Can Robots Laugh? An Inquiry in the Nature of AI

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Abstract: In this paper we discuss the possibility of robots having a mind and being able to act like human beings and even surpass the human intelligence, and in consequence taking over the world. It is possibility that has been put forward in human history long ago, and that has been accentuated with the new advances in technology from the last few years, of which Chat GPT is the last very well-known example. We base ourselves in a literature review made on eight basic features we define as characteristic of humans, namely: Reproduction, Creation, Belonging, Citizenship, Self-Awareness, Mortality, Rationality, Humour, Feelings and Emotions. We use a plurality of databases as Google and SCOPUS. As a result, we conclude that even if robots may express themselves as humans, and may beat humans in specific activities, they lack most of the features that define human beings and most probably they will ever do. As with time and space travelling, robots that would take power on Earth are a utopia that will probably never happen, but whose pursue will be beneficial for the human race. The paper has the limitation of being only theoretical, and the originality of being based on Philosophy of Artificial Intelligence and presented in a scientific environment.

Keywords: Robots, Humanity, Soul, Inteligence~

1. Introduction

Robots and Artificial Intelligence appeared in human history first as a dream of writers, like Mary Shelley's Frankenstein (Shelley, 1818). Just fifty years before, the idea of a machine that played chess was put forward, only to be uncovered as a lie (Standage, 2002). In fact, the first time that computers managed to play chess was due to the work of Alan Turing (Copeland, 2004), the mathematical genius that had helped decoding the German Enigma military machines (Reuvers and Simon, 2010). After several decades of great development and enthusiasm, the idea of AI surpassing mankind was decisively put forward by Bolstrom, 2014. According to this very well-known and quoted author, in some decades, humans could be comprehensively surpassed by robots, generating a very big problem of control.

In this paper we want to address this question, and we start by assuming that in order to beat humans, the robots would need to be something like "improved humans". By humans we mean an entity that has autonomy and that has a mind; that autonomy enables humans to perform a vast set of tasks, many of them unexpected; to have a mind means robots should have self-awareness and the idea of life and death and of existence; ultimately, as mentioned in the title of the paper, it would mean that robots would have emotions, would cry when things go wrong and would laugh when things go better than expected. Also, humans are citizens, they do not only create but they procreate; and they live in societies, they have citizenship. We really think that at the first quarter of the 21st century, humanity is very advanced, so advanced it is pursuing big dreams, like creating robots. But in the meantime, this is done by not having in consideration the value of humans themselves as intelligent, emotional and social beings. By understanding robots (and their shortcomings) we might be able to understand and value humans better.

Having what was just said in mind, and in order to answer to the research question (What is the nature of Artificial Intelligence, is it comparable to Human Nature?), the paper will be composed by the following sections: concepts, methods and data, analysis, discussion, and conclusions.

2. Concepts

2.1 Human Nature

By Human Nature we define a being which has both mind and body. That being is capable of reproducing itself and lives in groups, called families, clubs, cities or societies, becoming citizens. Crucially, body and mind are interlinked and give humans a sense of existence and of mortality; this sense is the origin of both art and philosophy. Humans have also a deep sense of belonging, even if they may be ferociously competitive with one another. Humans are capable of rational thoughts, but they also have humour, feelings and emotions; they also have values which guide their lives. Mind and body put together make it possible to create and to procreate, meaning that humans create things that are outside their bodies and also are able to prolong the human species.

Crucially, mind and body make it possible for humans to move and to decide at their own will what to do with their own existence as well as to influence their fellow citizens. Humans perform lots of tasks every day.

2.2 Robots

Robots are objects made of metal, plastic and silicone. They do not know they exist. They cannot replicate themselves. They do not have sense of belonging. They may be extremely good at doing some specific tasks but lack capabilities to do multiple tasks. They only may move by themselves limitedly. They can create something close to art or philosophy, but because they are not aware of themselves, these works are not art or philosophy: they only look like it.

The ideas exposed in the last two sub-sections are summarized in Table 1.

Table 1: Humans versus robots

Topic	Humans	Robots
Reproduction	Natural	Extremely limited – xenobots
Belonging	Deep and necessary	Impossible
Citizenship	Decisive	Not foreseen
Self-Awareness	Essential	Impossible
Mortality	Definitive	Not foreseen
Rationality	Important	Technical Limited in scope
Humour, feelings, emotions	Decisive	Impossible
Creation	Permanent	Technical

3. Methods and Data

We used the eight ideas that compose the first column of Table 1 as keywords and we searched SCOPUS and Google for information. We obtained the data we expose in Section 4.

4. Analysis

4.1 Reproduction

The idea that robots may reproduce themselves is essential if we consider them to be comparable to the human race or any other living species. Very recently, scientists have announced the creation of xenobots (Ramanujam, Rasikannan, Anandhalakshmi, Kamal, 2022) as "A Remarkable Combination of an Artificial Intelligence-Based Biological Living Robot". These xenobots are the first "living robots" and they are made from stem cells from frogs (Young, 2020). Crucially, they may reproduce themselves (Hunt, 2021*).*

> *"The xenobots used "kinetic replication" – a process that is known to occur at the molecular level but has never been observed before at the scale of whole cells or organisms, Bongard said. With the help of artificial intelligence, the researchers then tested billions of body shapes to make the xenobots more effective at this type of replication. The supercomputer came up with a C-shape that resembled Pac-Man, the 1980s video game. They found it was able to find tiny stem cells in a petri dish, gather hundreds of them inside its mouth, and a few days later the bundle of cells became new xenobots" (Hunt, 2021).*

Scientists believe xenobots may be used as helpers in scientific experiments:

> *"this combination of molecular biology and artificial intelligence could potentially be used in a host of tasks in the body and the environment, according to the researchers. This may include things like collecting microplastics in the oceans, inspecting root systems and regenerative medicine." (Hunt, 2021).*

Xenobots are seen as a new way of describing the machine metaphor in biology (Barwich and Rodriguez, 2024), as new bioinformational way of understanding AI (Gautam and Deverakonda, 2024), as new way of addressing embodied cognition (Bonhard, 2023); finally, xenobots may be used in drug discovery (Solanki, Mahant, Patel, Koria and Patel, 2022) and in spaceflight (Kiesling, Maitland and Simmonds, 2022).

The achievement we described is remarkable. Having said that, the idea of robots being able to reproduce themselves as a species is not foreseen, and indeed was not even put forward by very well-respected science-

fiction writers (such as Asimov, 1950) for whom robots would be always built by humans. In fact, Asimov coined the Three Laws of Robotics:

> *"The First Law: A robot may not injure a human being or, through inaction, allow a human being to come to harm;. The Second Law: A robot must obey the orders given it by human beings except where such orders would conflict with the First Law; The Third Law: A robot must protect its own existence as long as such protection does not conflict with the First or Second Law." (Asimov, 1952).*

4.2 Belonging

As seen above in the previous sub-section, robots have not been considered as capable of reproducing themselves in order to create their own species. However, quite recently, it was announced that a woman, Spanish artist from Barcelona Alicia Framis, "married a hologram" (Velasquez and Ferrant, 2024). This was preceded by a less mediatised occasion when a Japanese man (Mr Akihiko Kondo) unofficially "married" fiction character Hatsune Miku (Japan Times, 2018). Mrs Framis' actions have been described as a "performance" (Velasquez and Ferrant, 2024), and Mr Kondo was reported to have made his decision after being rejected by a woman and falling into depression – somehow Mrs Miku saved him from depression. More recently, in 2023, Mr Kondo created the General Incorporated Association of Fictosexuality. The idea of somebody falling in love with a computer-generated mind had been also put forward in the movie "Her" (Jones, 2013). In this movie, a relationship is developed between a man and an artificially intelligent virtual assistant personified through a female voice: the man character is played by Joaquin Phoenix, and Scarlett Johannsson gives voice to the AI device. More prosaically, several personal assistants have been developed before the pandemics like Siri from Apple, Google Assistant, Alexa, and Cortana from Microsoft and Alice from Yandex; all these "assistants" are very developed software that may interact and "talk" to the user while helping him; one of the main and more useful features of these programs relate to the GPS location, enabling driving and movement in so-called smart cities. All in all, these "assistants" relate to loneliness and to what the meaning of social life is at the end of the first quarter of the 21st century. It is not by accident that in the UK, a Minister of Loneliness was appointed in 2018 (Daley, 2018). There is something that makes one remember the Eleanor Rigby song (Lennon and McCartney, 1966) in the discussion about robots as social elements: where are the lonely people, or should they have a robot not to feel alone?

4.3 Citizenship

Some authors have discussed the role of robots in governance (Hilb, 2020) defining five scenarios of artificial governance: assisted, augmented, amplified, autonomous and autopoietic intelligence. Also, the possibility of robots paying taxes (Kim, 2024; Oberson, 2024), when imported (Costinot and Werning, 2023) or when used as substitute of labour (Chowdhury, 2022) was analysed. It was found that robots are real source of income for governments in times of crisis, and these funds may be used in the benefit of the same persons that may be disadvantaged and unemployed by the use of robots themselves.

However, the idea of robots having an ID card and citizen rights has not been put forward, because no robots have been so developed as to be considered a person. One known exception to this situation is Sofia, a robot created by Hanson Robotics and that, on October 25th 2017, at the Summit on Future Investment Initiative held in Riyadh, was declared as official citizen of Saudi Arabia (Fernandes, 2017). Sophia gave interviews to major outlets like the CBS, CNBC or The Guardian, but the idea of having "citizenship" was seen as a publicity stunt by Saudi Arabia (Jaynes, 2019) and a way to attract foreign investment in AI (Nease, 2020); other concerns happened with vote, marriage or murder (Maza, 2017). The citizenship award led to a "legal quandry" (British Council, 2020), and in 2017 even the European Parliament considered "granting of 'electronic personhood' to the most advanced machines to ensure their rights and responsibilities" (British Council, 2020) Nevertheless, those plans *"were considered as 'ideological, nonsensical and non-pragmatic by experts in medicine, robotics, AI and ethics*" (British Council, 2020).

4.4 Self-Awareness

The possibility of robots that have sense of existence has been portrayed in the movies long ago: Robocop was a humanoid (Verhoeven, 1987), and Number 5 was a robot who feared to be disassembled more than everything (Badham, 1985). However, these brilliant ideas were just good and entertaining science fiction and art. In scientific terms, the question is much more nuanced.

In the first semester of 2023-4, the Oxford Philosophical Society produced an online course on the "Philosophy of Artificial Intelligence". Among the topics analysed in those sessions were the following: "Can a robot be a

philosopher?" by Peter Gibson on November 1, 2023 (Gibson, 2023a) and "Could a robot be an artist?" by Peter Gibson on December 20, 2023 (Gibson, 2023b). In both lectures it was underlined that robots lack an essential feature that artists and philosophers must have, which is self-awareness. Indeed, both Art and Philosophy are major constructs of an intellectual entity (the mind) in relation with its environment, and they originate from the reflection or reaction of the self-conscious mind in relation to that environment. From this idea, two very interesting conclusions are derived: first, even if robots may produce something that formally may be called art, such as novels, painting, music and even ballet (Gibson, 2023b), all this is made in a technical, mechanical and non-dramatic manner, because we are only talking about algorithms that have been programmed and built by humans, that may be switched of by humans, and that therefore do not exist as personas, with identity and soul outside that human creation. Therefore, ChatGPT or any other very performant AI algorithm could be a very good assistant to a given philosopher, but it would never be considered as a philosopher even if the machine could write philosophical essays, because all the construction would be only technically based, and it would lack the sense of ontology that is need in all philosophies – even if the robots can define some possible paths to humanity, it is impossible for them to understand the "peripatetic mantra" – to philosophe is to be in the way – because they are not themselves aware of the existence of the way. Therefore, no awareness means no drama as artists and no ontology as philosophers, and therefore even though both those types of work made by algorithms look "like art" and "like philosophy", they should only be considered as second rate in comparison to those made by humans.

4.5 Mortality

Because robots are not self-aware of their own existence, they do not feel to be mortal. Even with the recent advances of biotechnology, like biobots, the dilemmas of life and death still do not apply to them (Levin, 2021). This idea is in itself quite important because it limits the possibilities of robots as entities. Also, and quite interestingly, it has been defended that if robots could be mortal (Delbert, 2019), they would be more performant, and more able to make complex decisions, because the "survival mode" is a way to improve performance (Man, Damasio, 2019).

4.6 Rationality

The possibility of robots making very complex calculations has been highlighted by chess algorithms like Alpha Zero (Knapton and Watson, 2017) and also by scientific software like SPSS, Stata, e-views or InVivo. Quite crucially, all those very strong programs outperform the human mind even in chess. But also quite importantly, not only have they been programmed by humans, so far they have not been able to out-program themselves consciously. Therefore, even if there is a possibility that a robot could generate harm, by malfunctioning or by bad coding, the idea that robots could consciously create harm in the world (killings, murders, etc.) has been, so far, considered only by science fiction, generating Asimov's laws (Asimov, 1952), and Bostrom's warnings on control (Bostrom, 2014).

There is also an important caveat that must be exposed in relation with this topic of rationality, and it is the problems of complexity and uncertainty. This means that life is more diverse than chess and mathematical problem solving, and humans perform a very vast level of activities every day; at the current stage of development, it would take an enormous number of robots to compete with the daily performance of the human brain. Also, life is not as predefined as chess and maths. On the contrary: life is full of uncertainty in all aspects – uncertainty of what to do, when to do, and how to do – and quite surprisingly the human brain can adjust to all these types of uncertainties and manage them quite well, and almost instantly in most cases. It will take a big advance in robots to be able to deal with both the complexity and the uncertainty of human life.

4.7 Emotions, Humour and Feelings

In 2019, three researchers published a paper (Rombão, Tomé and Ribeiro, 2019), in which they made a survey about the nature or robots and their social importance, and they found that on the one hand, ordinary people believe that robots may be very useful as tools in organizations, but on the other hand, they consider robots lack one decisive aspect of humans – they do not have emotions, or feelings.

Quite recently, Sahota placed the question of feelings by robots in the realm of imagination, and so did Kenyon (2024).

So for the time being robots are emotionless – and, answering the question in the title of the paper, they cannot laugh. This fact decisively limits what robots are or may be. They can create works that seem to be art, they may solve problems, but they are just tools of metal, plastic and silicone. As we know body and soul are essential for

human development, this means robots will never be able to compare with humans and humans will have superiority over them.

4.8 Creation

As mentioned in subsection 4.4, the idea that AI can create something like books or paintings has been advocated. Vlaad, 2024 considers that the notion of "author" should be clarified. Also, according to the same author, the images developed by AI are in fact conjunct works of the human developer that created the algorithm and the algorithm which needed the human instructions to create the piece of art; as a consequence of that possibility, separate competitions for AI-generated art works are envisaged.

5. Discussion

For the economic world, the importance of robots has been put as almost absolute. As previously noted in subsection 4.3, artificial governance has been considered, just like the effect of robots in taxes. Moreover, it has been almost consensual that robots may be used in organizations and that they will change the nature of work (Selenko, Bankins, Dhoos, Warbuton and Restubog 2022). An interesting caveat in this context has been to go from a position of "men and against the machine" to a position of "man with machine against man without machine". The question of power in the organizations has also been addressed; in an international conference held just before the pandemic in July 2019, the first author of this paper heard an engineer defining organizations as "a set of servers of carbon and silicone connected in real time"; this was, however, before COVID-19 and ChatGPT questioned the existence of both presential classes and lecturers.

Moreover, the idea that robots can become dominant in the world may hide some sort of political agenda, meaning the image of a world in which very few will dominate all the others with the support of robots. This also may be driven by an idea of exploitation of the labour force and of some hard version of Social Darwinism, in which the robots would be the ultimate weapon of the fittest in order to assure their own survival.

Finally, it has been advocated that IT developers are the persons that mostly advocate the agenda of robots' dominance in the world, because they would be somehow dominant in the world if this happens – a bit like accountants defending accountability as the second more important activity of organizations because without correct accounts nothing will work – so, some truth originating a big fable.

The behavioural side of robots is still very small, and they are still in the hands of programmers who are not able to develop the machines in order to have the eight characteristics we defined above as "human".

6. Conclusion

The quest for artificial intelligence is parallel to the idea of travelling through space and time. For the time being, and most probably as a whole, Humanity will not be able to create robots with brains and will not be able to surpass the speed of light and arrive at other worlds. Having said that, even if the ultimate goals might not be achieved, in the meantime, and during the quest, much good, wealth and health may be and has been generated. Therefore, as a whole, and in conclusion, even if robots cannot surpass humanity, they may be very beneficial for humans, in particular if they can be used wisely. As with all the machines and devices, it is not the tool itself that is the fundamental question: it is how we use that.

This paper is essentially reflexive, a bit speculative, and written like the old-fashioned essays with no use of technological tools of analysis, with the exception of the word processor or the search engine. It was also proofread by a human rather than a software. However, the questions we addressed are worth being discussed, because they touch deep in the nature of humans – so, by understanding the limits of robots, as the limits of time and space, we can manage to understand humanity and its strengths and limitations.

Moreover, we feel that philosophy and reflective thoughts are essential in scientific conferences, particularly in a time where technology creates so many possibilities, as well as so many ways of happiness and prosperity.

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