



Can the Robot be Considered a Person? The European Perspective

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ABSTRACT

Technological advances are equipping robotic entities with artificial intelligence and endowed with emotional intelligence that gives them a capacity for reflection, analysis, that is closer every day to that of humans. The growing autonomy of robotic entities raises the question of legal responsibility for acts carried out by such entities at the same time as it raises the question of the status of such entities: should they be considered as persons or as things? The European Parliament adopted a resolution in 2017 that assumes that such entities could be granted the status of "electronic person". The question is how this can fit into the legal framework of the Member States of the European Community. This article proposes a first reflection on the thing-person transition of an autonomous robotic entity. The findings show that this transition is not immediate and requires both technological advances and an adjustment of the law.

Keywords: Android; artificial intelligence; boidroid; personality; personhood; robot.

1. INTRODUCTION

With advances in artificial intelligence, it is now a question of equipping Information Technology

entities with autonomous intelligence and emotions [1]. Artificial intelligence is defined as: "software (and possibly also hardware) systems designed by humans that, given a complex goal,

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act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal" [2]. Regarding emotions, they are seen by some scientists as influencing factors necessary to reach a level of intelligence that would approach that of Humans in terms of strategy and efficiency [e.g. 3-4] and are increasingly studied and developed in the discipline of affective computing. Mayer et al. [5] have introduced the concept of "emotional intelligence" as "the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought" which has later evolved into four distinct yet related abilities: perceiving, using, understanding, and managing emotions [5: 511].

In addition to allowing such entities to develop autonomous intelligence independent of their designers, emotional intelligence would therefore give them greater potential for evolution and performance than an entity without this emotional capacity.

The ethics of these types of machines are of concern to some members of the scientific, political and legal communities from at least two perspectives: ethics relating to the design and use of such machines, and ethics relating to the machines themselves, in terms of responsibilities. However, the problem does not seem to be properly considered by all scientific communities [6-7]. Nevertheless, some bodies legislate on the issue. It is the case of the Parliament of the European Union which adopted a resolution on civil law rules of robotics in 2017 [8]. Despite laws already existing in Europe addressing the use of machines, none of them dealt with machines endowed with autonomous intelligence, including AI. The resolution grants robots a legal status of "electronic person" and highlights the need of a legislation addressing the machines' responsibilities. Paragraph AB in the resolution states that "the more autonomous robots are, the less they can be considered to be simple tools in the hands of other actors (such as the manufacturer, the operator, the owner, the user, etc.)". It asks the commission to consider "creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons

responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently" (§59f). More recently, the Legal Affairs Committee in the European Parliament discussed and approved proposals addressing AI issues. It provided recommendations on ethical aspects of robotics and AI to the European Commission and suggested to elaborate a legal framework (including ethical principles) for the conception, implementation and use of AI robotics within the EU. However, all these resolutions do not find the agreement of the whole scientific community: in an open letter addressed to the commission in 2018 [9], more than a hundred researchers and experts warned against adopting the 2017 resolution. Especially, the status of "electronic person" has been seen as allowing AI machines to be insured individually and be held liable for damage caused by their own actions to humans or goods and properties. Particularly, Noel Sharkey, AI & robotics emeritus professor at the University of Sheffield (UK), who co-signed the open letter, objected that "by seeking legal personhood for robots, manufacturers were merely trying to absolve themselves of responsibility for the actions of their machines" [10: 1233]. In addition, the European resolution contradicts the British position, whose British Standards Institute published at the same period the "BS8611:2016 - Robots and robotic devices. Guide to the ethical design and application of robots and robotic systems", setting ethical rules for robot design [11]. Especially, the guide insists on the fact that, in this area, ethical risks seem to predominate over physical risks, and insists on the need to know precisely who is responsible for robots knowing that the full responsibility for their actions lies with the human being.

The issues are also worrying the common people: in a survey undertaken by the European Parliament in 2017 [12], 90% of the 259 respondents from more than 20 countries said it was necessary to regulate developments in the robotics and AI area, which was perceived as a threat to humanity by 29% of all respondents, and a threat to fundamental human rights by 26%. The results of this survey show that it is important for legal authorities to legislate on the issue.

What interests us in this article is to see to what extent the resolution of the European Parliament is applicable. Indeed, it must be implemented in

the Member States of the European Community and must therefore be compatible with the law of each Member State. However, first, it is necessary to look at the conditions for granting the status of "electronic person" to an autonomous robotic entity. The analysis proposed in this article provides clarification on this point and identifies crucial associated issues requiring investigation.

2. METHODS

First, we discuss the relevance of the resolution adopted by the European Parliament granting the status of "electronic person" to the autonomous robot. Then, based on the example of French positive law (a set of rules currently applicable in the French legal area), we establish what distinguishes the person from the thing in terms of legislation. Finally, we identify the meeting points and contradictions between the European Parliament's resolution and the French law on the issue by illustrating them with current or future concrete examples.

3. ANALYSIS AND DISCUSSION

3.1 Autonomous Robot and the Electronic Person

The resolution adopted by the European Parliament in 2017 [8] defines autonomy as: "a robot's autonomy can be defined as the ability to take decisions and implement them in the outside world, independently of external control or influence" [8: §AA]. Such autonomous robots already exist, in the form of androids (e.g. Sophia [13]), animals (e.g. Spot [14]), or in the form of a car (e.g. Google's autonomous vehicles [15-16]). What allows such autonomy of the robot is the AI integrated into the robot software, the associated hardware being either internal or external to the structure of the robot itself. This type of robot must be able to self-improve its performance and therefore gain autonomy judging by the rapid progress of AI combined with this in computer science. Artificial Intelligence will surely be boosted by the implementation of quantum algorithms, allowing a larger number of calculations in a shorter time, improving machine learning capacities for instance [17]. Such perspectives foreshadow the possibility of enriching the intelligence, and possibly consciousness and emotion capabilities of autonomous robots. It is therefore not absurd to imagine that everyday life will soon be teeming with autonomous humanoid robots that would

resemble humans both morphologically and aesthetically and in terms of intelligence, consciousness and emotion.

Among other questions raised by this evolution, such a similarity between an autonomous robot and a human leads to the question of whether to consider this autonomous robot as a person or as a thing. The above-mentioned resolution adopted in 2017 by the European Parliament [8] proposes to consider the autonomous robot as a person by granting it the status of "electronic person" or "electronic personality". The robot would therefore no longer be a thing but a person, which has certain legal implications.

3.2 The Person and the Thing: Example of French Law

As in many other countries, French law is based on the « *summa divisio* », dividing private law into things, actions and obligations [18]. «Regarding "persons," the modern theory defines 'person' as the 'subject of rights and duties,' in the sense of that which is 'capable' of being 'subjected' to duties and/or of being 'invested' with rights » and "things" designates what all is not a subject of rights and duties, i.e. goods that can be owned, sold or exchanged [19,14 &16]. Concerning the subject of law, some laws are protecting, and others obliging. Concerning things, they are considered as an "object of law", that is to say something over which a right can be exercised.

Thus, endowing the robot with the status of "electronic person" amounts to moving such an entity from a passive posture vis-à-vis the law (it undergoes) to an active two-dimensional posture: it asserts its rights, and it complies with its duties. This refers to the notion of "legal personhood".

3.3 The Dimension of Consciousness

One of the dimensions of the active posture of the "subject of law" concerns being empowered by rights. This presupposes the capacity to be aware of one's rights as well as the ability to assert one's rights. The other dimension concerns being subjected to duties which presupposes having the awareness of these duties and having the ability to comply with these duties.

However, the notion of consciousness is not addressed in the European Parliament's resolution of 2017 [8]. No term whose radical

“conscious” appears in the text. As quoted in § Introduction, the resolution considers autonomy only in terms of decision-making and the robot’s ability to transform this decision into actions on its environment independently of external control or influence.

The resolution seems to compensate for this shortcoming by adjusting the legal framework with the provision of §56 in that it advocates “that at least at the present stage the responsibility must lie with a human and not a robot”. However, this shows that, in the current state of the law, there is an antinomy between, on the one hand, the status of “electronic person” which joins the notion of “legal personhood” able to assume its rights and duties and, on the other hand, the legal criminal responsibility of such electronic person who would be returned to a human such as the designer or programmer. This is in line with the concerns of Professor Emeritus Noel Sharkey referred to in § Introduction.

The introduction of the notion of “electronic person” in paragraph 59f states that it is necessary to “creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently” just contributes to this antinomy.

In addition, the notion of consciousness in the law is implicitly associated with the concept of a living being born viable: personality “is recognized to all human beings without exception”, because the attribution of legal personality is “independent of the level of consciousness of the person. The very young child (infans), like the mentally insane, are legal persons in the same way as the fully reasoned adult. Attached to the quality of human being, and independent of the state of consciousness, legal personality is, ultimately, subordinated to only one condition: that the being considered is born viable” [20].

This poses at least two problems in relation to the “electronic person”: it is not a living being and the notion of “viable” seems a priori difficult to define for such an entity. In addition, the resolution [8] states that these robotic entities are

characterized by the “absence of life in the biological sense”.

3.4 Illustrative Examples

The X-Company is developing the Everyday-robot (<https://x.company/projects/everyday-robots/>) aiming at helping daily office work. This technology combines collaborative learning and reinforcement learning fostered by data provided by multiple sensors including the LIDAR system to perceive and evolve in previously unknown surroundings. Equipped with an articulated arm mounted on a mobile wheeled base, the robot can act on its environment. Due to the use of AI, the robot can learn by itself and adapt to new environmental contexts and quickly self-elaborate new “skills” such as opening a door or moving objects while it would take several days of programming with a machine without AI.

Boston Dynamics has developed a dog-like robot “SPOT” intended for industrial environments [14]. Equipped with deep learning-based vision technology using multiple sensors including LIDAR system and classical or thermal cameras, the AI robot can undertake autonomous navigation in complex environments including difficult or destructed areas such as stairs or rubbles on the ground. It may detect people or fire using the thermal camera or provide real-time photos of its environment using classical cameras.

These two examples match the characteristics listed by the European Parliament [8] to define the “smart robot”:

- “the acquisition of autonomy through sensors and/or by exchanging data with its environment (inter-connectivity) and the trading and analysing of those data;
- self-learning from experience and by interaction (optional criterion);
- at least a minor physical support;
- the adaptation of its behaviour and actions to the environment;
- absence of life in the biological sense.”

In the line with the 2017 European Parliament resolution, the X-Company Everyday-robot as well as the Boston Dynamics dog-like robot SPOT might be granted the status of “electronic person”.

4. CONCLUSIONS

The resolution adopted by the European Parliament in 2017 [8] has been addressed here in the light of the French law. The introduction of the status of "electronic person" or "electronic personality" proposed by the resolution and applicable to autonomous robots would transform the passive posture of the robot under French law into an active posture: the robot, currently an object of law, would become a subject of law. It is thus both being invested with rights and being subjected to duties. The latter would imply that the robot is aware of the duties that are on its own and has the ability to respect its duties.

Technologically, this form of consciousness does not yet exist for robots, and if it did, the question would arise of the difference between electronic consciousness and human consciousness, and therefore would constitute a research perspective to be studied.

From a legal point of view, since the notion of consciousness is implicitly linked to the concepts of "living being" and "being born viable" in French law, this would require defining what these two concepts can represent for an electronic entity. This would also be a research perspective to be studied.

Biologically, current scientific advances allow the programming of bio-organic entities. For example, biocomputer nanoplatfoms have been developed and are invaluable especially for medical applications. They consist of "small molecules, polymers, nucleic acids or proteins/peptides, nanoplatfoms programmed to detect and process external stimuli" [21]. Therefore, this announces the possible integration of organic parts into an electronic entity and then clashes with the resolution of the European Parliament which excludes the life of the electronic person.

The study of these research perspectives is essential for the statutes of "electronic person" or "electronic personality" proposed by the resolution adopted by the European Parliament in 2017 [8] to take on its full meaning.

Furthermore, it is reasonable to assume that French law needs to be changed to make this type of resolution applicable, and that this type of adjustment is also necessary to other countries.

Finally, the totality of this problem necessarily confronts the question of the animal condition. Indeed, would it be ethically acceptable to grant the legal status of person to an electronic entity when the animal has still not acquired it?

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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