SHOULD THE LAW PERMIT OR REQUIRE THAT THE AI APPLICATION BE NAMED AS THE INVENTOR OR SHOULD IT BE REQUIRED THAT A HUMAN BEING BE NAMED AS THE INVENTOR?

THE PROGRESSIVE INTERPRETATION IN THE CASE DABUS

BY

ANA CECILIA SOTELO AGUILAR LL.M.[i]
ALEJANDRO GAMERO SALAS LL.M.[ii]

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1. UTILITY IS THE SOURCE OF LEGITIMACY FOR INTELLECTUAL PROPERTY

In a general sense, a scotoma is a fractional fluctuation in the field of vision. This definition can be used in a great deal of scenarios to describe a misrepresentation, and it is not just disorder, but a usual phenomenon like the Troxler-Effekt, when an unchanging stimulus fades away. In other words, this effect causes that we can not see what is just before us.

In order to answer this main question on ownership we can make distance from the objective to see the big picture avoiding a myopic short answer, or just a blind spot.

Utilitarianism has been invoked ever as philosophical origin of IP rights, and in this case, we can defend the AI inventor because it is useful. The AI as inventor is the last expression of the evolution of humans as algorithms of themselves. AI is a phenomenon which is economically growing with an aggressive expansion in every field of knowledge.

The only phenomenon with the same perseverance is 3D printing, it awakes the same eschatological fear, and it is the only comparable force of nature. It is not just a figure of speech, because both of them are not just technologies or patent families, they are a synergy between the current environment and the accumulation of resources in a decentralized network of knowledge with quick-economic-applications working globally meanwhile we are reading these lines. This kind of social phenomenon requires an interdisciplinary approach:

> *"... Yet, **3D printing not only disrupts the legal norms of intellectual property, but also the broader legal context** such as risk regulation and safety, product liability, consumer protection and insurance policy. **The disruptive nature of emerging technologies requires a holistic and interdisciplinary approach** to customising the intellectual property regime. It is thus insufficient to consider patents within the traditional domain of the intellectual property castle..." (Li* 2016, 108)*

We will adopt that necessary "holistic approach" in order to explore an answer for this question. I have read the phrase: "disruptive technology" so many times, and many authors assert that AI is a disruptive technology using the term manufactured by Clayton Christensen and Joseph Bower in 1995 [iii], but AI is not a new phenomenon, but it is just the accumulation of thousands of baby steps over the shoulders of hundreds of programmers and corporations.

The best example of this controversial issue is the DABUS case. The EPO refused two applications, an application for a “food container” (EP3564144) and application for “devices and methods for attracting enhanced attention” (EP3563896), with DABUS (a AI algorithm) as the inventor (November 25, 2019), filed by the Artificial Inventor Project which has filed patent applications in the United States, United Kingdom, Germany, Israel, China, Korea and Taiwan. The reason to reject the application can be summarized in the paragraphs 29 and 30:

> *29. The EPO boards of appeal have recognised that the inventor is a natural person, The boards have so far not been called upon to decide on the question whether an entity other than a natural person can be recognised as an inventor. However, this absence of case law does not allow for the conclusion to be drawn that entities other than natural persons can be accepted as inventors under the EPC.*
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> *30. It is additionally remarked that the understanding that the inventor is a natural person appears to be an internationally applicable standard. National courts of various countries have issued decisions to that effect. This standard has been reported by the majority of the EPC contracting states in a consultation conducted by the EPO in 2018/2019. The patent offices of China, Japan, Korea and the USA also*

follow this approach. The laws of some of the EPC contracting states explicitly define the inventor as being the natural person who creates an invention.1 No national law has been determined which would recognise a thing, in particular an Al system or a machine, as an inventor.

The origin of the IP protection is the utility of this protection for the innovation and the market, and the utilitarian approach is always the source of this legitimacy. In this sense, we can structure that "Inventor" is a construction by the law, with a "subjective" source of a behavior or will, and with an "objective" element or entity, both aspects are matter of interpretation.

2. THE INTERPRETATION IN THE DABUS CASE AND THE FEAR OF CHANGE

We live the age of automatic innovation (University of Surrey 2016) and it is not just an economic disruption, but it is omnicomprehensive (DeLong 2017). Academic interpretation has to be flexible in order to work according to our new needs (Condliffe 2017). We can summarize it, *robotic intelligence is just a new human interpretation of his own perception of his intelligence*. This will be a difficult conversion to a new paradigm for invention, but in the field of interpretation nothing stays still, and everything is flux, in the words of Heraclitus[iv] .

During the last 200 years, concepts like "intelligence" or "inventor" are labels which are changing to supply solutions to our markets, and our desperate social needs are forcing the technical limits every year, leaving behind useless norms.

"Inventor" is a concept developed by the law, with a "subjective" source of a behavior or will, and with an "objective" element or entity. Currently, we have to accept that it is a fluid concept with variable digital viscosity as a consequence of the “deux ex machina” materialized in the powerful tools and the participation of the digital accumulation of resources in universities and mega corporations.

The inventor is not just an isolated genius in a small garage working in an intuitive precognition with an inventive step, not anymore, that paradigm is over at the end of twenty century. Currently, in the wild global XXI, we have to protect the omnipresent investment of huge laboratories dismantling conundrums in the human genome, or creating cheap applications for the graphene (allotrope of carbon), or looking for vaccines against viral mutations which are travelling in our airplanes every single day. That kind of huge investment

in research is not possible without gargantuan infrastructures of AI, and we should accept that aspect of our current reality without regrets or qualms.

Our current needs of solutions for imminent global menaces, and the size of the necessary investment in AI are expanding our conception of protection, ownership and property.

Obviously, the short argumentation in the decision of the EPO shows fear for change and a lack of interest for the source of legitimacy of the IP law: utility. In the same sense, even with less arguments the IPO in United Kingdom has refused to accept the same applications. The officer explained that DABUS is a machine and it could not be regarded as an inventor and it is vague the derivation of the rights:

> *29 As the applicant says, inventions created by AI machines are likely to become more prevalent in future and there is a legitimate question as to how or whether the patent system should handle such inventions. I have found that the present system does not cater for such inventions and it was never anticipated that it would, but times have changed and technology has moved on. It is right that this is debated more widely and that any changes to the law be considered in the context of such a debate, and not shoehorned arbitrarily into existing legislation.*
> *Conclusion*
> *30 I have found that DABUS is not a person as envisaged by sections 7 and 13 of the Act and so cannot be considered an inventor. However, even if I am wrong on this point, the applicant is still not entitled to apply for a patent simply by virtue of ownership of DABUS, because a satisfactory derivation of right has not been provided. The applications shall be taken to be withdrawn at the expiry of the sixteen-month period specified by rule 10(3).*

The contradiction between the paragraph 29 and the conclusion in the paragraph 30 is evident. The officer recognizes that the utility of the AI inventors will be prevalent in an undefined narrative future, but the grounds of the decisions are limited to an arbitrary interpretation of a text, just a symbolic ritual, without any connection with the sea of facts which are recognized in the first three lines of the 29 paragraph. It is not just a "legitimate question", it can be interpreted as a fracture of the due process of law.

3. PROGRESSIVE INTELLECTUAL PROPERTY V REGRESSIVE IP

IP rights are exclusive rights, and for that reason they are an economic burden, a legal burden but a burden for the market and a transaction cost. Every IP right should be useful for the market and for the continuity of our civilization in order to preserve its utility.

For that reason, the source of the legitimacy of that kind of burden is a main issue and

is the source of thousands of articles and books. As a consequence of those facts, the consensus of its utility is not just a mean, but it is in the core of its legitimacy.

Therefore, there is a resemblance between the behavior of the tax (as a burden) and the IP rights, because it is like a kind of a private tax imposed by the IP right owner, and applying this observation in this case I can speculate that the best way to protect the efficiency of the intellectual property protection is a conservative policy like ***a progressive enforcement*** *of the rights*. I use the term "progressive" obtaining its content from the tax law and from the difference between ***progressive tax and regressive tax***. According to The World Bank:

> *"A tax is progressive if it takes a rising proportion of income (or expenditure) as one moves from poor to rich; a regressive tax represents a higher burden (relative to income or expenditure) on the poor than the rich". (Haughton 2009)*

In my opinion, the decision of the EPO is a *progressive interpretation of Intellectual Property rights*, because the factual consequence of that decision is the impossibility of exclusive rights over the eventual invention. In this scenario, DABUS is an instrument, this eventual invention is an accidental product or a discovery, and there is not an exclusive right for the owners or programmers of DABUS. The programmers are not inventors of the claims in the application because DABUS is an autonomous algorithm, and the innovation is automatic, but the products are always “res nullius”, things of nobody, valuable things but without owner.

The decision is progressive, with or without that purpose, because this decision avoid a new personal monopoly and it implies that every new development by the same channel will be res nullius, and without inventor, there is not owner and there is not patent protection.

Theoretically, public administration can display the ways to conduct the application in order to solve the specific problem of the applicant, or at least explain didactically in a due process, the rational grounds to provide attributions or obstacles according to the state of the art in the specific field.

A regressive decision implies the creation of exclusive rights for the new legal entity, because that decision excludes others from the domain over both applications (or inventions) creating a monopoly for the new legal entity (or DABUS) qualified as inventor. Using this classification, a regressive decision protects the property over the invention avoiding the production of a “res nullius” or nobody’s thing. A progressive decision rejects the patent application, and it implies that no one is excluded from the exploitation of the “food container” or the “devices and methods for attracting enhanced attention”. In this case, a regressive decision is clearly the opposite of a progressive decision.

Assuming that hypothetical scenario, DABUS as a legal entity can receive a legal protection in order to protect the investment behind its incorporation as digital inventor.

If we accept that this decision clarifies the position of EPO, then we have to understand its message stipulated in the decision which is that EPO do not want to suggest changes in the regulation, or in the international instruments linked to this controversy

A new specific treaty can update the main WIPO treaties on patent law to adapt this corpus to new developments in the market and to the evolution of technologies. New instruments adopted to respond changes have emerged over time. An example of this is the WIPO Copyright Treaty "WCT" and the WIPO Treaty on Performances and Phonograms ("WPPT").

These two treaties were adopted at the WIPO Diplomatic Conference on certain issues of copyright and related rights, held in Geneva from December 2 to 20, 1996 to respond to technological innovations that emerged in the 1970s and 1980s such as reprography, videotechnology, compact cassette systems that facilitate home recording, satellite broadcasting, computer programs, etc. The WCT and WPPT treaties do not affect the obligations of the Berne Convention, nor is it mandatory for countries to adopt WCT and WPPT jointly or separately.

The relevant international treaties in this case are TRIPS, Paris Convention, and the Patent Cooperation Treaty PCT. The "non-human inventors" are not expressly excluded in any of the three treaties, nor do they expressly provide for such a possibility. TRIPS states in "Article 27. Patentable Subject Matter" that patents shall be available for any inventions whether products or processes, in all fields of technology.

The "Article 29. Conditions on Patent Applicants" states that members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art.

The Paris Convention states in “Article 4ter Patents: Mention of the Inventor in the Patent. The inventor shall have the right to be mentioned as such in the patent”. Therefore, it only requires that you declare who the inventor is, without limitation.

Finally, the PCT also does not require the inventor to be "human".

The inventor should comply with having an accredited existence such as to provide legal certainty for the international community. In that case, it would be appropriate for the contracting states to establish regulations to adapt this new treaty recognizing this new legal entity. In patents there is no figure of the "collective inventor" so the AI entity would have to be a single individualized. It must be possible to prove the inventor's nationality. This

provision is necessary to invoke the application of the PCT rules, which can only be invoked if the inventor is a national of a signatory and ratifying country of the PCT.

WIPO should promote the creation of a new international instrument with the legitimacy of a global consensus in order to improve the promotion of this essential and strategic technology protecting the due process of law for every application of the AI as inventor. The main WIPO treaties on patent law can be updated to adapt the global regulations to the evolution of technologies.

4. CONCLUSION

This progressive interpretation in the core of the decision is trying to replace the market with a short interpretation of a specific regulation, without an interdisciplinary analysis of possible consequences in the long term, almost as a ritual rejection.

When the public administration replaces the market (and its constant flux of needs) in a legal controversy creates new problems. This phenomenon was exhaustively observed by the work of Fredrich Von Hayek in "the Road of Serfdom":

> *There is, finally, the supremely important problem of combating **general fluctuations of economic activity and the recurrent waves of large-scale unemployment which accompany them**. This is, of course, one of the gravest and most pressing problems of our time. But, though its solution will require much planning in the good sense, it does not — or at least need not — require that special kind of planning **which according to its advocates is to replace the market**. (Hayek 2001, 125)*

Apparently the EPO, as a public administration, is procrastinating a deep analysis on this matter. In our opinion, WIPO should promote the creation of a new international instrument with the legitimacy of a global consensus in order to improve the promotion of this essential and strategic technology protecting the due process of law for every application of the AI as inventor.

The best examples of this kind of instrument with a global consensus are the WIPO Copyright Treaty and the WIPO Treaty on Performances and Phonograms. Consensus will be important in order to determine how important the promotion of the AI as inventor for the stakeholders and citizens is.

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NOTAS:

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[i] Ana Cecilia Sotelo Aguilar has a Master of Laws degree in Intellectual Property by Ankara University with a WIPO scholarship.

[ii] Alejandro Gamero Salas has a Master of Laws degree in Intellectual Property by Ankara University with a WIPO scholarship.

[iii] Bower, J. L., and C. M. Christensen. "Disruptive Technologies: Catching the Wave." Harvard Business Review 73, no. 1 (January–February 1995): 43–53

[iv] quoted by Plato in Cratylus, 402a: πάντα χωρεῖ καὶ οὐδὲν μένει (Everything changes and nothing stands still).