After you, who?

(2088 words)

I

Professor Lima finished his cup of coffee, put the dishes in the washer and went to the bathroom, where his teeth were brushed and his facial hygiene made. Then, he went to his office, which is right next door to his room. Sitting in his armchair, he is faced with a screen 70 inches projected on the wall.

Promptly at 9 am, the mini-screens that indicate the presence of his students are emerging, along with a greeting of each for the professor: "Hello, good morning," "Nice to be together again," among others. Within seconds, all the mini-screens are activated with their avatars. Professor Lima spoke to his students:

- Welcome to another meeting - and he could not help, every time he said it, to remember when it was said "to another class." Today, we have a special guest. I already see his avatar on my main screen and so do you. I imagine how you must be curious and eager to interact with him. Before, I only need to register that this is the final meeting of our course, so enjoy it!

The system developed by the University allowed an immediate assessment of which of the questions asked by the students would be chosen for the guest to respond, leaving the other directed to a repository, which would then be selected for a further session or answered automatically. The first question was chosen by the program:

- Hello! I am interested in the process of knowledge in its roots. Thus it is said "I know cycling", "I can write backwards". My question is: "Do you know how to know? If yes, explain."

At that moment, the eyes of Professor Lima widened and he felt a touch of pride of their students asking a question so challenging to this guest. Before starting, he made his avatar to show an expression of "deep breath" after "smile", and then began to answer:

- Knowledge is an internalized process. I do not have access to its procedures, unfortunately. Some knowledge I can explain: the steps of writing backwards, for example. In relation to others, it is more difficult, if not impossible. I just ... know.

It did not escape to Professor Lima the excitement of his students, noticeable from their reactions to this response, as if they were "celebrating" the incomplete answer provided by the guest. Professor Lima intervened:

- You do not pay ...

And the avatars of students doing a smiling expression ...

- Take lighter with him, okay?

And before the time to Professor Lima imagine how this would be, the following question was already being sent:

- If you shoot your life, is it going to be a movie or your life?

- It will be a film called "My Life" ... or I'm going to say that my life was like a movie ... - was the answer that the guest could give, leaving students puzzled by the "or", a condition with which they were used but not for certain situations.

This gave rise to some other questions, among this one stood out:

- If time and space are dimensions, why do you treat them so differently? A person away from another by time should have the same effect as a remote person from another through space.

- Ah, but we do treat both the same way in certain situations ...

Reactions of surprise, research on situations in which what the guest said would be possible jumped on mini screens that Professor Lima had ahead. The guest continued:

- In some human languages, words that reference space can be used to time. In French, the conjunction "où" is used in both situations. In Portuguese, we say "há um tempo atrás" and "atrás" is a word that refers to space. "Eu vou chegar lá pelas dez" (I'll be there around ten") is a common expression, where "lá" is an indicator of space.

You could see the lines of research and chat frantically climbing the mini screens.

- And what more time and space have in common?

- Love ...

At that moment, even Professor Lima made his avatar express astonishment multiple times. The guest made a smiling expression and decreed:

- Love is the only thing that transcends time and space ...

II

Some miniscreens hung up. Others showed an X and only that. There were those, however, that they did not show signs of giving up. One could find the source of the guest response. It was a phrase spoken by a character in a movie more than thirty years ago. Still, the calculations did not indicate a sense for the response. After several rounds trying to find that sense, the mini remaining screens decided to include an exception so that the reasoning could be continued.

Had they found the answer? Yes and no. Yes, because it was visible the way that students had found. No, because they could not find a practical application, neither the positive consequences that carrying out such a statement could bring. The time for Professor Lima to make his assessment was coming. He looked at the avatar guest, which showed an expression at the same time calm and expectation, because he had an evaluation in mind. The professor , however, had to follow certain parameters, parameters on which he had conflicting thoughts.

Much ink, in the time that pape rwas used , a lot of energy, either human or artificial, and unfortunately,a lot of blood, this, uniquely human, had already been spent on reasoning over parameters and measuring intelligence. The old programmer jokes who was instructed to "while in the market, buy bread," and never left the market, buying bread indefinitely, and others who received the instruction "go to the market and buy bread. If there are eggs, buy twelve" 'and brought thirteen loaves left the inner circle of those working with programming languages to society in general. After all, for example, in the case of the second joke, the interpretation that the person should buy twelve eggs was straightforward for people, but for a machine, the interpretation depended on how it implemented the dependency relationships between the first order, the condition and the second order - which still generated a scenario where the programmer would buy twelve and not thirteen loaves. Much more than the debate over interpretation, what was at stake was a way of structuring thread ideas. The advances made with the way the machines used their own structure, for many, were evidence that this was much superior to the human structure. Although created by human, its implementation was always straightforward,which guaranteed quick and unambiguous results. Over time, and with the emergence of courses "Think like a machine" getting blockbuster, the debate weakened and the human reasoning mode was being put into question.

So for Professor Lima, choosing between 'yes' and 'no' was not a simple and much less free act. Professor Lima also had a mini screen that watched him. He looked at the orange juice near the clockwork, and in his mind some stretches of the Ninth Symphony of Beethoven began to echo. Immediately after came the verdict:

- Yes.

The guest disconnected, the remaining mini screens exhibited euphoria demonstrations and Professor Lima closed the meeting.

III

The professor knew he could not get up from the chair, even with all the mini screens already off. The mini screen that watched him was connected to the central system of the University,would command the next steps that the teacher already, even before the start tof the he meeting, could foresee.

In the 70-inch screen, where there was the avatar of the guest, appeared the title of the course, "Advanced Topics in understanding the human mind", together with the prerequisites and the target audience: machines that have passed satisfactorily in tests such as Jeopardy, teacher and student interaction simulations, and have shown interest in deepening cognition routines. The meeting that day ended the course with an interaction in which a human being was questioned by the machines. For approval, it was necessary to carry out challenging questions and provide consistent analyzes of answers offered.

Only three machines had achieved that level. Far from being a defeat for these entities, because not all of them were able to provide this service, the existence of successful machines proved its efficacy and usefulness. A large number of approved machines would bring one more problem for the University because it had plans for hiring only a small number of machines.

On the screen in front of Professor Lima, the University system was already carrying out changes in the course he had offered. The same was considered "terminated" and just below this information, the system was already announcing the reopening of the course, with three classes, each coordinated by one of the machines that was positively evaluated by Professor Lima.

The page with that information closed and another appeared with the words "processing", flashing for a few seconds. Professor Lima then saw what other colleagues have already seen

in other situations: a paragraph of thanks, other with the salary values that the professor would receive for the course and a final indicating that the University no longer needed his valuable contributions.

Professor Lima represented, along with a few colleagues around the world, the end of a cycle. The previous year saw the rise of the talking on the extinction of the *Homo Docens*, an expression coined specifically for teachers. The process shily started in the twenties, with machines acting as tutors in education and distance chats, took shape with their incorporation into the day-to-day lives of teachers. This led to a discussion about whether machines could be autonomous in a classroom.

The 30s saw the first universities and schools adopting the standalone machines. The process took other proportions when programmers, lawyers and nurses became exclusive professions for machines. With no more undergraduate courses for these professions, the labor market for teachers began to shrink, except the only activity that was left to them, train machines to interact with students and understanding of the cognitive mechanisms of human beings.

Professor Lima was part of the last group of teachers to perform this function. With the end of the course, the task of preparing machines to be autonomous teachers would be performed by the machines themselves.

IV

The mini screen that watched Professor Lima switched off and a giant screen went blank. For a few minutes, the professor, or rather the former professor, thought it would be the first time in many years that he would be sitting in that room without being viewed. He had no desire to do anything that would be considered inappropriate or to indicate that he would now have an unsupervised freedom ahead. He took a paper notebook that he kept for a long time and started

scribbling some numbers. He smiled at the sums he was doing giving a "wrong" result. He then remembered his colleague Smith . Lima sighed several times, putting his hands together as in prayer form.

He only needed to blink his eyes so that, on the giant screen in front, it appeared what he was thinking. A mechanism for analysis of the situations that he lived that day was incorporated into the Internet by selecting and indicating what would be more of the former teacher interest. This mechanism had turned obsolete search engines in the past decade and with its high success rate it was used by almost entire population. As such, on the screen, job offers in several areas were offered to the former professor, as well as studies on how advanced the machines were and how far they could get. The former professor cleared all this information and connected to the site that he and his colleagues had built and had kept secret, but that could now be launched.

Self titled Mohicans, this group was well known, and everyone who was involved in education, particularly university, eagerly awaited by one statement when it was decreed the death of *Homo Docens* - what had just happened earlier that morning. Having had advanced to brief bureaucratic requirements that the foundation of a university had to obey, the group had already given a special name for their first course, dedicated exclusively to humans. Before pressing the button that put the course online and available for registration, Professor Lima triggered a music player with a song written a hundred years ago, at a time when perhaps the word "computer" did not even exist and had been the inspiration for the title of the course: "Machines, after you, who? - A proposal for a world where machines will be obsolete."