

## **Autonomy, legal personality and liability of AI**

**AI everywhere.** Artificial intelligence applications are gradually part of every person's routine. If the first image to which the concept of artificial intelligence relates is that of a humanoid robot, reality presents versions that are less anchored in science fiction visions, but none the less surprising.

Much of the customization provided by algorithms in the most popular Internet applications takes a form of artificial intelligence. The recommendation of new songs (according to the history of auditions), the selection of which posts will appear first in the news feed of a social network (based on previous interactions) and even the best way forward in a traffic app (based on information about traffic jams in the city) are artificial intelligence applications.

**Robotics.** These applications become even more interesting for the debate on ethics and legal implications when incorporated into a robot, serving as a true hardware that interacts with the external environment. The questions raised by the popularization of intelligent robots challenge (and will challenge) the Law in a different way than that experienced with the expansion of the Internet in the last two decades.

**What is different in AI/robotics?** Ryan Calo points out three peculiar characteristics of robotics that are divorced from the debate over the past twenty years about the interface between law and the Internet. According to the author, robots are marked by: (i) their materiality; (ii) emergent behavior (usually called "autonomy"); and (iii) its social value.

(1) *Materiality* represents an important characteristic of robotics, since applications of artificial intelligence start to interact with the environment in a more evident way. A robot that has a body - regardless of its shape, whether humanoid or not - is more easily perceived. By having a body, the robot adds a new layer of questions in the interaction with the environment and with humans, since it can cause damage previously unknown in the simply digital environment. *The damage caused by a robot is nothing virtual.*

In addition to the questions about the physical damage caused by robots, materiality contains a second feature that may give rise to a new legal treatment for intelligent robots: *the way they might behave or look like a human*. Humanoid robots tend to more easily generate empathy and this feeling could lead to the recognition that an application of artificial intelligence is more than simply programming embedded in a physical component. She would deserve some form of special protection. For this conclusion, the other two characteristics of robotics are even more relevant.

(2) *Emerging behavior* is understood as the robot's ability to learn and adapt to circumstances. As artificial intelligence applications are trained to react to the stimuli they receive, it is increasingly important to know the degree of predictability of the result of your response.

Increasingly there is news about the development of artificial intelligence applications whose behavior had not been previously imagined by the responsible programmers. When the result was not expressly foreseen, is it correct to say that the machine made an autonomous decision? Herein lies the debate about the so-called autonomy of artificial intelligence. As we are not yet at a time when it is possible to talk about total autonomy of behavior on the part of machines, Ryan Calo prefers to call this characteristic "emergent behavior" in order to honor the fact that the main element in the debate is not "autonomy" ", But rather the fact that the robot starts to behave differently from the input it receives from the environment.

(3) The third characteristic of robotics that is worth mentioning is *social value*. Like no other technology, robots awaken - often because they have anthropomorphic characteristics - a response and social involvement different from that dedicated to other goods. The construction that artificial intelligence, especially when embodied in a robot, seems to deserve a tutelage other than a simple thing is greater the more similar to a human being the machine is. But if the robot has a body, has an emergent behavior and generates social involvement, would it be right then to grant it some form of legal personality?

**Substitution Effect.** In responding to the thesis presented by Ryan Calo, Jack Balkin argues that the concept of "social value" needs to undergo further reflection. *It is not a case of imagining that people will simply confuse robots with human beings* (and in that direction end up giving them a form of personality). In Balkin's view, what exists is a "*substitution effect*" through which people exchange human action for the performance of a machine, but always for *very specific functions*.

In other words, the robot would never fully replace the human, but would only do a certain function in its place: open the door, drive the car, or make an appointment with the hairdresser. We would still be a long way from the moment when a robot could perform all these functions.

Robots were created by people. Therefore, all that the machine does would be a mere execution of commands and prior programming. However, the more complex the solutions presented by machines for the dilemmas they are faced with, it is to be expected that the Law will also move forward to seek to understand what intelligent robots are and how the legal system should react to their progressive insertion in society.

When establishing their national strategies on artificial intelligence, several countries comment on the need to get the population used to relating to (and through) increasingly intelligent machines. In the case of Japan, for example, the national robotics plan explicitly mentions the objective of creating a "barrier-free society for robots".

**What is AI's legal status?** This rapid insertion of robots in social relationships naturally triggers a series of legal questions. What is the legal nature of smart robots? Do they have rights of their own? Would they have legal personality? In

early 2017 the European Parliament adopted a Resolution with recommendations on rules of Civil Law and Robotics. The text points to the need to regulate the development of autonomous and intelligent robots, with the recommendation to consider the creation of a kind of legal personality for robots.

Reading the study that served as the basis for Parliament's Resolution reveals how aspects related to civil liability were relevant for the adoption of the proposed measure. The damage resulting from the development of autonomous cars and other intelligent robots served as a starting point for the question: who answers when a robot causes damage? Would the company that manufactured the robot respond? Or the one responsible for your programming? And if the robot is actually used by a third company, which contracts directly with the consumer, wouldn't it be better if they were responsible?

**Electronic Personality.** The solution proposed by the European Parliament would be to create a kind of legal personality for the robot itself, sometimes called "e-personality" or "electronic personality". The name brings the debate about the legal personality of intelligent robots closer to that already faced in other situations by the most diverse legal systems.

Why does the legal system give personality? Along with the natural persons, who naturally possess it, it is common to find situations in which the order gives different entities an autonomous legal personality. Legal entities of the most different types (companies, associations) and foundations are the best examples. If the legal system confers legal personality to the foundation, resulting from the posting of an asset, why not give it to an intelligent robot?

**Personality and liability.** It is worth asking, at the outset, whether the solution of granting legal personality would be the appropriate answer. In the European scenario, driven by inquiries about responsibility, the question of personality appears to be much more linked to the construction of a reparation mechanism for the victim of damage than as a result of a discussion about what an intelligent robot is and its legal status more embracing.

It does not seem that creating an autonomous legal personality is the only (and perhaps the best) way to address the issue of damage caused by intelligent robots. Who will manage the robot's assets? Wouldn't a broader form of insurance be more efficient to support the victim than creating a new category of legal entities?

The European Parliament's resolution goes so far as to mention two initiatives related to the development of intelligent robots: (i) the adoption of a mandatory registration of these robots and; (ii) the creation of insurance that can then deal with the chances of damage caused by them.

Thus, they are strictly patrimonial issues that lead to the creation of the figure of the legal personality of robots. To a large extent, it was also patrimonial issues that led to the creation of legal entities such as companies and foundations. However, unlike what happens with these entities, intelligent robots are able to

develop a special interaction with humans. This is the characteristic of "social value" mentioned above.

What are the consequences of this interaction between robots and humans? Unlike foundations, which lack materiality, intelligent robots, in the European Parliament's definition, need to have a physical presence. It is clear that the characteristic of materiality is also taken into account by Parliament. Physical representation will not necessarily reproduce human traits, but the interaction with a material robot (and not simply with a programmed voice), creates a series of new situations.

**Can we opt-out?** One of them, for example, is the caregiver robot, specialized in monitoring elderly or sick people. Is there a right not to be treated or cared for by a robot? This questioning begins with the eventual discomfort with non-human companionship, but it certainly reaches urgent concerns the further the formation of diagnoses made by artificial intelligence advances.

**AI and animals** Civil law doctrine is used to treating animals as things. In the classification of moving goods, generally all animals are included. But what about the recent evolution in the treatment of the topic in France and Portugal, which transformed animals into "sensitive beings" in the light of their respective laws? If animals were detached from the category of goods to occupy a new position, could the same reasoning be applied to intelligent robots?

Curiously questioning the nature of human relationships is a path that leads to understanding the future of robots. This debate, as seen, goes beyond the simple dynamics of civil liability.