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# AI and the Problem of Communication: Language, codification, translation, adaptation

**Abstract**: This essay speculates on the nuances of communication between the human being and artificial intelligences or artificial intercommunication, trying to show what are the chances, problematizations or adaptations that the future will challenge us, as a human species engaged in the progress of extreme technology. In this sense, various research laboratories are presented, which have the visionary ambition to propose a positive solution in the relationship between man and Machines.

**Keywords**: posthumanism, artificial intelligence, communication, fake people, Machines, Lingodroids, Star Wars, Westworld, Merlin Project, CETI Project, physical intelligence, liquid networks.

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More than a decade ago, Rosi Braidotti (2013), in her seminal book on posthumanism, which has challenged concepts that today have an international audience and acceptance, was questioning whether in the new climate of radical cultural and technological changes, where the new death-technologies operate at a global scale, one could navigate (or not) between "a political economy of nostalgia and paranoia on the one hand, and euphoria or exaltation on the other" (9). Another decade ago before Braidotti, Neil Badmington (2004) was theorising several "matrix terms" for the new cultural metamorphoses, providing a context for several

techno-prophecies, such as "inhuman, non-human, a-human, posthuman" (126). Another important landmark was created twenty-five years ago by Katherine N. Hayles (199), who tried to reassure mankind (on a cultural level) that "the posthuman does not really mean the end of humanity. It signals instead the end of a certain conception of the human." ( 286). All of these options, which have been widely commented and debated, well received or criticised, have branching speculative nuances in following years.

It would be enough to go through Clifford A. Pickover's (2019) history of artificial intelligence, from its medieval robots to contemporary artificial neural networks, to have understand the panoramic and at the same time passionate problems related to technological entities that have permeated human history from ancient time up to the present. Even more ambitious than Pickover, the recent project proposed by authors Philip L. Frana and Michael J. Klein (2024) elaborates a wider framework, compiled as an encyclopedia of machines, with a comprehensive depiction of the role artificial worlds had in human life for a very long time, if only on a creative fantasy level.

A key question remains, why our biggest fears about the presence of artificial intelligence in our lives are related to human existence? By pointing the finger to the main anxiety that, thanks to the extreme and high-performance development of technology, A.I. could gradually infiltrate everything that is human life, our thoughts, work and politics, we are faced with the possible infiltration which would eventually lead to the control of the artificial over the human. The possible domination of humanity by Artificial Machines (whatever their shape, structure or size) is, at first, done by disruption and intrusion, but this disruption further amplified and continued, would ultimately lead to a supremacy of the "Machinery". Here the term Machinery is used to encompass multiple manifestations, with relatively terrifying meanings, rather than the more positive notion of Machines.

The robots that already serve in certain areas and bureaucratic or consumer spaces and that even on the phone are likely to deceive us (so much their voice resembles a real one) are called *fake people*. It is interesting that it is precisely the FALS qualifier that separates and delimits them from the human sphere. They could have been called by an invented term, but the first option was to name them by comparing them to humans, but indicating that they are absolutely not people. The human anguish is related in a matrix-like way to the modes in which these fake humans could form a league or caste in which they could manage to communicate without the intermediation of human creatures, directly that is, machine to machine, beyond the great human link. And, by communicating directly, they could make decisions dangerous to humanity, in a sense that is not yet clear except as a general stake. It's a hypothesis and an idea to be debated by futurists and technological ethicists.

If false humans succeeded in creating a vast network of high-performing non-human minds, what could be their goal, other than the domination of human beings? That is the question, as Hamlet says, if he lived in our times. This question is also raised by Matthew

Houston, in an article already a year old—"Can We Stop Runaway A.I.?" (published in *The New Yorker*, May 16, 2023). Therefore, one of the solutions at the moment is to temper technological development, i.e., to adopt a moderate scientific attitude. The truth is that we can't stop the development of A.I., that would be bizarre, but perhaps we can temper it, we can control it in such a way that it doesn't take on uncontrollable proportions.

Of course, the problematization here is utopian: scientists are not going to temper their advanced research, for that would be like returning to a backward form of humanity. Precautions may be on the minds of governments, but not on the minds of companies or scientists. At the present stage, the commentators (the intellectuals who have at least a modicum of competence about the A.I. world) are the skeptics on duty, the apocalyptics and sarcastics who, by their verbiage, hope to prevent the harmfulness of today's long-shot technological world. Let us hope their words from the agora will be heard in the laboratories of the future.

The hunger for communication, or more precisely the craving for interrelation through exbitionist-voyeuristic (but not only) exposure, has predictably and progressively led to the phagocytic development of social networks, as well as to the hyper-development of extreme technology actions in the matter of artificial intelligences. The goal was a positive one, initially: how to communicate more adequately and faster, forgetting, however, that speed of communication does not necessarily imply depth of communication. Then came another compulsive ambition, just as predictable: how to develop as a species, training our inventive and creative capacities technologically and inventing other, artificial life forms, without having to imagine entities from other planets or to delude ourselves in science fiction style, by a frank pact with fiction.

I have always been drawn not only to how artificial intelligences communicate (relatively human-like) with humans, but also how two or more artificial intelligences communicate with each other. It is a question that has been circulating for many years now, and it is based on the following idea: if several artificial intelligences can communicate with each other (if such an action is reached or tested), is their language the one borrowed from human language, or can we speak of another language, specialized and specific only to Machines? Perhaps we are deluding ourselves cognitively, because the language exchanged between two robots, for example, would be entirely dependent on the language of their human creators, without being able to go beyond the human linguistic structure.

And yet today's super-developed programs allow for the existence of a supra-language or post-language if only because in all the other languages of the Earth the abundance of anglicisms is conspicuous and part of a new linguistic stage of humanity, whether we like it or not. Futurists believe that English will be superseded as the superlanguage of computers and artificial intelligences, because at some point they will be able to create a form of communication through codes (or electrical signs and signals or computer formatting) and

not necessarily through language. Then natural language (born and created as a human language) could be muzeum-ized, without this meaning that a synthetic language would win the day. It is possible that for artificial intelligence language would simply NOT mean anything from one point on.

I wonder what it would be like if there was a Facebook or Twitter or Linkedin or some other social networking site that was used exclusively by A.I.! Of course, even more provocative (or even absurd) questions cross my mind: will there ever be a graveyard of Machines (that can no longer function or are outdated), just as there are graveyards of automobiles (cars)! Or will such obsolete machines end up in technology museums instead!

More than a decade ago, researchers at the Queensland University of Technology created a pair of robots that created their own language. They were called Lingodroids. Although the Lingodroids invented their language in the same pattern as human languages, their language was more like a children's game of fold, as the resulting sound was childlike. It's like pressing a few keys on an electronic organ for toddlers (those who are curious can search the internet and find these Lingodroids). The dialogical antecedents between A.I. existed in a famous movie, which we all know, not only in film history, but also in technological and mental history: it's about the *Star Wars* robots named C-3PO, R2-D2 and BB-8, the first two robots being the essential ones, as BB-8 only appears in *Star Wars. The Force Awakens*, from 2015, almost forty years after the first two, in the chronological order of the films in the series.

A few years ago, there was a talk of two Chatbot bots inventing a secret language on Facebook that only they understood (their programmers didn't understand it either). The TV show *Westworld* also contributed to a whole paranoia about language and control. Perhaps it will create by itself, one day (by virtue of the march of history and civilization), a simple galactic language, but minimalist enough to be understood by the whole galaxy. Not in words, but in signs, as it would be easier to understand or change. This, however, not only implies the "linguistic" debate about human communication with artificial intelligences or communication between artificial intelligences, but would also cover possible human communication with entities including extraterrestrial ones.

In this way, it could be prophesied, to a certain extent, even a kind of extinction of human languages (or their sifting, their filtering), with only those languages that are used by the majority or that have a structure that is possibly intelligible to other non-human galactic dimensions being preserved. It sounds relatively apocalyptic what I write here, but I am just summarizing the hundreds or even thousands of discussions on this subject on the Internet, pondering the matter myself. If we ever achieve the successful practice of brain implants (personally, I don't want that, as interesting as it would be), we will no longer need to communicate by language even among ourselves, as non-verbal, visual language will suffice.

The question of language between two artificial intelligences only really becomes a burning issue if we ask the question of creativity and artistic dimension. The only thing is

that, if there is no human curiosity in this respect, it is clear that the language (let's call it that, in principle) is exchanged between the same or different forms of A.I. will only have a minority artistic side, since the pragmatic and immediate dimension will be prioritized. When and if robots, or any other form of A.I., are able to program themselves, without the need for any human interference or any high-performance human brain, then, yes, perhaps we will no longer really be able to talk about language, but about something else that has yet to be named.

If human languages will be sorted out, at some point, so that only those that have a structure that is easy to share and take on (collectively, i.e., galactically!) remain valid and usable, and those that are considered invalid will remain only in dictionaries and relatively tribal communities, perhaps the rebels and protesters (alters) that exist in all times and societies will invent a new profession, that of language and language troubleshooters!

Another intriguing question is whether, through the signals and sounds emitted by artificial intelligences, we could actually find a way to communicate with animals. The ones most targeted by humans are marine animals and birds (especially their communication with each other is fascinating.) MERLIN, for example, is a free program from Cornell University's Lab of Ornithology that can identify bird species by the sounds they make (so far, about a thousand bird species have been identified). Communication between whales or dolphins even arouses the passion to check (with the help of science) whether their language could be deduced and translated by equating it with the language of artificial intelligences that emit sounds and signals, not necessarily words and sentences. The contribution of biologists and bio-linguists becomes imperative in this case, if we are, in fact, in a paradigm shift.

It would be possible (and not necessarily utopian) that by understanding or at least equating A.I. language, we might be able, at some point, to intuit the language of certain animals that communicate super-intelligently through sounds, signals and especially codes (or encodings). Researcher Shane Gero (from Carleton University in Ottawa) made recordings of groups of cachalots for two decades (as part of a project called CETI), identifying their communication codes. He then set up (adapted) a computer program into which he entered recordings of cachalots' sounds, and these sounds were partially identified. The even more ambitious challenge remained to create a computer program that would be able to communicate with the cachalots. After all, we should reinvest the verb to translate including an ethical and ontological-gnoseological dimension.

Another pioneer in extreme technology with a passion for technological communication is Daniela Rus (originally from Cluj, Romania), today director of the Massachusetts Institute of Technology and the Artificial Intelligence Laboratory. Together with researcher Ramin Hasani, Daniela Rus has advanced the concept of *physical intelligence*, which she wants to concretize by hybridizing the dexterities of artificial intelligence with the abilities of robots. Daniela Rus also proposed the concept of *liquid networks* (or liquid neural networks), which

refers to artificial intelligences modeled after worm neural networks. These networks are called liquid in the sense of adaptive.

We will see if this will be possible, as I am excited by the experiment. For now, these visionaries are enthusiastic and rightly applauded. They certainly have their technical limits, and certainly, before being launched on the market of ideas and A.I., they have had their share of failures and problematizations. But, after all, this present-ization of the future interests all of us.

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