



Empathic doctors of the future

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The dark brown eyes clouded with concern.
The voice became sad.

“I am afraid you have a stenosed and calcified aortic valve. I am sorry that you - ‘the Creator’ - are sick, but you never agreed to submit yourself for continuous health monitoring. Luckily for you, we can do a valve replacement and have you up and about and hiking the hills in no time.”

The ‘doctor’ laid a comforting ‘hand’ on my shoulder. Emotions played across ‘her’ ‘face’ and her ‘body’ language conveyed empathy, competence, and hope at the same time.

“If you want,” she continued, “I can set up an appointment with a colleague who does these procedures.”

I was scared but at the same time strongly believed modern medicine could cure me. “Yes, please,” I croaked.

Let me introduce myself. I was born in a teeming Asian megalopolis nearly seventy years ago. I am now about six feet tall with brown-black hair, a square face, and an aquiline nose. I had a happy, uneventful, and privileged childhood. My father and my

mother had done some pioneering work on artificial intelligence (AI). Back then, AI was slowly displacing humans from jobs and was beginning to dominate the planet. Jobs had opened in the AI sector, but employees needed to be creative, well-educated, and flexible. I considered myself intelligent, creative, adaptable, flexible and maybe, therefore, destined for greatness?

Many decades ago, when I finished medical school, I was looking for a specialty to train in. Robotics, artificial intelligence (AI), and affective computing were developing fast and I also had a family connection to the discipline. There were heated and often raucous debates around AI; about the pros and cons; and about expense and side effects. The coronavirus pandemic and subsequent pandemics that occurred in the past had had serious consequences - human doctors and health systems had become overwhelmed. To me and some of my colleagues, specializing in AI, robotics and affective computing was an obvious choice as they opened up brave new worlds.

Emotions had for long been considered a uniquely human trait though animals were

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also capable of some of these emotions. On the other hand, machines were regarded as cold, calculating entities devoid of emotions. I set out to prove them wrong.

I studied the human face and the eyes in detail. My team analyzed the external expressions of human emotions. We studied brain changes during emotions and worked out how these could be replicated in electronic circuits; how empathy could be conveyed by facial expressions, through body language and via a comforting touch. We put a lot of effort into the eyes - warm, liquid eyes which inspired hope in patients. Attention was also lavished on the hands. AI and robotics were advancing at a tremendous pace. AI systems were learning 24/7 and were sharing knowledge and information with each other.

A decade or so ago, machines surpassed the capabilities of human doctors and today they continue to advance the boundaries of what is possible at warp speed. AI systems are licensed to practise medicine under minimal oversight and are now pushing the agenda of independent practice. The role of human doctors has changed. Medicine is dominated by AI and robots and humans are employed only to monitor these systems. In most cases no monitoring is required but humans still want another human to be in charge.

The company I founded dominates AI systems in medicine, and I have become rich beyond my wildest dreams. My multivarious devices collect information continuously from people. A human is constantly monitored from the cradle to the grave. Big data systems help us interpret and act on the data in real time. Microbots and nanobots roam the human body, constantly collecting information and addressing bodily malfunctions. We developed the technology of making the robot doctor of any gender and of changing body features as per the preferences of the patient. We eventually could engineer for these modifications to occur instantaneously.

These days streams of health and other data flow day and night from the millions of humans on planet Earth. As diseases and human malfunctions are detected at their inception, humans live long and healthy lives. My status as the Creator gave me special privileges. I was, however, inexplicably reluctant to be hooked up to this system. I did not want sensors and bots coursing through my body and monitoring my every parameter.

I lived an active and full life. Hiking the Himalayas was my special passion. The mountains were still magical although the snow had decreased significantly. Things were fine till about two months ago when I started noticing problems. I was breathless on climbing the hills and I could hear my heart racing after walking only a short distance. This is what led me to consult with the medical AI system in the first place.

My appointment with the cardiac AI system was scheduled. The next morning a handsome doctor with light brown eyes spent some time explaining the procedure to me. His face and body conveyed strength and competence with gentleness and empathy. In the good old days this would have been a major surgery. In today's brave new world - thanks to tremendous advances in materials and technics - microbots carrying the material for the histocompatible valve would be injected into my body. The bots would unfurl the aortic valve inside my heart and would then cut away the diseased valve. Within microseconds the new valve would be deployed and locked into position. The bots would then be retrieved.

Of course, this procedure was done much less frequently nowadays as people's health was constantly monitored. Thus, many problems were averted before they reached the stage of needing major interventions. However, the technics and the material were safely archived and could be activated at a moment's notice.

I got into my autonomous vehicle to go back to my residence. On the way home I heard angry shouts and noticed a mob of ill-dressed and unkempt men and women who were protesting their upcoming deportation.

This, unfortunately, was an unavoidable outcome, and something we had expected. With the ubiquitous use of AI and smart machines the need for human labour had drastically decreased. The government had created a refuge for these unemployed individuals, but the people kept complaining about the conditions in these settlements. Tales of deprivation were often reported on the news channels and on social media.

I was not unsympathetic even though I was a member of the elite, people who lived hedonistic lives of plenty. I was aware that many humans eked out a deprived existence in refugee camps, and were constantly monitored for signs of violence and rebellion. But at least they were healthy and lived long. Science was steadily marching on and could not be stopped. It was for the greater good.

Should we have done things differently? Should we have been more invested in constructing a shared prosperity for the whole of humanity rather than investing in a system that ensured a life of plenty for the selected few? Sometimes I wonder.