

Intellectual Property and Artificial Intelligence: An Emerging Challenge

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Authors

Pedro Frankovsky Barroso

Fernanda Quental

Pedro Tavares

Topics

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Generative artificial intelligence has caused a true revolution in the knowledge economy by enabling intellectual creation by machines, based on prompts as simple as asking ChatGPT to write this article. This capacity derives from machine learning, which relies enormous quantities of data in the form of books, articles, studies, reports, films, artworks, photographs and other pre-existing works, all potentially protected by intellectual property rights.

AI systems that can learn and create raise various challenges for intellectual property, especially with respect to ownership of rights over AI-created work and the legality of using protected works to train AI tools.

I. Ownership of AI-created works

In The Next Rembrandt project, AI software learned Rembrandt's style through analysis of the painter's body of work. Using an advanced 3D printer, the software then produced a new Rembrandt painting, imitating the thickness and texture of the layers of paint in an authentic Rembrandt. But the question is, who owns the copyright in the new, machine-created work?

The question of whether non-humans can be considered the author of works has been considered by administrative authorities – such as the U.S. Copyright Office, which denied registration of images created by the Midjourney system – and by the courts – such the District of Columbia Federal Court's recent decision to deny protection of the work A Recent Entrance to Paradise, developed by an AI system called Creativity Machine, which is owned by Stephen Thaler (who is also known for DABUS and disputes over ownership of inventions and patent protection). In both cases, the lack of human authorship was an obstacle to protection of the works under US law.

Brazil's Copyright Law (Law 9.610/98) would seem to support a similar conclusion. Article 11 of the Law defines "author" as a natural person who creates a literary, artistic or scientific work, and article 7 provides examples of intellectual works that are subject to protection, defining them as creations of the mind (criações do espírito). In fact, at the 10th Civil Law Symposium (IX Jornada de Direito Civil), held in May 2022, the Federal Council of Justice issued Restatement of the Law (Enunciado) 670, taking the position that regardless of the degree of autonomy of an AI system, only human beings can be authors.

This does not mean, however, that works created with the assistance of artificial intelligence cannot be protected by copyright. In March 2023, for example, the US Copyright Office issued new guidance to clarify that AI-assisted artistic works are eligible for copyright protection in the name of the natural person who used the AI system to create the new work, depending

on the amount of human creativity involved.

II. Machine learning and the use of intellectual property

Aside from the question of authorship of AI-generated works, the use of original works (even if copyright has not been registered) in the machine learning process has raised important questions: all the texts, sounds, and images that feed AI systems.

These questions bring us directly to the role that GPT technologies (Generative Pre-Trained Transformers) play in the production of texts and the difficulty in understanding what could constitute a violation of copyright when a work is produced using an AI tool. For example, a user who writes a book using results generated by such a tool will probably have used texts by various authors to create a new work. So what are the limits on the use of existing material to create new texts by means of AI?

Brazil's Copyright Law is strict as to the unauthorized use of works through any means. Article 29(IX) of the Law prohibits the use of others' works for "inclusion in databases, storage in computers, microfilming or other forms of archiving". Brazil's Criminal Code makes violation of copyright a crime.

The courts, legislators and members of the legal profession will have to find solutions to these issues, given the inexorable influence AI will have on the future.

III. Conclusion

Finding fair and equitable solutions to these questions requires active collaboration among legislators, jurists, AI specialists and civil society. Without a doubt, the future of intellectual property in the era of AI will be determined in large part by the courts. And aside to questions of copyright, ownership of patentable inventions made by machines will add to the new dynamics of intellectual creations applied to art and industry.

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Pedro Frankovsky Barroso



Fernanda Quental



Pedro Tavares