Kluwer Copyright Blog

Ex Machina, Ex Auctore? Machines that create and how EU copyright law views them

Ana Ramalho (Maastricht University) · Monday, November 12th, 2018

The creation of works by artificial intelligence systems (AIS) challenges our perception of creativity and, with it, of eligibility for copyright protection. Examples abound. AIS can autonomously create paintings, literary works, music, or even artificial photos. Were these works created by a human being, their eligibility for copyright protection would not be controversial. However, it is unclear whether the copyright framework can accommodate AIS as creators, or whether works automatically generated by an AIS can qualify for protection under copyright law.

International treaties do not provide a definition of authorship (even though, as I have pointed out elsewhere, an argument could be made that the international norms are crafted to cater for a human author). In the EU, authorship is only addressed in the Software Directive, the Database Directive, and the Rental and Lending Rights Directive. However, the last of these only establishes an authorship rule in relation to cinematographic works (which is then repeated in the Satellite and Cable Directive and the Term of Protection Directive); and the Software and Database Directives leave a considerable amount of leeway to Member States (stating that the author of a computer program/database can be either the natural person or the group of natural persons that created the work, or the legal person defined as a right holder under national law). Interestingly, though, the legislative history of both the Software and the Database Directives refers at some point to a "human author." The Proposal for a Software Directive comprised a provision on computer generated works that never made it to the final draft, where it was stated that "a human 'author' in the widest sense is always present." The Explanatory Memorandum to the Proposal for a Database Directive clarifies that it intended to restate the "fundamental principle of the Berne Convention[…] that the human author who creates the work is the first owner of the rights in that

work."

As for conditions for protection, in the EU works must be original in the sense that they are the author's own intellectual creation – a requirement statutorily set in relation to software, databases, and photos (in the Software, Database, and Term of Protection Directives, respectively), and then extended by the Court of Justice, via its *Infopaq* decision, to subject-matter falling within the scope of the Information Society Directive. This definition of originality has embedded in it the notion of creativity, as becomes apparent from further decisions of the Court of Justice: in its *Football Dataco* decision, the Court ruled that a work will be its author's own intellectual creation where the author was able to make free and *creative* choices, thus stamping her own "personal touch." In the *BSA* case, the Court mentioned the need for the author to express his *creativity* in an original manner and achieve a result which is an intellectual creation of that author. Moreover, the Commission's Review of the legal framework in the field of copyright and related rights (SEC(2004)995) has also mentioned that "[o]riginality corresponds to the independent *creativity* of the author as reflected in his or her literary or artistic creation."

In other words, in order for a work to be original in the sense that it is the author's own intellectual creation, it must be creative, or it must display the author's creativity. The problem is that the concept of creativity is not defined in legislation or case law. In its Opinion in the *Football Dataco* case, the Advocate General excluded any assessment as to the quality or artistic nature of the work when judging whether said work possesses a creative element. A similar statement can be found in Recital 8 of the Software Directive ("[i]n respect of the criteria to be applied in determining whether or not a computer program is an original work, no tests as to the qualitative or aesthetic merits of the program should be applied"). The extent to which it is possible to separate a finding of creativity from an evaluation of a work's (cultural and artistic) value is of course subject to discussion (an excellent analysis of this point can be found here).

In the absence of a positive legal definition, some answers can be found in other areas where the subject of creativity has been explored in depth. For instance, psychologists consider that creativity encompasses at least two elements: novelty and appropriateness (see, e.g., here). In other words, the creative product must be new and valuable. Beyond these two elements, however, there is little consensus in Psychology as to what creativity is or what it entails. In her seminal work *Creativity in Context*, Teresa Amabile suggested that, for a product to be creative, the underlying process must also be heuristic (where the path to the outcome is not straightforward) rather than algorithmic (where there is a clear and straightforward path to the outcome). The example that Amabile gives of the latter is telling: "[A]n artist who followed the algorithm 'paint pictures of different sorts of children with large sad eyes, using dark-toned backgrounds' would not be producing creative paintings, even if each painting were unique and technically perfect." She goes on to explain that a task or process might be heuristic or algorithmic depending on the creator in question, stating that "if the task is heuristic for the individual in question, then novel and appropriate solutions generated by that individual can be considered creative." This suggests that, according to this theory, an assessment of creativity needs to focus on the outcome, but also on the process of creation – with the consequence that an outcome that is the result of a heuristic process can be considered creative, while a similar outcome resulting from an algorithmic process will not. Or, to put it differently: a work produced by a human being might be considered original, while the same work produced by an AIS will not.

Similarly to psychologists, scholars from the field of Philosophy hold that, in order for a work to be creative, it must be new and valuable; also similarly to Psychology, in Philosophy some authors

have recommended some requirements be added to these. For instance, Hausman (see his work here) holds that the work must be the result of a blend of spontaneity and direct control (the latter because, inter alia, the creator also exercises "critical judgement in deciding what to accept and reject when possibilities occur to him" – something akin to the "free and creative choices" required by the CJEU). This point is key when discussing the eligibility of AI-generated works for copyright protection: AIS depend on technical rules and programming by a human being, and thus it could be argued that the AIS is not making any "free and creative" choice. Rather, when "creating" a work, an AIS is choosing among a range of possible pre-determined options. It lacks imagination and "out-of-the-box" thinking, in the sense that it must be fed knowledge of different styles and representations to be able to produce works. In other words, AIS do not have the specific blend of spontaneity and rational choices that is inherent to a human creator.

If AIS creations cannot be considered original, then they should be considered as public domain works. Of course, this makes the distinction between AIS creations and AIS-aided creations extremely relevant, if difficult (see for an illustration of such difficulty the example of Computoser, an AIS that algorithmically generates music, although its creation may be based on nine criteria chosen by the user).

On a policy level, it should also be noted that there is not much justification to protect AIS creations. Taking copyright rationales into account, the creator of the work – the AIS – does not need an incentive to create, nor does it make sense to protect works as an extension of its (non-existing) personality, or to award it a reward for its (non-existing) effort to create. The human being who owns (or is in possession of) the AIS might need an incentive to disseminate the AI-generated works; but that is a different question from granting copyright protection to the work itself. A solution like a neighbouring right for disseminators of AIS creations (much like the publisher's right in the publication of previously unpublished works, prescribed by the Term of Protection Directive) could be a way forward (as I also proposed here).

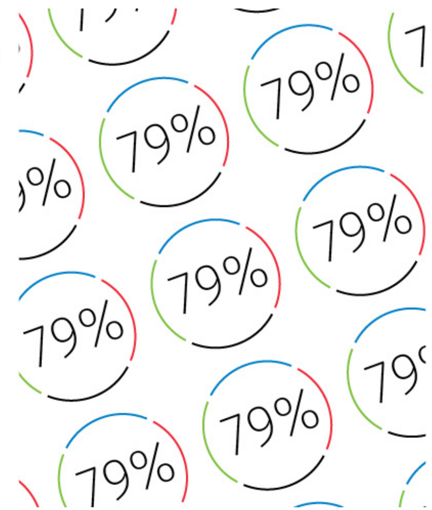
To make sure you do not miss out on regular updates from the Kluwer Copyright Blog, please subscribe here.

Kluwer IP Law

The **2022 Future Ready Lawyer survey** showed that 79% of lawyers think that the importance of legal technology will increase for next year. With Kluwer IP Law you can navigate the increasingly global practice of IP law with specialized, local and cross-border information and tools from every preferred location. Are you, as an IP professional, ready for the future?

Learn how **Kluwer IP Law** can support you.

79% of the lawyers think that the importance of legal technology will increase for next year.



Drive change with Kluwer IP Law.
The master resource for Intellectual Property rights and registration.

2022 SURVEY REPORT
The Wolters Kluwer Future Ready Lawyer
Leading change

This entry was posted on Monday, November 12th, 2018 at 10:35 am and is filed under Authorship, European Union, Originality, Ownership
You can follow any responses to this entry through the Comments (RSS) feed. You can leave a response, or trackback from your own site.