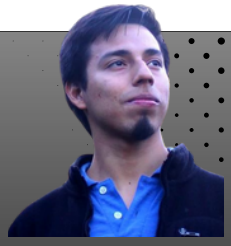
Who (or what) will provide the consultation?



Valenzuela Mendoza Jesús Gilberto
AMEXA
abstrot@hotmail.com

Many readers are familiar with the story, somewhat like a fable, about the first human appearance and the evolving concept of humanity, which remains without a precise definition. The discovery of a broken and healed bone has often been interpreted as evidence of an early human actively caring for another, a decision to help an individual facing a life-threatening condition, even in the Paleolithic era. Whether truthful or a folk legend, it highlights our inherent tendency to look out for one another, a defining trait of what it means to be human.

Moreover, it is common to highlight the use of tools in our activities as we evolve as a civilization. The practice of medicine, from its beginnings, has involved techniques and instruments, even primitive ones. Therefore, the synergy between medicine and science is not just beneficial; it is inseparable and essential. Medicine, as we know it, is not merely an art—it is the result of the art of technique, in other words, technology.

Computer invention involved an authentic revolution in all instances, not just in the industrial field. As a data management machine, increased exponentially scientific progress by enabling the storage of enormous volumes of information that would have been impossible for human limits. Medicine likewise benefited from modern technology with CT scans or magnetic resonances, changing the methodology for diagnosis and treatment.

Several brilliant minds who witnessed computers' genesis, also predicted its future development. Ada Lovelace and Alan Turing anticipated that computers would eventually perform intelligent responses to their input data. They intuited that they would not be eternal information-processing devices, but could make decisions. John McCarthy coined the term "Artificial Intelligence (AI)" to unite efforts and establish an action field of this idea.

In short, AI involves the integration of logical, mathematical, and computational procedures designed to create machines that simulate human intelligence, capable of performing autonomous and adaptable learning processes. Since the COVID-19 pandemic, AI has been evolving alongside a global digitalization trend that continues to expand into our daily lives. From fun photo filters and text chats to analyzing vast amounts of data for global decision-making, it is clear that AI is not only a useful tool but, like other technological inventions, is gradually becoming indispensable.

For AI's definition, I delimit the extension of its current role in medicine. Not every monitorization device includes it, even those for telemedicine, still realize their measurements by pre-existed algorithms.

The majority of electronic administration systems don't rely directly on AI; it is specifically used in information processing outside of the core administration. Surgical robots, often featured in Vanguard technology publications, are not operated by AI but are controlled by the surgeon, who adjusts the trajectory and precision using mathematical analysis algorithms.

In contrast, artificial intelligence is used as an assistant in diagnosis, performing analysis of laboratory results and imaging studies; in research, evaluating data from databases; in recent monitoring devices, predicting clinical conditions; and as a valuable tool for personalized medicine by offering a deeper understanding of the specific conditions and needs of each individual, among other functions. This significance is highlighted in recent publications and news reports that often present alarming commentary and impactful, yet imprecise, information, which interferes with the understanding and appreciation of AI's true impact on present and future medical practice.

As in all fields, healthcare workers often show defensiveness toward AI's progress in this sector. From the completion of academic tasks through automatic text generation to the consultation of questions with extensive language models, their growing application in medical research, and their direct involvement in roles traditionally reserved for doctors.

It is interesting to note the comments from doctors and healthcare workers who view AI with fear or disgust, questioning its growth in medicine and bluntly asserting that it is a technology that could never reach a sufficient level of precision to trust medical decisions, insufficient to provide accurate diagnoses and treatments, or even offer consultations.

While not as captivating, many healthcare workers (both students and professionals) lack knowledge on how to properly utilize this tool. They have not explored its potential future applications in medicine, often observing it from a distance or drawing quick conclusions without thoroughly analyzing or investigating the necessary information to form a scientific perspective.

It is not the increasing reliance on machines for productive, administrative, and service activities that truly makes us fearful. No, because we blindly trust the vehicles we use for transportation, we don't question the functioning of diagnostic and monitoring devices, and we are not surprised by the vast number of machines involved in running our hospitals. We are even less concerned with the machines necessary for the functioning of the internet and telecommunications. As with every technological dilemma, the media and debates are flooded with scenarios in which modern technology eliminates jobs and threatens the survival of our species and the planet. We have faced this before and dealt with it easily, because, in retrospect, the problem has never been the specific invention or its applications. The problem lies in the structural changes in the economy, politics, culture, and society.

What differentiates technological disruption from artificial intelligence? Until now, we haven't felt the need to stop and reflect on our existence and what defines us as individuals. Increasing productivity has led us to believe, often unconsciously, that philosophical introspection should be reserved for our brief breaks, even deeming it unnecessary and relying on the work of classical thinkers. AI not only requires us to rethink concepts like intelligence and consciousness to better understand its possibilities and limitations but also demands an urgent reevaluation of these concepts, as well as others, such as humanity.

This is the type of preparation society needs to undergo in order to effectively control and make the most of this tool for the common good. When we truly understand our role in society and humanity as a whole, it will guide us to leverage our abilities and inventions. Only then will artificial intelligence become just another tool at our disposal—one that is currently undergoing a revolution and will ultimately transform our entire way of life.

Focusing on the question posed in the title, it is clear at this point that the issue is no longer whether artificial intelligence is capable of performing in medicine, as it has already demonstrated its precision and effectiveness in the field. The real question is about the new concept of medical care, taking into account every detail involved; from the role of the doctor and the healthcare environment to the prescribed procedures and even the patient's role.

Until now, we have comfortably defined the doctor as the one who provides diagnoses and treatments to address health conditions. However, with such an ambiguous concept, it is easy to conclude that a machine could easily take on that role. As doctors, we are more than just providers of health services, we are humans helping other humans. We feel pain, we suffer, and we understand the value of health. Artificial intelligence does not. That's the fundamental difference between a machine and a human. If we focus on humanity and value medical care as a key pillar of human well-being, then it will be a human doctor who provides consultation.