



Would you let a robot be your taxi driver? And your doctor?

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Robots are excellent chess players, best drivers, and they are already becoming doctors.

If a robot provides a better service than a human being, because it reaches a more accurate diagnosis in less time, and cost, or performs a more reliable surgery, or monitors with full accuracy our health condition, then, many people, if not most of people, will prefer a robot as a doctor -whatever

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is a *robot*- just because the robot is more useful, and produces better results. Just the same happens with taxi drivers.

Let's begin the discussion from a utilitarian ethical paradigm, and later on exploring alternative ethical and political paradigms.

Robots are useful because they remove human errors, have no flaws. Daniel Kahneman, in *Noise: A Flaw in Human Judgment* (2021), describes many flaws in medicine, even in relation of reading X-rays; too often different doctors reach different diagnosis, particularly when the patient is a child. Doctors are no better than judges, for instance, providing both predictive and evaluative, value-based, judgments. It is true that intelligent algorithms may dehumanize patients by standardizing people into statistics, but algorithms fed with massive data by sensors and digital devices can be much more precise and fair, and reliable, than a human being. It is therefore rational for people to choose robots as doctors, as well as a judge, not just as a taxi driver or chess player.

Robots are free from any emotion, or distraction. They are value-free. Have no prejudices. Networks of interconnected devices, from intelligent implants to exogenous prosthesis, all sort of autonomous artefacts, will learn and improve very fast by themselves, just by exchanging massive data, about a particular human being, about a given group of people, in a given environment, under specific circumstances, over time. Humans may not know why robots take one or another decision, algorithms tend to become black boxes, but this obscurity may seem a reasonable price to pay, for many, if the robot's decision is at the end right.

Robots are able to provide objective advice to patients based on facts, as observed and measured scientifically. Robots don't have problems to mix up values with facts, feelings with thoughts. Robots are free from human errors and never face "tragic dilemmas" -as defined by Martha Nussbaum-, decisions having no alternatives free from ethical controversy.

Moreover, it is likely that robots will likely become affordable not just to wealthier population but to everybody, as more robots are being manufactured by other robots. It is likely, therefore, that, liked or no, all sort of robots used in medicine may provide "a greater happiness for a greater number of people", the key political decision-making criteria from a utilitarian ethical view, as formulated first by Jeremy Bentham, and then refined by John Stewart Mill, the great liberal philosopher, in mid-19th century. Governments would have to support robots acting as doctors, because they are more useful and cost-effective than human doctors. Moreover, the interaction with a robot will be increasingly similar to the interaction with a human because robots may be designed with human-like interfaces and capacity to interact. Since Alan Turing proposed this famous test in the 1950s, to distinguish between a robot and a human being in an online conversation is becoming more difficult -*proof you are not a robot!*-already ask may online applications.

Pablo, my brother in law, is a good doctor; he practices in Berkeley, California; opposite to his father, a psychoanalyst, Pablo has a scientific-oriented mind-set. Actually, Pablo finished a PhD in Molecular Biology at Harvard, before studying medicine. If a patient asks for his opinion, he always

tells the truth -all the truth, nothing but the truth. "Your life expectancy is about three months", he may say. If the patient keeps asking him what to, Pablo may say: "you may accept it, and live as peacefully as possible, next months, or go to a good private hospital to get the best available cure, for half million dollars, having maybe 10% chances to survive". Implicitly, Pablo is applying a utilitarian ethical paradigm, since he is balancing costs, financial and also emotional, and benefits. A robot will be able to do better this kind of advice. What is the best alternative from a pure cost-benefit analysis? It depends on the age of the patient, as well as in his income level. Just by answering in terms of costs and benefits, Pablo is sharing his own utilitarian ethical frame. A robot would actually be able to perform the cost and benefit calculus in a more refined way than Pablo, based on the official US Cost-benefit guidelines and the so-called "Statistical Value of Life". What rational price -in dollars, or euros- a given human being should be able to pay to gain some more months or years of life? This calculation is perverse, "grotesque" as Charles Taylor said, but it is needed since public resources are scarce and some sort of rule is needed to allocate them to reduce car accidents or to finance public research on cancer or to hire more doctors on public hospitals, or just to build schools or another art museum.

Based on a Cost-benefit decision-making criteria, it seems that letting robots to substitute human beings as a doctors may be a sound decision indeed, in the sense it is very useful. But, what it means for humans to live in a society where doctors -psychologists, judges, and why not best friends and lovers- are increasingly being replaced by robots? Just focusing on doctors, it may mean that human bodies can be manipulated and fixed as machines, and of course the same holds for animals, engineered to develop organs to be transplanted to human beings. The scholastic distinction between body and mind, or soul will be removed, but also these concepts. A human body is an imperfect organism that needs to be improved. Death, at the end, is an error of nature that should be solved. This is the implicit ethics applied in engineering, needless to say. It is embodied into a pragmatic and positivist, progressive rather than conservative, mind-set. Every invention is useful if it solves a problem in a cost-effective manner, if it improves human wellbeing. There is no absolute and universal truth independent from humanity, as Richard Rorty stated. Our values are evolutionary, like our biology, they come from the stories we tell ourselves once we experience the consequences of our previous decisions. More useful values survive, remain. Animals have no other rights than those useful to human beings. Transhumanism, as claimed by Kurtz Kurzweil, Engineer of the Year in 1992 in the USA, is likely and not too distant and, according for instance to Jacques Ellull, unstoppable future.

Let's explore now an alternative ethical paradigm, based on deontology, and rights. A number of patients may just prefer to claim their right to die with dignity instead of spending their latest days and months surrounded with robots. I am remembering now in Tobias, also Californian, like Pablo, but Tobias migrate to Europe in late eighties and open a chiropractic clinic in the Olympic Village of Barcelona. He enjoyed very much sailing, and dreamed to sail one day across the Atlantic; he even bought a lovely second-hand sailing boat that needed care and expensive repair and he devoted a lot of time and money to it. I remember a sailing trip both of us alone, almost ten hours discussing about vitalism: Tobias was convinced that our body can cure itself if we take care of it, particularly if we make sure that our nervous system functions well and sends proper messages to our brain. He rejected

being vaccinated, long before coronavirus pandemic. Never took medicines. Almost never was visited by a doctor, and he got a very late diagnosis of cancer, one day, when finally his family took him to a doctor. The Spanish public health system could treat him for free, and he also had enough savings to go back to USA to the best hotel in Huston. Instead, Tobias decided to equip his boat at very best, say good-bye to his two sons and together with his second wife sail to America from Barcelona. Maybe the joy of fulfilling his sailing dream and the peace of sailing for weeks will be good for him, he thought; anyway, he would live intensively his remaining time. Tobias died much before expected, days before reaching Canary Islands, and his wife sailed by herself few days to reach Palmas, Tobias' body tied in the cabin, covered by a blanket. Tobias death was premature indeed, but it was not sad. Robots had no role at all in Tobias' history.

Surely Pablo would admire Tobias, because his decision was human indeed. Only a human being can decide this way. Doctors have, since Ancient Greece, a deontological code beyond pure utilitarian ethics. Both doctors and patients have rights to be protected. Should a doctor help a patient to die, if he or she asks for? How do we understand this help, as avoiding pain and suffering, as taking out the system that keeps the person alive, or even providing means to provoke the death? The engineers that design and build all sort of intelligent autonomous devices, such as robots, don't use to ask these questions to themselves, they don't have any deontological code; even more, engineers don't feel the need to have any deontological code since they have an implicit utilitarian or consequentialist ethic. How to develop a deontological code for robots? The European Parliament is studying the legal status of "electronic beings". Who is accountable for robots' wrong doing? Do doctors need to rethink and update their ancient deontological code? And lawyers to redefine the meaning of law?

There is third ethical paradigm to be considered, based not on the consequences of the decision as evaluated by each individual, nor on the rights and moral imperatives as stated by Immanuel Kant. From Aristotle to Charles Taylor, Alistair McIntyre or Mikel Sandel, there is an ethical tradition that emphasizes the concept of "virtue", values than cannot be imposed as norms neither evaluated as cost and benefits, or usefulness, but shared by a community. Hardly a robot can be sensitive to virtues. Pablo's patient may prefer not to ask their sons or daughters for money, he may wish to be together with all of them, in his latest days, in a nice mountain resort; Tobias invested all his savings in his boat, and leave to Canary Islands, instead of paying the university of his sons because he wanted his sons to live by themselves, free from him. There is a restaurant in Lima, Peru, called "The Good Death". What's a good death? Hardly a robot will never have the sensitivity to understand this question. Many doctors, at least decades or centuries ago, had this sensitivity. Robots had no role in the death of my grand-mother: "I die happily", she said to all of us, "Because all of you are here, with me", she added. She, like ancient stoics, believed that we humans have "to obey the law of life" to live peaceful lives, not to worry of anything we know we cannot change. But it is part of human condition no to obey these laws, but to change them. We don't know how to die as happily -this was her word- as my grand-mother, because it is not easy in a rationalized, disenchanting world.

Engineer's mind-set is a problem-solving mind -they see life and nature as an exciting environment full of problems to be solved. Engineers tend to believe results matters, think in terms of utilities

more than rights or virtues. And have an endlessness curiosity. Hannah Arendt, in *The Human Condition* (1958), stated that Engineers don't know the meaning of what they are doing, since engineers are just focused on usefulness. Somebody –a humanist, a philosopher, the King-philosopher of Plato- has to look over engineer's shoulders, and decide instead of the engineer. Maybe a humanistic psychologist –in the tradition of Husserl, Marlow, Sartre, Merleau-Ponty, has to look as well over doctor' shoulders. Are doctors becoming first engineers, in their way to become robots? Engineers are naïf, play like children, don't care much about the long-term implications of their inventions, neither about the science that may explain it. Instead of thinking, engineers do, try, test, and learn by doing. Technology drives itself, according to Jacques Ellul's *The Technologic Society* (1954).

Martin Heidegger was optimistic enough to still devoted time to educate engineers, to make them aware of the meaning of replacing nature by machines, in *Letter for Humanism* (1947). Richard Sennet – student of Arendt- had a more positive view of engineers. For Sennet, engineers have to become craftsman, as he stated in *The Craftman* (2006) able to work for the sake of doing well, independently of the cost or the benefit, avoiding excessive standardisation, and alienation, saving as much as possible authorship. Engineering should be considered as a humanistic activity focused no to replace the world, or the body, but to inhabit it. Engineers had to become like the humanist doctors of old times.

Richard Rorty, the most famous American pragmatist, claimed in *Philosophy and Social Hope* (2000) that philosophers have to become useful, like doctors or engineers, less interested on abstract metaphysics and more on ethics. We claim that doctors and engineers have also to become interested on ethics and politics, sensitive to practical philosophy, aware not just on the consequences but also on the values, rights and meanings involved in what they are doing. At least in this point, let's agree with Heidegger.