protection for their algorithms. They must be prepared to be disappointed.

---

<sup>1</sup> European Parliament resolution of February 16, 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).

<sup>2</sup> The method used here is based on the distributive application principle of intellectual property rights developed in French case law concerning video games: so-called “complex works” composed of several elements covered by different legal regimes. See Cass. Civ. 1, June 25, 2009, No. 07-20.387.

## Artificial Intelligence & Intellectual Property

At first glance, neither copyright law nor patent law protects algorithms. Under copyright law, an algorithm is a series of mathematical operations, that is, an idea, principle, or method that cannot be protected because such things are “free to circulate” and cannot be appropriated. And patent law expressly excludes scientific theories, mathematical methods, and computer programs from its scope.

Indirect—and incomplete—protection may be had under copyright law, however, by protecting the software. When an algorithm is incorporated into the source code of “original” software (as defined by copyright law), the software, and therefore its intelligent core, the algorithm, can be protected. But since this protection extends only to the source code and not the algorithm itself, a third party that lawfully extracts the algorithm from the software would be free to use it.<sup>3</sup>

Patent law also protects an algorithm that is incorporated into a machine if, “when it is run on a computer, it produces a further technical effect.”<sup>4</sup> However, the advantages of such protection must be weighed against two major disadvantages of patent filings:

- patent claims must include a detailed description of the algorithm, which will thus be disclosed to the public and competitors; and
- filing protects only the version of the algorithm described in the claims, such that a new patent must be filed for each new version. In practice, that is impossible.

### 1.1.2. Software

As the AI system’s backbone, the software is of key importance. By transforming algorithmic modalities into instructions that a machine can understand, the software makes it possible to configure the AI system’s operation and equip it with capabilities.

The protection offered this linchpin is clearly inadequate, however. It is true that software is protected by a specific copyright regime<sup>5</sup> in which the originality criterion has been modified to fit software’s characteristics. It thus requires a showing that the software’s creator made choices evidencing a “personalized intellectual effort.”<sup>6</sup>

But this protection covers only the form of the software, that is, the program’s architecture, the source code, object code, and preliminary design materials.<sup>7</sup> Interfaces and features, which are ideas underlying the software, are not protected at all.<sup>8</sup> Even though they are the key to innovation, features (such as a robot’s ability to raise its arm) may be reproduced if they are recoded without violating the copyright.

Only patent law can help software, but only if the software is part of a patentable invention.

### 1.1.3. Databases

A machine’s intelligence depends on its ability to analyze data and make predictions based on that analysis. Such intelligence is not innate; it is the result of continuous learning. An AI system’s performance thus requires that it be fed data continually. Having veritable warehouses of organized data at one’s disposal, as the GAFA companies do, is therefore a powerful economic weapon.

---

<sup>3</sup> CJEU, May 2, 2012, case C-406/10, *SAS Institute*.

<sup>4</sup> EPO Board of Appeal, IBM I T 1173/97, July 1, 1998; IBM II 935/97, February 4, 1999.

<sup>5</sup> French Intellectual Property Code art. L. 112-2 13°.

<sup>6</sup> Cass., plenary ass., March 7, 1986, No. 83-10.477, *Pachot*.

<sup>7</sup> Any multimedia elements incorporated into the software, e.g., the robot’s voice or images, are protected by specific provisions of the French Intellectual Property Code.

<sup>8</sup> Directive 2009/24/EC of April 23, 2009, Recital 11.

## Artificial Intelligence & Intellectual Property

An AI database can be understood two ways. Its arrangement—the container—will be protected by copyright in the rare cases where the criterion of original intellectual creation is satisfied, that is, where the database’s structure and organization are not dictated by technical considerations or constraints that do not leave room for creative freedom.<sup>9</sup>

More importantly, all of the data in the database (the content) will enjoy protection under the *sui generis* law of database producers, which rewards those who show that “a substantial financial, material, or human investment” was made to constitute, verify, or present the base’s content.<sup>10</sup> Such producers will therefore be able to prohibit the extraction or reuse of all or of a qualitatively or quantitatively substantial portion of the content. But they will have to show that the investment made to constitute the database can be separated from the [other[A8]] investments made.<sup>11</sup> And creators of offers developed with AI-based Web-scraping tools (even though the sites are “public”) have cause to be worried.

### 1.1.4. Technical innovation and aesthetics

AI systems occasionally incorporate innovative technologies that are the result of substantial investments (a particular type of motricity, a sense developed by special sensors,<sup>12</sup> software that improves machine learning capabilities, etc.).

If these inventions satisfy the criteria of novelty, inventiveness, and industrial application, the inventor may obtain protection under patent law and thus enjoy a use monopoly in exchange for disclosing the technical innovation. Although costly, a patent is a particularly useful investment for an invention that is easy to reverse engineer and is therefore at significant risk of patent infringement.

In addition, the visual aspect of a humanoid or animaloid robot may, as an aesthetic innovation, be protected under the law of drawings and models if it satisfies the criteria of novelty and individual character[A9]. It is also possible to obtain trademark protection for the name of the creation.

### 1.2. Protecting the AI system as an indivisible whole

Creators of AI systems rarely design the technology alone. Instead, they assemble components created by others. The question of who has intellectual property rights over each component must therefore be answered, first to make sure the components are used lawfully, and second to determine the creator’s rights over the AI system as a whole.

If a component is ordered from an external provider or, as is more often the case, belongs to a third party, the AI system’s creator must obtain a transfer of rights or at least a license to use the component.

If a component is created by an employee of the AI system’s designer as part of their job, the related rights will be automatically transferred to the designer/employer whether the AI system is software or a patentable invention. In the case of a patent, however, the transfer must give rise to additional compensation, which can be a problem.

And in the case of employee creations protected by other intellectual property rights, employees must sign express, specific transfers of rights.

Some components may also be available as open source. Collaborative platforms such as the robot operating system<sup>13</sup> offer freely accessible tools and software libraries with which one can create a complete robot operating system. The idea is to give AI creators a common hardware and software base incorporating the technological advances made by the community so they can concentrate on perfecting those advances or on creating new applications for them.

---

<sup>9</sup> CJEU, 3rd ch., Oct. 18, 2012, case C-173/11, *Football Dataco Ltd v. Sportadar GmbH*.

<sup>10</sup> French Intellectual Property Code art. L. 341-1 *et seq.*

<sup>11</sup> This principle was reiterated, in particular, in [Cass.] Civ. 1, *Pressimmo On Ligne v. Yakaç*, Nov. 12, 2015.

<sup>12</sup> The sensor technology underlying the artificial sight developed by Chronocam, which functions almost like the human retina, is protected by more than 20 patents.

<sup>13</sup> <https://www.ros.org/>

## Artificial Intelligence & Intellectual Property

In practice, open source will allow them to use, copy, redistribute, and/or modify software that has freely accessible source code, provided they comply with the applicable open-source license(s). However, some of these licenses, and in particular the general public license (GNU-GPL), impose strict limits on reusing code or developing works derived from the code originally made available.

These so-called restrictive licenses may have a “contamination” effect (which fans of open-source software prefer to call “reciprocity”): any program developed—even marginally—from an element of code covered by this type of open-source license, and even software that may be interfaced with it, may be entirely subject to the terms of that license. In other words, a developer who incorporates open-source software into their system may have to disclose the source code for all the system’s other component software.

Furthermore, if a developer opts to distribute or market their creation, they will not be able to retain title to their contributions but must instead grant the same rights over them as they enjoy over the “freely accessible” component. Take, for example, a humanoid robot that very realistically simulates human movements, and assume that those features were developed using open-source software under a restrictive license. When marketing the robot—and thereby distributing the software that runs it—the developer must disclose all of the source code that was used to develop those features. Competitors will then be able to create similar machines and the robot will lose at least some of its “innovative” value.

Given the number of software programs on the market that include freely accessible components and companies’ increasingly “proprietary” interest in open-source libraries (as illustrated by Microsoft’s acquisition of GitHub in 2018), creators of AI systems are encouraged to be extremely careful about using freely accessible components as their creations may, in the end, be worthless. Note also that the Court of Appeal of Montpellier has found that a company that had its employees develop software using open-source code did not hold the rights to that software.<sup>14</sup>

Once assured of its proprietary rights over the AI system as a whole<sup>[A10]</sup>, a company may want to protect its innovation. In the absence of a regime specific to AI, the “trade secrets” regime seems to be an avenue worth exploring. It will protect preparatory documents that lead to creating an AI system, provided they are not public or “easily accessible,” were the subject of reasonable measures designed to keep them confidential, and have “commercial value” because they are secret<sup>[A11]</sup>.<sup>15</sup>

Non-disclosure and non-competition agreements will therefore have to be written carefully, clearly describing the confidential information and identifying who must keep it confidential. In the event of unlawful disclosure, the injured party may sue for unfair competition, economic parasitism, or breach of contract.

The European directive of June 8, 2016 on trade secrets thus provides harmonized<sup>[A12]</sup> protection within the EU for creators of robots, subject only to a time limit on disclosure of the confidential information. This harmonization “should [in fact] make it easier for the players to implement their non-disclosure policies and provide a regime that protects those left behind by intellectual property law: inventions that have been completed for which no patent application has been filed, marketing studies . . . and algorithms (which case law regularly holds cannot be protected by copyright).”<sup>16</sup>

## 2. Creative robots: How does intellectual property law protect creations produced by robots?

---

<sup>14</sup> CA Montpellier, March 1, 2016, No. 12/06117.

<sup>15</sup> French Commercial Code art. L. 151-1.

<sup>16</sup> K. Disdier-Mikus and H. Miereanu, “Transposition de la directive secret d’affaires : une loi attendue et presque à l’heure!” [The incorporation of the trade secrets directive into French law: a highly anticipated law that’s almost on time!], *Echos Business DLA Piper*, available at: <https://business.lesechos.fr/directions-juridiques/partenaire/partenaire-1689-transposition-de-la-directive-secret-d-affaires-une-loi-attendue-et-presque-a-l-heure-322377.php>



## Artificial Intelligence & Intellectual Property

Despite the growing role robots are playing in today's society, the law has barely addressed the issues that raises. It is especially important that we decide how AI-generated creations—and their dissemination—are to be protected. While intellectual property law is currently not a good fit for such creations, it does provide a few solutions.

### 2.1. From tools to creators, robots have evolved

Until recently, AI was used primarily in industrial robots and computer-assisted engineering as a tool that facilitated creation by repeating pre-programmed actions while humans controlled the creative process, such as in desktop publishing and computer-assisted design.<sup>17</sup>

It is undeniable that a person who leaves their personal imprint on AI-generated creations may be deemed an author. The French courts have long held that using a machine “does not cause the work in question to lose its originality or novelty,”<sup>18</sup> and since 2000 have expressly recognized that a computer-assisted creation can be protected.<sup>19</sup>

But the faster pace of innovation, greater computational power and storage capacity, and algorithms' greater efficiency is giving robots greater autonomy and increasing their ability to analyze, learn, and even create by themselves. Today there are robots that can paint and even exhibit their work,<sup>20</sup> or write poems<sup>21</sup> or screenplays,<sup>22</sup> without human intervention.

And their works have value, even if it is only speculative today. For example, in 2021 a digital work of art created by Sofia, a robot developed by Hanson Robotics, was sold as an NFT for the record amount of nearly €580,000.<sup>23</sup>

So depending on how they are configured and the data they are fed, robots can learn and evolve to the point where they can make independent decisions that express choices<sup>[A13]</sup>, such that the final product is created through a process that is almost equal to human reasoning.

AI systems have thus evolved from mere subjects of law to creators of works similar to those that may be the product of human creativity. It is entirely possible for such systems to produce inventions, drawings or models, or any other object that may be protected. Does that make them subjects of rights? Can intellectual property law protect their creations even when the only human intervention is to launch the technical (rather than the creative) process?

### 2.2. Why intellectual property law cannot easily be interpreted to cover creations produced by AI systems

The existing legal framework cannot yet be applied to creations produced without significant human intervention, primarily because robots do not satisfy the conditions for copyright protection under Article L. 111-1 of the French Intellectual Property Code.

The requirement of originality, the cornerstone of French copyright law, emphasizes the link between creator and creation. The work must bear the author's imprint, but no AI system in existence today is aware of the aesthetic or artistic effect produced by its purely mechanical action of creation.

---

<sup>17</sup> For example, Flow Machines, an AI system developed by Sony, helps musicians write music by drawing on a vast database of scores to compose new pieces. However, it cannot create a “musical style” or make aesthetic choices.

<sup>18</sup> Douai, Dec. 4, 1964, *LNF v. Ass. USVA*, Ann. 1965, 218. 1.

<sup>19</sup> Regional Court (*TGI*) of Paris, 1st ch., July 5, 2000: “computer-assisted musical composition, when it involves human intervention [such as] author choices . . . results in the creation of original works.”

<sup>20</sup> <https://www.franceculture.fr/emissions/le-reportage-de-la-redaction/le-premier-artiste-robot-expose-a-oxford>

<sup>21</sup> <https://qz.com/682814/i-want-to-talk-to-you-see-the-creepy-romantic-poetry-that-came-out-of-a-google-ai-system/>

<sup>22</sup> [http://www.lemonde.fr/pixels/article/2016/06/10/une-intelligence-artificielle-ecrit-le-scenario-d-un-court-metrage\\_4947819\\_4408996.html](http://www.lemonde.fr/pixels/article/2016/06/10/une-intelligence-artificielle-ecrit-le-scenario-d-un-court-metrage_4947819_4408996.html)

<sup>23</sup> <https://www.20minutes.fr/high-tech/3015011-20210406-une-oeuvre-d-art-cree-par-un-robot-vendue-plus-de-580-000-euros#:~:text=L'auteur%20de%20l'oeuvre,ses%20apparitions%20ici%20et%20%C3%A0>

## Artificial Intelligence & Intellectual Property

AI-generated “non-intelligent creations” may, however, be deemed original due to the French courts’ recurring confusion between novelty and originality.

More importantly, given how fast technology changes, it is conceivable that robots will one day be aware of their actions. When that day comes and an AI system is able to function completely autonomously without any prior human intervention to configure it, the French Intellectual Property Code’s requirement of originality, in its strict sense, should be satisfied.

Then, the only thing a high-AI system looking to be recognized as an author would be missing is legal personality, the *sine qua non* of a rightsholder.

To date, robots do not enjoy any more legal rights than animals do, and would probably be treated the way a U.S. court treated Naruto, the macaque/photographer who was denied the copyright to his famous selfie.<sup>24</sup>

That decision is entirely in line with the regulation adopted by the United States Copyright Office in 2014, which heavily emphasizes humans’ central role in the creative process and expressly provides that if there is no human author, works produced by animals, plants, or nature are not protected by copyright.

It remains to be seen whether the French regulatory agency will follow that line of thinking or, rather, the French National Assembly’s suggestion (in its resolution of February 16, 2017<sup>25</sup>) that discussions be held on whether it is time to grant robots legal personality.

Representative Pierre-Alain Raphan resoundingly answered “no” on January 15, 2020, when he proposed a charter on artificial intelligence and algorithms that expressly denies legal personality to systems that use artificial intelligence (Article 1, paragraph 2).<sup>26</sup>

Similarly, on January 28, 2020, the European Patent Office published its decision denying two applications for European patents because an AI system was named as the inventor.<sup>27</sup> The Office believes that only a human being can be the inventor of a patentable invention.

Granting legal personality to AI systems would in any case cause difficulties, one of the first being to determine which liability regime would apply to their actions.

But more importantly, as the degree and nature of artificial intelligence varies significantly depending on the area of application, a threshold level of autonomy or intelligence would have to be set, and legal personality granted only to systems that exceed that threshold.

To determine whether an AI system crosses the threshold, Turing’s historical test for assessing a program’s intelligence no longer seems adequate given today’s technological advances. Though some people believe it still sets the standard, it is based solely on a machine’s ability to imitate a human conversation,<sup>28</sup> which excludes many robots that have been highly perfected but do not have the features required to even take such a test.

---

<sup>24</sup> *Naruto v. Slater*, No. 16-15469 (9th Cir. 2018).

<sup>25</sup> See note 1, above.

<sup>26</sup> Proposition de loi constitutionnelle no. 2585 relative à la charte de l’intelligence artificielle et des algorithmes [Proposal no. 2585 for a constitutional law concerning the charter on artificial intelligence and algorithms].

<sup>27</sup> Applications EP 18 275 163 and EP 18 275 174.

<sup>28</sup> The “Turing test” (1950) measures a machine’s ability to think. To be qualified as high AI, the machine must, after five minutes of conversation, have fooled more than 30% of its conversation partners such that they think they are speaking with a human being rather than a machine.



## Artificial Intelligence & Intellectual Property

Lastly, the issues of who owns a robot's creations and the practical and legal issues concerning dissemination of those creations must be addressed.

### 2.3. Potential solutions

If the law does not change on this issue, the ownership of works generated entirely by AI systems may be resolved by considering that they fall immediately into the public domain, though that would not eliminate the need to establish criteria for categorizing such works.

Another option would be to transfer the intellectual property rights related to such creations to the humans who helped create the AI system and, by extension, that system's creations. Among the potential rightsholders, two in particular stand out: the robot's creator who, by programming it, enabled the robot to become a creator; and the robot's third-party purchaser (the end-user) who triggers the creative process and has virtual or physical control over the robot.

Granting rights directly to the robot's user (who has custody of the robot) rather than to the creator has a certain logic to it. If the AI system is sold and used by someone other than the programmer, granting rights to the programmer could mean they will have rights over creations they are unaware of or had not foreseen.

The United Kingdom resolved this issue by providing, in Section 9(3) of the Copyright, Patents, and Designs Act 1988, that "in the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken." That person is most likely the robot's user, who acquired the machine to take advantage of its creative potential.

The World Intellectual Property Office (WIPO) [A14] also seems to have opted in favor of granting rights to the robot's end-user: "The copyright owner in such works can basically only be the person or persons who produced the creative element without which the resulting work would not be entitled to copyright protection."<sup>29</sup>

On the contrary however, on July 30, 2021, the Federal Court of Australia held that an AI system could very well be considered an inventor.<sup>30</sup> Even though Australia's Commissioner of Patents has appealed the decision, the boundaries seem to be shifting.[A15]

Be that as it may, with "learning" robots, the creation will not reflect the human user's personal choices. Given that there is little to no human participation in the creative process, it does not seem appropriate to grant the user intellectual property rights over the creation.

It does seem appropriate, however, to grant the robot's creator a *sui generis* right over the robot's creations given the considerable investments made to design and educate the robot. That *sui generis* right would provide a foundation for a copyright, which could then be transferred to the end-user who exploits the robot's creative potential.

This solution would have two advantages. First, such works would not be in danger of losing value by falling immediately into the public domain, and second, innovation would be promoted because creators of robots would be assured of a worthwhile return on their investment.

But until the necessary changes have been made to intellectual property law, contract law will be the best way to clarify and protect the intellectual property rights of the various parties involved in creating a creative robot.

---

<sup>29</sup> WIPO, "Second Committee of Governmental Experts on Copyright Problems Arising from the Use of Computers for Access to or the Creation of Works," *Copyright: Monthly Rev. of the World Intellectual Property Organization (WIPO)* 115:9 (1982), p. 247, para. 16.

<sup>30</sup> *Thaler v. Commissioner of Patents* [2021] FCA 879.