



Montreal AI Ethics Institute

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Montreal AI Ethics Institute's (MAIEI) Submission to the World Intellectual Property Organization (WIPO) Conversation on Intellectual Property (IP) and Artificial Intelligence (AI)

Theme: IP protection for AI-Generated and AI-Assisted Works

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Introduction

Please consider this document to be MAIEI's official intervention for the purpose of WIPO's Conversation on IP and AI. This intervention posits that, at best, an uncertain case can be made that there exists a genuine need to provide AI an exclusive IP over its own "innovations". Furthermore, IP protections conferred onto AI are unlikely to serve as an effective mechanism for regulatory compliance. Rather, IP protection for AI "inventors" present a host of negative externalities and obscures the fact that the genuine inventor, deserving of IP, is the human agent. This document will conclude by recommending strategies for WIPO to bring IP law into the 21st century, enabling it to productively account for AI "inventions".

Tenuous Benefits of AI Innovators

As is the case for most policy tools, IP laws have been designed to incentivize and disincentivize human behavior to achieve an "optimal" goal. The goal of the patent system is to motivate people to invest time, money and energy into creating novel and meaningful inventions for society.

However, AI technology, in and of itself, is impervious to behavioral nudging efforts by policy tools because, unlike humans, AI is not *knowingly* self-interested. This reality begs the question: even in the best-case scenario, what would IP for AI achieve? Why should the definition of IP be broadened to account for AI "inventors" when those "inventors" will not change their behavior in light of these protections? Since AI does not actively: i) invest in R&D; ii) decide to develop innovative rather than generic approaches to problem-solving; nor does it, iii) understand the concept of "meaningful to our society", then what role will IP protections for AI play in promoting inventions in our society?

A useful analogy, which demonstrates the inapplicability of local laws to IA systems, is the concept of applying criminal laws to self-driving cars. Unlike human drivers, self-driving cars are not incentivized to drive safely because of legal penalties or demerit points. In fact, besides being a sequence of 1s and 0s, self-driving cars have no idea what the concept of "legal penalties" or "demerit points" are; let alone feeling motivated to behave according to the incentive structure they've established. Therefore, developers of self-driving cars are not requesting legal penalties and demerit points be expanded to ensure safe driving by AI technology; instead, developers are focused on the technical components that are compatible with this technology to ensure it is safe. Why then are we attempting to expand IP law to enable inventions by AI technology when those incentives are not compatible with AI technology?

Extending the legal techniques that have been designed to nudge human behavior and applying them to technology is a logical inconsistency that invalidates the importance of applying IP rights to AI.

IP as an Ineffective Regulatory Compliance Mechanism for AI Innovators

Some WIPO interveners may argue that, when applied to AI, IP can become a useful vehicle for ensuring regulatory compliance. But, ironically, IP can actively undermine AI regulation by taking problematic features of the technology, such as a lack of transparency and explainability, and mis-interpreting them as valuable characteristics like creativity and non-obviousness, which make the AI worthy of IP protection.

Currently, the human agent responsible for creating AI technology gets all the credit for the invention but is also held accountable if the AI goes wrong. However, if IP rights were conferred onto AI, the technology could take all the credit but with whom would the responsibility lie? It is possible that companies profiting from the technology's invention could simply wipe their hands clean of liability as the AI's "creativity" has been legitimized by the IP and need not be explained for fear of disproving "non-obviousness" or "inventiveness". Therefore, rather than holding the IA to a higher standard of responsibility, the IP protection would turn features we've been critical of into characteristics worthy of praise and protection.

Furthermore, those AI technologies that egregiously violate regulations are unlikely to file a patent application. For example, it is improbable that a problematic deep fake, which takes the face of a high-profile individual and transplants it onto a pornographic image, will claim IP protection. Therefore, IP protection is not an effective regulatory compliance mechanism.

Negative Externalities of IP for AI Innovators

While the benefits of IP for AI are tenuous, at best, the negative externalities are severe, at worst. To begin, conferring IP rights onto AI technology may profoundly impact the perception of this technology in society. Once human rights are granted to AI technologies, it is likely that these algorithms will be viewed as equally valuable when compared to human creators and worthy of the same rights. This assertion may catalyze the realization of a dystopian society wherein human values and freedoms are valued evenly with AI's "values" and "freedoms", with unspeakable implications for our democracy, autonomy and economic opportunity.

According to Abeba Birhane and Jelle van Dijk, authors of "Robot Rights? Let's talk about Human Welfare Instead", the debate about the rights of robots is coming at the expense of urgent ethical concerns including machine bias, machine elicited human labor exploitation and the erosion of privacy impacting the most vulnerable in our society. The authors argue that the most pressing ethical discussion in AI is not whether robots are entitled to rights but rather the utter lack of responsibility in designing, selling and deploying such machines, with a detrimental impact on the lives of human beings.

Therefore, the negative externalities that may arise as a result of conferring IP rights to AI seem to outweigh the benefits, to say the least.

Humans Drive Value in AI Inventions

Fundamentally, AI “innovation” is created with human time, energy and money and the invention is only valuable in the sense that it is valued by humans. Since the AI’s accuracy depends on quality data, obtained by the human, and the AI’s design depends on that which the society deems relevant, identified by the human, it is the human creator rather than the AI that confers value in the AI creation. Therefore, the individual(s) responsible for developing the AI technology should be the owners of the technology’s IP rights.

Whereas AI algorithms are mostly in the public domain, the uniqueness of AI inventions is derived from the system’s pipeline arrangement. It is human ingenuity that organizes the elements of AI into a pipeline in order for the technology to provide results that are new and unique. For example, the pipeline arrangement generates parameters obtained from training on the input dataset and the hyperparameters obtained from the tuning of the algorithm to optimize for some learning objective. Therefore, AI IP rights should be conferred onto humans rather than the AI itself.

Bringing IP Law in the 21st Century

IP law still has a role to play in the AI space. IP rights can prevent the use of trade secrets, enhance the flow of information, and even incentivize remuneration for the data of individual consumers. However, to confer these benefits, IP protections must be applied in new ways. In order to prevent the use of trade secrets and enhance the flow of information, it is recommended that either companies assign inventor status to the human creator(s) or a new category for IP law is created wherein the system wouldn’t own the patent rights but the patent could not be copied without consequence.

If data were patentable, obtaining that data could be more significantly budgeted into R&D costs. This would incentivize higher quality data retrieval and potentially remuneration for individuals in exchange for their data. This practice could enhance fairness in the AI ecosystem and increase representation in datasets.

In terms of data disclosure, a summary of aggregate statistics could be disclosed through the use of: datasheets for datasets, nutrition labels for datasets, factsheets for datasets or data dictionaries. Each of these mechanisms will reveal the dataset at a level that is not too precise while still allowing for patentable IP.

Conclusion

We look forward to discussing the suitability of IP protection for AI technologies in more detail at the WIPO Conversation on IP and AI.