The ontology of Artificial Intelligence and the *Toy Story effect*

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Abstract

I address here some ontological questions of artificial intelligence (AI). The most elementary is whether the AI exists. I will argue that AI does not exist; what does exist, instead, are the *AI systems*. A crucial fact is that people are part of the AI systems, as designers, users... It is in these people that the intelligence resides: in AI systems, the intelligent part is not artificial and the artificial part is not intelligent. It is not a rectifiable technical problem, but an ontological one. In other words, we must go from considering AI systems as technical systems with social consequences, to considering them as technically implemented social systems. If we would accept that intelligence can be found in a simple device, we would succumb to what might be called *the Toy Story effect*. Toys do not play by themselves, as well as machines do not have intelligence. Both playing and understanding require the concurrence of a human being.

Keywords

Delegated control systems (DeCo systems), information, intentionality, simulation, function.

Introduction

Surely you have heard a lot about the ethical and political problems of AI. However, our ethical tribulations almost always refer to deeper ontological problems. And so is the case regarding AI. Without addressing the latter, the ethical debate becomes imprecise and superficial. Let us see what ontological questions are behind the ethics of the so-called artificial intelligence. So the most elementary question we can ask in ontological terms is whether or not AI exists. Luc Julia, who led the SIRI development team at Apple, provocatively titles his book: *L'intelligence artificielle n'existe pas*[1]. For his part, Erik J. Larson, in a similar vein, has published the book entitled *The Myth of Artificial Intelligence. Why Computers Can't Think the Way We Do*[2]. In the advance of this book we can read: "We aren't really on the path to developing intelligent machines. In fact, we don't even know where that path might be […] AI will continue to improve at narrow tasks, but if we want to make real progress, we will need to start by more fully appreciating the only true intelligence we know—our own".

An inappropriate name

But, what do we mean when we say that there is no AI? Maybe we are facing here a naming problem. Perhaps there is something which we call AI, but for which we are using an inappropriate name, since it does not contain true intelligence or the intelligence it contains does not reside in the artificial part of this entity. It would therefore be necessary to propose a better denomination, which would not lead to confusion. "The term artificial intelligence – recalls Katharina Zweig, from the Algorithmic Accountability Lab at the University of

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[1] Luc Julia, *L'intelligence artificielle n'existe pas*, Éditions First, París, 2019.
[2] Erik J. Larson, *The Myth of Artificial Intelligence. Why Computers Can't Think the Way We Do*, Harvard University Press, 2021.

Kaiserslautern – arose in the 1950s, when scientists wanted to raise money for their research. They thought it sounded like something the State would be happy to encourage. And now we hang on this name. Most computer scientists find it inappropriate"[3]. According to Luc Julia, in 1956, during the famous Dartmouth Conference, John McCarthy convinced his colleagues to call AI something that has nothing to do with intelligence. I would clarify: an AI system does have something to do with intelligence, but is the human being who provides what is intelligent in it, not the artificial part of the system.

Machine learning or *deep learning* are equally confusing names, especially if we have to assume that it is the machine itself that learns. All these denominations – lures, it should be said – have a commercial, advertising, even propaganda function, but they do not respond to the truth of the thing. They immediately resonate with science fiction and the media headlines. Therefore, dreams and futuroscope terrors begin to thrive. However, no machine understands, or knows, or learns, or is capable of counting to two. People do it, with the help, sometimes, of machines. For this reason, other terms have been proposed, such as *assisted intelligence*, *expanded intelligence*, *decision support tools, human-centered artificial intelligence* (the Stanford University has created a research institute with this name)... These names are more appropriate, since they indicate that the intelligent subject is a person, while the machine can assist or expand the intelligence of said subject. We could also talk, and I think it would be the most appropriate option, of *Delegated Control systems* (which we can abbreviate as *DeCo*).

The change in perspective that this name introduce could be summed up in a few words: we must move from considering AI systems as "technical systems with social consequences" to considering them as "technically implemented social systems"[4]. In other words, people are also part of the AI systems, as designers, owners, maintainers, users, supervisors... It is in these people, and not in the artificial part, where the intelligence of these systems resides. Machines cannot be intelligent. This limitation does not respond to a technical problem that can be technically corrected, but to an ontological difference.

So what is intelligence?

Now let me take a step back and reflect for a moment on the concept of intelligence. This way we will better estimate if certain entities deserve or not to be called intelligent. Or, more precisely, where intelligence resides in *a technically implemented social system*. Dictionary definitions of the word "intelligence" often refer to the ability to understand. It is also common for them to allude to the ability to solve problems. For instance, The Oxford Learner's Dictionary defines "intelligence" as "the ability to learn, understand and think in a logical way about things". For the *DRAE* (*Diccionario de la Real Academia Española*), intelligence is the "ability to understand or comprehend [...] Ability to solve problems".

We know that the artificial part of an AI system is incapable of understanding by itself. You cannot even properly say that a machine counts or computes. Counting implies joining two (or more) moments, and keeping them as such, in a single and identical conscious representation, understanding at the same time the similarity –but not identity- and the difference between them, something that a machine does not do.

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[3] Anna Von Hopffgarten interview to Katharina Zweig, "La inteligencia artificial carece de la flexibilidad de decisión humana", *Mente y Cerebro*, enero/febrero, 2021 [my translation].

[4] R. Hirschheim, H. K. Klein y K. Lyytinen, *Information Systems Development and Data Modelling*, CUP, 1995, p. 1.

It is true, on the other hand, that AI can help us solve multiple problems (computing, writing texts, drawing, geolocation, logistics, telephone assistance, medical diagnosis assistance, advertising and a long etcetera). But these problems are not for the artificial part of the system, but for the designer or the user of the system. For a facial recognition machine, recognizing or not recognizing a criminal is not a problem. It is a problem for people's safety, and the system can help us deal with it. Of course, the same system can be used to control the population of a country and to facilitate political repression there. Nevertheless, this is also not a problem for the cameras or for the software involved. It is, undoubtedly, a problem for the human subjects of the country in question. Only a living being can suffer and die; only a person can wonder about the meaning of her life. Those are problems. And both a hammer or an abacus, and a computer network too, each in its own way, can help us deal with these problems (or make them worse). But this does not make these tools intelligent. *We* understand. *We* have problems. Not machines.

We can see it from yet another angle. Sometimes the so-called AI is characterized by its simulation capacity. It simulates functions of human intelligence, it is said. However, simulating intelligence is not the same as being intelligent. Furthermore, the simulation only appears as such for the human being who observes it, not for the machine. The machine does not know that it is simulating intelligent behaviour. On the other hand, the very notion of function inexorably refers to a being for which a given effect is functional. Outside the human framework, the lights that come on and off on a screen, or the movements of a robot are mere effects. They do not fulfil functions. It is the human point of view that changes its ontology transforming mere effects into functions.

It's the ontology, stupid

So, the question is basically – let us insist – of an ontological nature. Artefacts, in the Aristotelian ontology, are substances only in an accidental sense, i.e. by analogy. Living beings, and especially human beings, that is, people, are substances in their proper and paradigmatic sense. As it is an ontological difference, the hope (or threat) of annulling it through technological sophistication is illusory, a mere category mistake.

What has been said so far affects any technological system (washing, transport, energy production, communication...). A washing system, for instance, includes a number of elements: washing machine, detergent, electricity, water intake and drainage, clothes... and a user with certain knowledge and intentions. Outside of this system, a washing machine stops being a washing machine and becomes a simple metallic mass. Any artefact, placed outside of the human world, loses its functionality and becomes a plain set of physical effects. Since the artefacts ontology is given by their function, they also lose their ontological rank, they stop being what they were. A washing machine placed on Neptune is no longer a washing machine. Nevertheless, the ontology of the so-called AI systems depends even more intensely on the human gaze, since they are located in the realm of the intentional, that is, of the semiotic. In this area, the entities are sustained on three supports. If we remove one of them, they collapse, as happens to the stools. Charles S. Peirce makes it clear: "All dynamical action, or action of brute force [...] takes place between two subjects [...] But by semiosis I mean, on the contrary, an action or influence which is or involves a cooperation of three subjects, such as a sign, its

object and its interpretant, this three-relative influence not being in any way resolvable into actions between pairs"[5].

What do we mean when we say that a machine stores or processes my financial or medical data? We say that a certain electromagnetic state of the machine (*sign*) is related to my payroll or my blood pressure (*object*). Obviously, there is no physical relationship between them, but rather a semiotic relationship that is established through a person (*interpretant*) capable of understanding or interpret -with the help of certain interfaces- electromagnetic states as income or blood pressure. Similarly, the machine only plays chess or *go* if a person can relate the physical states of the machine to these games traditionally played by humans. The case of chess is very illustrative: when a machine finally meets certain expectations, it is at the same time deprived of the mythical aura that surrounded it when it was just a project; it is reduced to the level of the prosaic, devoid of ghost and glamour. Look at the poor *Deep Blue*, who knew glory days, raising now museum dust.

It is exactly the same in the case of the now famous ChatGPT. Its performances are really impressive. It is very helpful in multiple tasks. But, in spite of its astonishing attainments, no one thinks that this software understand anything. Rather, it has become clear to us that great linguistic achievements can be attained without understanding anything at all (as John Searle advanced years ago). Even more, ChatGPT could be considered as an empirical refutation of any usefulness that could have been attributed to the Turing test for assigning consciousness.

So, we've all learned, at the end of the day, that a chess-playing robot, or a chatbot, is about as interesting as a vacuum-cleaning robot. Without an *interpretant*, the machine just changes from one physical state to another. It is no longer part of an intelligent system. It is just a piece of matter, like a washing machine on Neptune. Why is it so hard for us to accept it?

The Toy Story effect

Instead, we tend to imagine that in our absence the artefacts continue to have the same entity as in our presence. Thus, we imagine that a machine that is part of an AI system, together with certain people, continues to be intelligent even if it does without the gaze of those people. But this mirage is not due to an excess, but to a lack of imagination. It is not easy to imagine what the world looks like when the world is not seen by anyone. The look of the human being sustains the being of the artificial. Without the gaze of a person, the artificial is flattened; it becomes in pure physical reality. Hence the difficulty of imagining. It's easier to dream that everything stays the same when I stop looking. It is what we could call *the Toy Story effect*. The child's hand and eye turn a piece of green plastic into a shy dinosaur. The child imagines that when he leaves the room, the dinosaur is still there. He cannot think of it like the inert piece of green plastic it is when the child himself leaves the playroom or falls asleep[6].

What do we imagine would happen if the human being left the room (Chinese?), if they were left out of the AI systems? For some, this will occur from the point they call *singularity*[7]. From there the machines would generate other smarter machines, a post-human world controlled by robots. But perhaps we could imagine, to the contrary, that machines left to themselves would

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[5] Charles S. Peirce, *Collected Papers*, Harvard University Press, Cambridge (MA), 1931-1935, vol. 5. p. 484.
[6] He cannot imagine it because "when he woke up, the dinosaur was still there". I am quoting, of course, the famous microtale *The dinosaur*, by the Mexican writer Augusto Monterroso (1959) [my translation].
[7] Ray Kurzweil, *The Singularity Is Near*, Penguin Books, London, 2006.

soon fail by virtue of the general tendency towards entropy, design and construction defects, as well as the difficulty in obtaining stable energy sources; they would decay and be re-incorporated into natural physical (such as erosion) and chemical (such as oxidation) processes. Even of a biological nature: the most probable post-human landscape is not that of the Earth governed by intelligent robots, but that of a leafy jungle that hides in its bowels, along with the stones of ancient temples, authentic filth of silicon, plastic and metal. In fact, every machine has to be maintained, that is, led by the hand (in Latin "manus", and from there, in English "to maintain") by people. Every AI system requires maintenance. And the more sophisticated ones require more maintenance, not less.

In short, data is data about something, intelligence is about something, and so information. They are triadic, semiotic, intentional entities. The electromagnetic (or quantum) states of a computer are not data in themselves, unless an *interpretant* manages to connect it with an *object*. Moreover, the dependence of the data on a consciousness that converts them into such is extreme in the case of the so-called *synthetic data*, whose relationship with the truth is so difficult to establish. These are data (?) sets not taken from reality, but generated by a model that reproduces the statistical properties of the real data set. They are used to anonymize medical information of patients or clients in the financial sector, as well as to train algorithms at a lower cost than that of acquiring real data.

Without people, an AI system immediately ceases to be intelligent. There is no more data. He no longer understands anything. It no longer simulates anything. It no longer serves any function. Its troubles are finally over. What we called information is diluted. All decision ceases to be such. Let us add that there is no virtual reality, but rather a digital representation of reality, of the only reality that exists, within which the virtual has a place as a representation, but decays when there is no one to represent something to. In this sense -I agree with Luc Julia-, AI does not exist. It is the mere effect of a poor imagination, sometimes placed at the service of economic or political ambition.

In order to avoid misunderstandings, we should change "AI" to a less tortuous name, since the disturbance generated by a bad name ends up being projected onto anthropology itself. Thus, the image of human intelligence is degraded or reduced to a game of physical interactions, and the human being himself comes to be understood in dualistic terms, as a kind of fortuitous meeting place between bodily hardware and mental software susceptible to migration.

A prudential intelligence

When dealing with complex phenomena, we have to use, yes, the brute force of algorithms, but also all the imagination, creativity, intuition and prudence that human beings are capable of. In fact, the most comprehensive "method", the one that regulates the application of all the others, including the automatable ones, is human prudence.

As far as we know, the universe is not some kind of eternal clock, but a unique, historical, and contingent event. It is endowed with a certain network of regularities, sufficient to make life and intellection possible, but compensated with unpredictable novelties. This very peculiar distribution of constancy and rupture affects both the orbit of the planets and our daily life, made of imperfect cycles, circadian rhythms, habit and shock. Only a living, sentient, located and interactive intelligence, a prudent intelligence like the human, can understand this disconcerting texture of the universe. We learn from experience, but we know at the same time that there is no guarantee that things will continue as they were. Hence the convenience of

intellectual humility, which has been dressed over time as a Socratic attitude, Aristotelian prudence, learned ignorance, fallibilism...

An AI system generates expectations. It places a point in an n-dimensional space constructed from a history of data, and, based on it, it tells us what can be expected regarding the object represented by that point. But the system can crash when it registers the occurrence of something whose possibility was not even considered in advance. When this happens, the system itself is left without the ability to adapt itself to this experience. When this happens, it is not the algorithms that must react, but the people responsible for them. And they will react, first of all, by drastically changing expectations. They can do it since they are not artefacts, but conscious people who can come to understand the phenomenon, which is not expected from the machine, and who can activate their creativity to generate better expectations from now on with or without mechanical help.

We are now treading the terrain of epistemology and we see that the so-called AI algorithms are good at detecting lines of correlation between enormous amounts of data. However, correlations are not yet causal relationships, they do not allow us to understand the phenomenon we are facing or provide an explanation for it. To do so we would need theories that conjecture causal relationships. It is true that the detection of raw correlations already puts us on a certain path, suggests hypotheses, and serves as a heuristic tool. In addition, in this sense, it can be of great help to understand a certain part of reality, as long as complete automation of the scientific search is not intended.

A person can conjecture causal relationships, beyond the mere correlations that a machine detects. This step does not have to be purely arbitrary, random or irrational, but rather, in some sense, it is guided by a practical and social knowledge that Aristotle called *phronesis*, prudence. Said knowledge facilitates the integrative constitution of the experience, a wisdom on our fallibility, the management of emotions linked to the frustration of expectations, the propaedeutic of the creative moment, as well as the critical filtering of the emerging expectations.

In the words of Erik Larson: "AI works on inductive reasoning, crunching data sets to predict outcomes. But humans don't correlate data sets: we make conjectures informed by context and experience. Human intelligence is a web of best guesses, given what we know about the world. We have not a clue how to program this kind of intuitive reasoning, known as abduction. Yet it is the heart of common sense. That's why Alexa can't understand what you are asking"[8].

Consequently, an AI system that aims to replace human prudence would simply be out of place, out of the universe that houses us. On the contrary, a DeCo system inscribed within the framework of prudential human intelligence will be in its rightful place and will be able to fulfil functions of a great value for human life.

<center>And some practical conclusions</center>

The practical problems have nothing to do with a supposed post-human future of intelligent machines. "What should terrify us -says Ramón López de Mántaras, founder of the CSIC's AI Research Institute- is not a future dominated by a hypothetical superior AI [...] What should really worry us is the present situation, in which we are delegating more and more tasks in an

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[8] Erik J. Larson, *The Myth of Artificial Intelligence. Why Computers Can't Think the Way We Do*, Harvard University Press, 2021. On abductive inference, see Atocha Aliseda, *Abductive Reasoning*, Springer, Dordrecht, 2010.

AI as limited as the current one"[9]. What is crucial has to do with the present, with the way in which DeCo systems are already being used, with the responsibility that certain people, companies and governments have for it, as well as with the impact that this use already has on life for all of us.

The new name (DeCo systems) does justice to the true ontology of these systems and, above all, leads us more directly to important practical issues. We begin to see what the relative position of humans and machines should be. It is not a matter of deforming the former to fit into a world presumably dominated by mechanical intelligences, but of placing the latter within the framework of human life, outside of which they cease to function, even cease to be. What can algorithms contribute to human life? They allow us to delegate the control of certain processes.

Now we can more appropriately raise the pertinent practical issues, ethical, political, educational, legal... Whose is the hand that rocks the algorithms? Who delegates? Is he entitled to do so? In which DeCo systems do you delegate? Are they the most appropriate? What kind of actions are delegated? Are they really delegable? For how long is control relinquished? Is it sensible? Is the delegation reversible? What monitoring or evaluation procedures exist? Are they sufficient? What risks are assumed in case of failure? Is it prudent to assume them? What advantages are obtained for human life with the delegation of control? What is lost in return?...

At the educational level, it is, of course, essential to train people in virtue, rather than insist on instructing machines in the ideology of political correctness. Unfair biases will not be redirected just by redesigning algorithms, but by educating virtuous people. And the virtues have to be educated to be at the level of the current technological context. For example, through intermittent technological silence practices[10]. In other words, we need an attitude of detachment towards the digital, an attitude that Heidegger called *Gelassenheit* and that we usually translate as *serenity*, that is, an attitude that allows us to say *yes* and *no* to the digital. *Yes*, when it comes to improving people's lives; n*o*, when it contributes to devastating the essence of the human being. Let us see if we can discern when it is one and when it is the other.

In this sense, an education of the critical spirit is also of utmost importance. We cannot continue to uncritically accept the rhetoric of digital power. From the main centres of global digital power, disorienting metaphors are imposed on us. For example, we all already talk about *uploading* or *downloading* documents or data. The truth is that our data, the same ones that we graciously give away daily to large digital corporations, move horizontally, from one computer to another, they do not go up and down. To the same game of misleading metaphors belongs the famous "cloud." It is obvious that the "cloud" does not exist. When we say that we are uploading data to the "cloud", what we are actually doing is simply sending them to someone else's computer, Mark Zuckerberg's, Bill Gates', or Xi Jinping's computer. A game of erroneous metaphors is hiding digital power relations. Faced with this, a critical education is essential.

At the political level, the DeCo approach allows us to immediately identify the legitimacy deficit and the risk to the freedom of the people. Thus, most of the DeCo technologies are ultimately in the hands of the Chinese Communist Party (CCP) and a few large US corporations. The greats of the so-called AI are, on the Western side, the GAFAM (Google, Amazon, Facebook, Apple and

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[9] Ramón López de Mántaras, "El traje nuevo de la IA", *Investigación y Ciencia*, 526: 50-59, july, 2020, p.59 [my translation].

[10] Alfredo Marcos, "New Praxis. Releasement in a Technological World", in L. Valera y J. C. Castilla (eds.), *Global Changes. Ethics, Politics and Environment in the Contemporary technological World*, Springer, Dordrecht, 2020, pp. 17-27.

Microsoft) and, on the Chinese side, the BATX (Baidu, Alibaba, Tencent, Xiaomi). The first impression we get is that there is too much power in too few hands.

We have to ask ourselves if the power they hold is legitimate. If it is not, neither will it be that they delegate it to the algorithms. The CCP is now, with the so-called AI in its hands, a threat to the entire humanity. And something analogous can be said about the large North American corporations that control the rest of the so-called AI pie. It is imperative, for the health of democracies and for the freedom of the people, that the excessive power of these corporations be dissolved. Responsible digital consumption, lucid use of social networks and prudent management of one's own data would already help[11]. But in addition, political pressure and public opinion in favour of the dissolution of nuclei of abusive digital power would be pertinent.

The new European AI Act already takes steps in the right direction[12].This law, still in process, regulates products generated through artificial intelligence systems, not said systems as such. The regulation is based on the risk that these products entail. Those with unacceptable risk (social scoring, mass surveillance...) will be prohibited. Those with high risk (access to employment, education and public services...) will be subject to strict controls. Those of limited risk (multimedia products, chatbots...) will have to be labelled. Finally, minimal risk ones will simply be authorized. A reflection is in order regarding this approach. AI not only generates products, as automobile industry or agricultural activity do, but it also constitutes a political and social power. So, perhaps we should consider regulating of AI as a power, in the same way that mass media - remember, the so-called fourth power- are regulated.

In any way, as AI is now in the hands of half a dozen US corporations and the CCP, a determined activism in favour of the fragmentation of digital power is required. It must be a simultaneous task to the proclamation of laws. Without addressing it, any restrictive European legislation will only serve to make Europe even more irrelevant in the AI concert. Perhaps even to relocate its most disturbing developments towards more fragile countries.

With what has been said, I do not wish to even insinuate that there is perfect symmetry between the Chinese and the American cases. In the first, the use of DeCo systems for the subjugation of the population should simply be combated. In the second, it would suffice to support actions in favour of a division of the GAFAM corporations.

Within the practical issues, I want to refer, finally, to the so-called *digital rights*. It should be clear by now that robots have no rights, nor are they responsible for anything, nor do they have to pay taxes, that it is absurd to talk about software rights. We are, once again, before a category mistake. But neither does it seem very perceptive or very useful to ask for a new generation of human rights, this time – let's say, to summarize – digital. Inventing new human rights weakens the very idea of "human rights". Human rights are based on the dignity of the person and their belonging to the human family. It is always tempting to use this formula –"human rights"- to protect any asset considered valuable. But, as the field to which it is applied expands, its protective force inexorably diminishes.

If we understand by human rights those of the first generation, fundamentally the right to life and liberty, then the accusation of having violated human rights is an extremely serious accusation. But if we include not only second and third generation rights, but also new digital rights and neurorights, plus the "human" rights of robots or animals, then the accusation of

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[11] Carissa Véliz, *Privacy is Power*, Transworld, London, 2020.

[12] Anu Bradford, *Digital Empires*, OUP, 2023.

violation of a right becomes slightly disturbing. Much more insightful and useful would be to connect the digital to basic human rights, to show how it affects them, without inventing new lists of supposed rights. What is serious about some DeCo systems is not that they violate our alleged digital rights, it is that they can sometimes threaten our lives or compromise our freedom.

In summary

AI, as such, does not exist. Without the human gaze, any artefact loses its intentional aspect and collapses into a simple physical system. There are, instead, AI systems, of which people are a part. What is intelligent in them is not artificial and what is artificial in them is not intelligent. The name, therefore, is misleading. It would be more accurate to speak of DeCo systems.

DeCo systems are already bringing great benefits and causing problems today. It is not pertinent to discuss its practical aspects looking at a distant post-human future, but at the present of our lives. Most of the so-called AI is dependent on the CCP and a few US corporations. The control that these poles of power exercise over our lives through DeCo systems is totalitarian in the first case, abusive in the second. Even so, the promotion of new *ad hoc* rights is not appropriate. Protection against this control must derive from education in virtues (prudence especially, as well as serenity, creativity, self-control, industriousness...) and respect for fundamental human rights.

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