

Inteligencia artificial (AI): oltre i confini legali *Artificial Intelligence (AI): Beyond Legal Limits*

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ABSTRACT: In the last years, the Ecuadorian legislator has dedicated to treating as a priority the economic topics, ignoring the diverse technological advances, the reason why the legal reflection on Artificial Intelligence (systems of algorithms that learn of themselves) is practically nonexistent, although it has been incorporated in several scopes of our daily life. Although the human being has not developed vital Artificial Intelligence yet, the impact in many areas, including the legal one, is undeniable, so we must think about the legal regulation both in the present and in the future, to establish specific fundamental rules. We cannot ignore that already exists in the world a citizen android, Sofia, whose case leads us to reflect if perhaps it is necessary to recognize as the holder of rights to the Artificial Intelligence, a subject without face nor necessarily human appearance, as it happened, in the year 2008, with Nature.

KEYWORDS: Intellectual property, copyright, patent, civil law, legal systems..

RESUMEN: En los últimos años, el legislador ecuatoriano se ha dedicado a tratar como prioridad los temas económicos, desconociendo los diversos avances tecnológicos, por lo que la reflexión jurídica sobre Inteligencia Artificial (sistemas

de algoritmos que aprenden de sí mismos) es prácticamente inexistente, pese a que se ha incorporado en varios ámbitos de nuestra cotidianeidad. Si bien el ser humano no ha desarrollado aún Inteligencia Artificial fuerte, el impacto en muchas áreas, incluida la legal, es innegable, por lo cual debemos pensar en la regulación jurídica tanto en el presente, como a futuro, para establecer ciertas reglas fundamentales. No podemos desconocer que ya existe en el mundo una ciudadana androide, Sofía, cuyo caso nos conduce a reflexionar si tal vez se deba reconocer como titular de derechos a la Inteligencia Artificial, un sujeto sin rostro ni apariencia necesariamente humana, tal como sucedió, en el año 2008, con la Naturaleza.

PALABRAS CLAVE: Propiedad intelectual, derecho de autor, patente, derecho civil, sistemas legales.

INTRODUCTION

Throughout our lives, human beings and especially in developing countries, we consider that once our basic needs are satisfied, we have nothing to fear and that the Law, with its regulations, reaches its goal now in which, even partially, satisfies them.

Therefore, our Assembly treats any of the Bills that refer to economic issues as urgent, especially forgetting Private Law matters that, as they do not address these basic needs, detract from the attention of our legislator. Then, without understanding that perhaps the key to this economic development so often sought is, precisely, not to put aside those matters that other States analyze almost routinely.

Thus, our legislation is very far removed from the global legal regulation on Artificial Intelligence, which has gone from being the dream of science fiction authors like Isaac Asimov to being part of the daily life of all humans, including Ecuadorians.

1. WHAT IS ARTIFICIAL INTELLIGENCE?

In the words of the French scientist Kourosch Teimoorzadeh (2018): “it is the observation/reproduction of the performance of nature to design machines with the capacity to reason/solve problems autonomously” (s. p.).

However, this terminology is much older than we generally believe, since the expression is considered to have been coined in 1956 by John Mc Carthy, who defined it as “the science and ingenuity of making intelligent machines, brilliant computer programs” (cited by Velasco, 2012, s. p.).

Nevertheless, the human dream about Artificial Intelligence had its origin a long time ago: Ramón Llull in his *Ars Magna* in 1275, laid the theoretical foundations for an artefact that, using levers and wheels, combined words, grammatical constructions, and scientific theories to reach valid conclusions. Alternatively, false and Leonardo Da Vinci (1452-1519) with his fabulous designs seemed to predict this reality (Velasco, 2012).

However, it is from the second half of the twentieth century to the present, that more and more, the old “utopia” has become a reality in force in all areas of our action, from the artificial intelligence of games such as “Furbys”, small electronic toys that feed and” communicate “to distract our children, or that of the drones that we use to take stunning panoramic photos from the air to much more advanced artificial intelligence such as that of some androids.

Currently, there are some ways to classify Artificial Intelligence, according to the greater or lesser complexity of its functions, of which we consider that we can adapt the following:

1. Weak Artificial Intelligence: It only specializes in one area or target, so although it can surpass some human capabilities and has a significant impact

on several areas, it is considered weak. We can subclass it like this:

- 1.1. Weak / Basic Artificial Intelligence: Programs such as Siri, Alexa or Waze are included in this classification. Already within these simple programs, it is observed how Artificial Intelligence learns from us, reaching what could be considered a certain level of manipulation, for example, the case of the Waze program, which induces us to take specific paths with the indication that they are the shortest ones, but at the same time, are the ones that can have more sponsors of said program.
- 1.2. Weak / Narrow Artificial Intelligence: for example, the “Deep blue” chess program that has already beaten the human world chess champion, intelligent video games with massively multiplayer, or the case of the android Sofia, which we will analyze in more detail below.
2. Strong Artificial Intelligence: To date, we have not managed to develop a robust Artificial Intelligence (AI) that can perform any task that human beings perform, even worse than it surpasses it in all its capacities. Among the characteristics that it should possess, they would be self-programming (without the need for a human being), be proactive (not only reactive like Weak AI), solve open problems (not only for the one they were programmed for), have several neural networks such as being human. (Webedia Brand Services, 2018, p. 22-23)

Although it is predicted that we will reach the development of Strong Artificial Intelligence in approximately a decade, already today the scope of Artificial Intelligence is unpredictable, as several cases have shown:

In November 2017, the online video game company “Ccp games” released an update that expanded the possibilities of the so-called “non-player characters”, but it turns out that, in this massively multiplayer online role-playing game, those “characters non-players” began to fight for control of the territories and did it in secret from everyone: for a while, neither the developer company nor the users knew anything about that. The “pirates” began to seize the territory and resources of the “miners” when suddenly the faction of the “vagabonds” appeared in the sector. It is unknown if it was an accident, or if Artificial Intelligence responded to their actions. “So, the pirates and another faction – the Amarr empire flotilla – united and fought together against the common enemy, The mooring flotilla defeated the vagabonds, but the pirates betrayed them and came out winners of that battle, and no one among humans saw this fight: they only found out after it ended. Ccp games are investigating an unusual situation to learn more about the risks of out-of-control artificial intelligence. (RT, 2018, p. 82)

Likewise, in 2017, Facebook had to deactivate Artificial Intelligence that it had created to improve chatbots. To test it, they left two AIs to talk to each other and, they were surprised that they generated their language to do so, so they decided to turn off this AI since a language that we do not understand could be dangerous as it would imply that the AI could get out of control (Rodríguez, 2017).

2. CURRENT IMPACT OF ARTIFICIAL INTELLIGENCE

Various areas of human development have already received the positive (negative?) Impact of AI Let us try a definitive list, chosen at the whim of the author, but which in no way intends to exhaust the human areas in which this effect has been felt, in the which has been tried not to have to go to do it, as the popular imagination sometimes believes, only to distant Asian countries, where, for example, it is already possible to be served in coffee shops by Artificial Intelligence (Alvarez, 2018).

2.1. In the work area

In Colombia, in 2019, the Millennium BPO company launched the thalon hotel assistant robot, which is close to one and a half meters in size, with fifty different cavities to carry and store food and a mechanical arm, responds to voice commands, and walks without stumble thanks to a mapping and tracking system. Then “room service” can be done in a single trip to several rooms, without errors, and you can even pick up and take the clothes to the laundry, with facial recognition functions.

In Bolivia, Nayra, a robot for teaching Aymara, is one of the initiatives presented to promote the study of native indigenous languages, recognizes specific voice commands in that language and was promoted by the organization of Ibero-American states to education, science and culture. Nayra (new aymara robotic assistant) is the size of a doll and is dressed in a pollera, the traditional garb of indigenous women (Latin Press, 2017).

2.2. In the consumer area

When any of us enter data on the networks, they allow to establish preferences, tastes and customs, information that is very valuable for companies at the time of product development and to put them on sale:

Having clearer and more accurate information facilitates decision-making, the offer of products and services can be efficiently segmented, and key processes for retail and consumer preference can be optimized such as inventory management and dispatch logistics. (Abarza, 2019, p. 21)

Since 2015, the Kikker company has developed AI to promote responsible and sustainable consumption at points of sale in markets and supermarkets in Brazil: “Kikker manages to understand demand based on 25 variables of trained and trained algorithms to create a neural network capable of the project the demand and need for purchase” (Terra, 2019).

2.3. In medicine

Artificial Intelligence has become a powerful ally of Medical science, from the area of data storage to the diagnosis of serious diseases such as cancer, for example, the Watson program for Oncology, developed by the international business machines corporation (IBM), which in 2011 amply defeated two of the best human contestants in the jeopardy television contest, has been trained to detect more than 13 types of cancer and has been applied to more than 45,000 patients worldwide (Warrior, n. d.).

Also in recent months, AI has been used for the diagnosis of COVID 19 in several countries, such as in Brazil where, since April 2020, the RadVid-19 tool helps to “identify what is the probability of having covid and indicates the percentage of the lung that is sick” (El Comercio, 2020, s. p.).

We can also cite intelligent prostheses in cases of loss of anatomical limbs, such as those developed in Spain by the laboratory of the University of La Rioja (Logroño, 2020), and the collaboration of AI in the generation of drugs or vaccines, accelerating their development processes, especially at the same time for the COVID-19 pandemic (Bankinter Foundation, 2020).

2.4. In the family environment

The possibility of development of affective bonds between humans and artificial intelligence that seemed distant to us, given the weakness of the existing AI. Thus, in November 2018, world newspapers published the news of the “interdimensional” marriage between the Japanese Akihiko Kondo and a famous singing hologram, Hatsune Miku, who moves and speaks from a device. When the new husband was asked if he did not consider the money spent on the wedding of forty guests (more than seventeen thousand dollars) a waste, he was able to indicate that the hologram was everything could wish for, because:

He turns on the lights when calls on the phone to tell him that she is coming home and sleeping next to him with her wedding ring on her finger ... Two-dimensional characters cannot deceive, they neither age nor die, points out. (El Universal, 2018, s. p.)

This last statement, unfortunately for him, was not correct, since, due to a software update, he was “widowed”.

This type of virtual relationship is increasingly common in Japan: “In 2019 a survey in Japan noted that about 12% of young people reported that they sometimes or often fall in love with an anime or video game character” (The Third, 2020, s. p.). Indeed, this situation, with the Covid-19 pandemic, has increased throughout the world, given the prohibition of meetings, crowds and in general contact that allows the closest socialization between human beings.

2.5. In the legal field

Since 2018, in Brazil, the supreme Brazilian federal court installed an artificial intelligence tool, dubbed “Victor”, in charge of reading all the extraordinary resources that are uploaded to the system and identifying which ones are linked to individual

issues of general repercussion. This action represents a part of the initial phase of the processing of resources in the court and implies a high level of complexity in machine learning, publishes the tech target portal: “it is the largest and most complex Artificial Intelligence project in the judiciary and, perhaps, the Brazilian public administration” (El Telégrafo, 2019, s. p.).

In the United States, the Artificial Intelligence system of the robot “Ross”, created by Canadian startup from the University of Toronto that also used the Watson supercomputer technology (used as we have seen in Medicine as well), can listen to human language, scanning more than 10,000 pages per second and formulating a response faster than any lawyer.

Their responses include legal quotes, suggest more articles to study, even calculate a confidence rate to help attorneys prepare cases. Besides, since it is artificial intelligence, the more inquiries it receives, the more it learns and increases its effectiveness. Likewise, due to its algorithms, “Ross” can consider the ideology of the judge, the parties involved in the trial and the lower-ranking courts from which the cases arrive; Once the information is assimilated, it responds based on current laws and translating the terminology. Likewise, the robot tracks in real-time the results of sentences and lawsuits that have established jurisprudence, so that it can detect any risk that represents a threat to its clients and correct it. “Ross” responses are not a copy-paste. Interprets and executes value judgments according to a study on jurisprudence, which it stores in its database. Thus, in 2016, the American firm “Baker & Hostetler” hired Ross to integrate the bankruptcy management department, with a large team of 50 human lawyers at his service (El Telégrafo, 2019, s. p.).

Also, in New York, the Premonition system provides a history of judge litigation, with data on victories and defeats of plaintiffs and defendants (Granero, 2020).

In Argentina:

Sherlock-Legal was developed, the Artificial Intelligence program of Albremática SA, the publishing company of eDial.com, which analyzes through natural language processing the rulings of Argentine courts based on questions formulated by its clients, the software produces a list of the most relevant cases, relevant citations and an evaluation in percentage terms of the client's chances of winning or losing, stating, at the discretion of the program, which, in turn, is based on algorithms developed based on jurisprudence data, if we ask about the applicant, it is positive or negative. (Granero, 2020, p. 28)

However, the use of Artificial Intelligence goes much further: we are beginning to talk about predictive justice.

Thus, we have as an essential antecedent the Compas algorithm (Correctional Offender Management Profiling for Alternative Sanctions), produced by a private company, used by the American Criminal Courts to assist them in calculating the risk, dangerousness and recidivism of the accused, which is based, among other things, on a questionnaire and criminal history, but has been questioned by some experts who claim that the algorithm calculates a higher risk of recidivism if the accused is African American. However, other studies contradict this claim, indicating that this assumption comes from the fact that the data on which the risk calculation is based are biased, as pointed out, for example, by Sofía Olhede, professor of statistics at University College London.

The fact that the algorithms draw on criminal records may be beneficial for some, says Nikolaos Aletras, who, with other colleagues, developed software that, in four out of five trials, delivered the same verdict as the European Court of Rights judges. Humans (El Telégrafo, 2019).

With detractors and defenders, Artificial Intelligence has continued to be incorporated into the legal world, and today, apparently, we already have “robot judges”. Thus, in China, “... the first artificial assistant was named Xiao Fa, which can be translated as:

Tiny right “or” tiny law “, and the first pilot was tested in 2004 in Shandong on criminal matters. The system was designed to analyze 100 crimes, and the idea was to standardize sentences and automatically generate draft sentences. The first virtual or cyber court was established in the Chinese city of Hangzhou in August 2017. Later, similar chambers were opened in Beijing and Guangzhou. These so-called Internet courts are competent for some issues related to network operations, electronic commerce and intellectual property. (Granero, 2020, p. 23)

However, due to the lack of transparent information from the Chinese government, it is questioned whether these judges really exist or are simply assistants to a human judge (Soltau, 2020). On the other hand, in June 2019, Estonia, a highly digitized country, indicated that it intends to use artificial intelligence to judge small cases (value less than 7,000 euros) whose ruling would be supervised by a human judge (Law World, 2019).

3. CURRENT GLOBAL LEGAL FRAMEWORK FOR AI

Currently, legal regulation is scarce since the rapid technological advancements in the matter far exceeded that anticipated by any jurist. For this reason, although it seems incredible, the first legislation to which we will refer, the European one, was based on science fiction, with a great exponent, the author Isaac Asimov, who, in a short Story of 1942, later, compiled in his work, *Yo robot* (1950), enunciated what has become known as the three laws of Robotics:

1. A robot cannot harm a human being or, by inaction, allow a human being to be harmed.
2. A robot must carry out the orders of human beings, except if those orders conflict with the First Law.
3. A robot must protect its existence to the extent that it does not conflict with the First or Second Law. (Research and development ID, 2017, p. 96)

Thus, based on these three laws, in January 2015, The European Parliament decided to set up a working group on legal issues related to the evolution of robotics and Artificial Intelligence in the European Union, dedicated to particular to Civil Law aspects. The group held ten meetings between May 2015 and September 2016 and received advice from various stakeholders, scientists, and lawyers. In June 2016, the eprs scientific perspective unit published a specialized study on the ethical aspects of cyber-physical systems (SCF) that are intelligent robotic systems, linked to the internet of things, or technical systems made up of network computers, robots and artificial intelligence that interact with the physical environment, such as automatic cars and drones,

This study drew attention to the possible risks derived from the development of robotics, in aspects such as employment, protection of privacy, security and civil liability (European Parliament, 2017).

In January 2017, the legal commission approved its report with recommendations to the Commission on Civil Law Norms on robotics. Thus, the Commission was asked to propose Union legislation to define as “intelligent robot” the robot that has autonomy, is using sensors and interconnectivity with the environment, which has at least one support, that adapts its behaviour and actions to the environment and that cannot be defined as “alive” in a biological sense.

The introduction was also proposed of an advanced robot registration system, to be managed by an agency of the Union European for robotics and Artificial Intelligence. This agency would also provide public agents with specialized advice on technical, ethical, and regulatory issues in the field of robotics.

Regarding liability for damage caused by robots, the report suggests that it could be based on strict liability, no-fault requirement, or on a risk management approach (responsibility of the person who minimizes risks); Thus, the responsibility must be proportional to the level of instructions given to the robot and its degree of autonomy, so that the rules on liability could be complemented with a mandatory insurance scheme for robot users and a fund for compensation in case an insurance policy does not cover the risk.

The report proposes as an annexed to the resolution, two draft codes of conduct: a code of ethical conduct for robotic engineers and a code for research ethics committees. The first code presents four ethical principles for robotic engineering: 1) beneficence (robots must act for the benefit of the human being); 2) non-maleficence (robots must not harm human beings); 3) autonomy (human interaction with robots must be voluntary); 4) fairness (the benefits of robotics should be distributed equitably). No robot can be created without the on / off button (European Parliament, 2017).

Finally, we cannot fail to mention that, on February 19, 2020, the White Paper on Artificial Intelligence was presented in Brussels, aimed at generating a regulation for human-based AI and based on what it has already generated. The European Union mentioned in previous lines. It is essential to highlight the control over Artificial Intelligence based on this on-off button, as a highly relevant issue. In effect, this allows us to project the legislation of the future for strong AI.

4. FUTURE REGULATION OF ARTIFICIAL INTELLIGENCE?

The case of the android Sophia, created in 2015 and presented in 2016, which was declared a citizen in Saudi Arabia, has been known worldwide. Beyond the interest of her citizenship, given her status as an android in the shape of a woman in an Arab country where until recently women could not even drive vehicles or make public appearances without a veil, the statements of its manufacturer, the company Hanson Roberts, indicating that his long-term objective is to fulfil the promise imagined by great names in science fiction literature such as Isaac Asimov, that is: “to manufacture fully alive, conscious robots that can adapt to the world by themselves” (EFE, 2017, s. p.). On the other hand, nationality generated controversy, since questions were raised about whether we have the right to vote or reproduce, and fundamentally, if being a subject of rights, we should have an on-off button?

In this regard, it should be mentioned that, in the current context, we are witnessing a change in the legal paradigm, and we can venture to indicate that the category of subjects of law is a much broader category than the one that we were taught as a synonym for a person. Indeed, although the development of Artificial Intelligence is not very advanced in Ecuador, however, could become one of the pioneer countries at the legislative level in this matter, since, unlike most countries worldwide, it surpassed (although without further discussion, we must admit

it), the traditional categorization subject of law is synonymous with the human person, in 2008, with the Constitution of Montecristi.

In effect, the Ecuadorian Supreme Norm, in its art. 10, indicates that Nature is the subject of Rights. Therefore, it is a “normative imputation centre, the entity to which the legal system imputes rights and duties” (Fernández Sessarego, 2009, s. p.), owner to which rights are attributed for being a subject and not for being a person, so it is necessary to be a subject of law to have the capacity, but not to be a human person to be a subject.

In Ecuador, therefore, the complexity of legislating for realities without a physical subject has been overcome since Nature is a subject “without a face”. Thus we open the door more efficiently so that other different classes are accepted within the categorization of the subject to the human being individually or collectively considered at different moments of his life (Fernández Sessarego, 2009), as in Peru, and that the legal relationship perhaps contains an intermediate subject, as has been proposed for animals, which would be a new holder called “subjective or pernicious” (Varsi, 2020, s. p.), which could be applied to strong Artificial Intelligence (when it exists), creating a new subject, which we could call electronic person.

The detractors of new categories such as those indicated, usually argue that dignity is only a human quality, so ontologically only the human being can be subject to the law since it is also the one who creates the legal norm based on their own needs.

Nevertheless, in Ecuador, we can object to what is indicated and test, for that purpose, the essentialist or intrinsic value justification that was applied to nature (Gudynas) for

other faceless subjects, such as robust Artificial Intelligence, recognizing a value, independent of the one assigned to it by the human being. It means then that:

When the rights of Nature are recognized - read then for the case, in my opinion, Artificial Intelligence -, they are admitting their own or intrinsic values in it, attribution of a right that is linked to an “Essence”, this could come from three “approaches”, which are confused and superimposed in the postulates of the so-called “deep ecology”: 1) the well-being and flourishing of human and non-human life has a value in itself same, regardless of the usefulness they render to humans; 2) the recognition that an object is valuable insofar as it possesses properties that do not depend on relationships with the environment or other objects; and, 3) things have an “objective” value that does not depend on the evaluations given by third parties. (Simon, 2017, p. 243)

Likewise, we can turn to the culture of science fiction cinema and refer to the film *Blade Runner*, which contains an idea that may gravitate towards the recognition of AI as a centre of normative imputation: human dignity is only circumstantially human, it is that is to say, that although it has been classified as human because it is that of human beings, it can nevertheless cease to be its exclusive heritage from the moment in which, what we consider valuable is also owned by other beings or, if wanted, from the moment we become aware that this is so. What we value in human beings is not the mere fact of their belonging to a common gender (or it should not be), but the fact that they possess certain qualities (to express it as Ramón Valls, capacity for moral autonomy, although there would be other ways of thinking and saying it). As most of the members of the human race possess such qualities, we grant nobility to

the human race to which they belong, especially if we believe that no other gender possesses them (Manrique, 2006).

It turns out then that, if we accept this idea, understanding that we are all digital beings, algorithmic data banks, the apparent barrier between human beings and Artificial Intelligence are removed. This idea already underlies the “computational metaphor” of Steven Pinker, one of the most prominent specialists in cognitive sciences, who in 1997 published in his work “How the mind works” that the human mind is a system of “organs of computation. “Which has allowed us to understand objects, hunt or escape animals, learn about the diversity of plants and learn to recognize and differentiate themselves from each other, thus establishing an analogy between the way our minds function by modules and that of the Artificial Intelligence (Gómez, 2018).

CONCLUSIONS

The digitization of humanity is indisputable, we are, or we exist in the data uploaded to social networks, and: “connecting with the system becomes the origin of all meaning” (Harari, 2016, p. 429), so we must agree with Yuval Noah Harari because:

Although we cannot predict the future, science converges on what seems like a universal dogma, which states that organisms are algorithms and that life is data processing, then intelligence is disconnected from consciousness, and non-conscious but intelligent algorithms soon know us better than we do, intelligence no longer it is conscience. (Harari, 2016, p. 430)

Without a doubt, the risk that this reflection implies will be objected, so let us clarify that we do not intend to simplify a debate within which several disciplines must be involved, in which perhaps we should create a Bioethics Commission like Warnock (1978) who discussed at the time the legal

regulation for assisted reproductive techniques. However, what has indicated in previous lines allows us to propose, by way of conclusion, a hypothesis not so far-fetched: the imperative of the legal integration of Artificial Intelligence, since perhaps the future of all digitized humans, are cyborgs, which we will be all of us, integrated into Artificial Intelligence in our essence.

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