

The Role of Humanities in 21st Century Medicine



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Abstract This work succinctly expresses a prolonged reflection on the topic of the role of the Humanities in 21st century medicine. My thinking process has been complex, disturbing and sometimes desolate. Perhaps it is the first time in the history of humanity that the future appears unfathomable and totally unpredictable. This reality includes not only limitless scientific and technological aspects but also an anthropological conception of human beings. By the end of this century they will be so different that perhaps they will no longer recognize themselves as such. These ‘posthumans’ or ‘transhumans’ are so unimaginable to us that we will not dare to value their thoughts, decisions and actions. This is, as I have said, a disturbing subject that will change the conception of person, identity, culture and society forever. So this reflection turns out to be, a limited way of groping that future.

1 Introduction

I am greatly honoured to participate in this forum and I wish to express my thanks to the organizers in general and to Susana in particular. I greet with special respect Teresa Casal. I hope I deserve my participation and value the hierarchy of panelists and attendees. Besides, I want to thank you for the fertile instability that led me to document and reflect deeply on the proposed topic. This paper has the purpose to cooperate in building a better and more sustainable world, one in which important socio-economic interests are compatible and extremely respectful to a human being’s value, the most vulnerable groups, nature and our shared and only home ...the planet.

I am a native of the heart of the 20th century. Therefore, I am bound to see the 21st century as a time to come, as a future, despite having already traveled almost a quarter of its extension. It is good that our comfort zone becomes a quagmire from time to time. Naturally, I am not a futurologist nor a reader of the signs of time. I

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actually see myself as a connoisseur of the medical humanities in the field of medical education. I have written this paper from two points of view: considering the 21st century as a future time and from the perspective of the medical humanities.

I will try to share with you some fruits, still immature, arising from extensive and at times troublesome reflection. I am convinced that the richest, clearest and most important part of my presentation will be the subsequent debate where the audience will share their own experience.

2 Perplexities

The chorus of Sophocles' tragedy *Antigone*¹ (5th century BC) sings the following: *"Many things are amazing but the most amazing thing is man"*. According to Heidegger, the Greek word 'Deimós' refers to both something amazing and wonderful and something dreadful and sinister. About one hundred year ago, this German philosopher said: *"Today anthropology seeks not only the truth about man but also the meaning of truth in general. However, nobody has never known so little about what man is. Man has never been so troubled as now."*²

No adjective can describe the present, the past and the future in such an impassive and unfathomable physical universe. Only human beings can characterize things, phenomena and times. It is we, human beings, who can also glimpse a future that is both amazing and terrifying. In our task of considering the present and future of medicine we should not be oblivious to what is magnificent and sinister.

At the beginning of his book *"The physics of the future"*,³ the Japanese science writer and theoretical physicist Michio Kaku states:

"I don't believe that at the end of this century some secrets concerning our bodies will remain undisclosed. Therefore, everything we could imagine will probably come true" (David Baltimore, Nobel Prize).⁴

"I don't think the time has come, but it is near us. Unfortunately, I'm afraid I belong to the last generation that's going to die" (Gerald Sussman, Professor of Electrical Engineering at MIT).⁵

Kaku goes on stating something more troubling:

"Actually, no one has the guts to say that genes can be added to make human beings of higher quality" (James Watson, Nobel).⁶

¹ Sofocles *"Antígona"* (1994).

² Heidegger (1929).

³ Kaku (2011).

⁴ Quoted in 2. Pag 133.

⁵ Quoted in 2. Pag 133.

⁶ Idem 3 y 4.

Nick Bostrom, a distinguished Swedish philosopher, asserts: “*If the efforts of scientific-technological development do not stop, all essential abilities will be acquired through some kind of technology*”.⁷

It came to my mind to question the difference between our perception of the future and that of our parents and grandparents. My father was born in 1924, exactly a hundred years ago. Between 1824 and 1924, the future had high predictability and did not represent a problem. The idea of progress exploded and set the end to a century that was both unfair and auspicious. Children would go to their parents’ school, probably with the idea of practising the same trade or profession. Medicine had a few resources and a physician would do more or less the same as his or her teacher. Between 1924 and 2024 everything changed radically. Great advances were gradually made in science, technology, society and culture. There began a new conception of present and future times and we saw ourselves surrounded by unsuspected environments, amazing interactions and fabulous technology. Although the future was blurry, we had some constants that gave us an acceptable certainty.

Between 2024 and 2124, the scene seems to be entirely unpredictable. There are no limits. I dare glimpse a perspective of only 15 or 20 years. I find the end of the 21st century unimaginable and unfathomable. Hundreds of thousands of laboratories from different fields are designing artifacts that all together make up a completely unpredictable, complex and uncertain scenario. They seem to be designed autonomously. The future of all fields, including medicine, make us feel stunned, small and perplexed.

“Transhumanism” is the new operating conception for the future of humankind. It brings together scientists, researchers and experts from different fields of knowledge: artificial intelligence, neuroscience, nanotechnology and applied biotechnology. They are joined by philosophers and learned men with the same goal: to change and improve human nature in order to eliminate unwanted and unnecessary issues such as suffering, diseases, aging and even death.

I don’t know about you. All this perplexes me!

3 Medicine

By the middle of this century, medical science will be very close to give human hands the mythical power over life and death. This science will have the function to heal the sick and also ‘enhance’ human body and create new forms of life. This will not be caused by our religious faith. It will be a miracle of biotechnology.

Advances and changes in the concept of what is strictly biological led David Baltimore (Nobel Prize for Medicine in 1975) to argue the following: “*Today’s biology is an information science*.”⁸

⁷ Bostrom (2009).

⁸ Quoted in Leroy Hood’s original book.

In fact, computing biology uses computer tools to help us better understand the most complex living systems. It also works with elements like proteins or DNA molecules to process and store information.

The medicine to come in the near future shows aspects that need to be highlighted and listed.

1 Genomic Medicine

Gene sequencing is on its way to be an automated process performed by robots at a very low cost. Thus, it will be accessible to all normal citizens. Genomics provides access to the hallmarks that define characteristics and the ‘genetic signature’ of biological organisms which are ‘inscribed’ in nucleic acids.

2 Doctor’s Visit

Patients’ interaction with their physician will change radically. Online consultation will consist of an interaction with a computer program. Sensors for biological variables will be placed in our bodies to anticipate changes in homeostasis and the appearance of atypical cells. This will give place to immediate correction of such deviations.

Tissue engineering or regenerative medicine will bring about a kind of ‘Human Store’.

3 Use of Stem Cells

Stem cells can be used for tissue growth including whole organs. They can be easily handled thanks to the advances in the field of chemical messengers which guide them to specific organs. Stem cells also have the potential to cure diseases such as diabetes, heart disorders, Alzheimer, Parkinson and even cancer. In fact, it is difficult to think of a disease where stem cells will not have a major impact.⁹

4 Cloning

Experiments previously carried out with animals will be used in humans. This is an advanced and revolutionary process that depends on the evolution of current legal, ethical and religious constraints.

5 Gene Therapy

In the near future, gene therapy will cure most of the 5,000 known genetic disorders like cystic fibrosis, Tay-Sachs disease and sickle cell anemia. It will be possible to treat numerous genetic diseases caused by a single gene mutation. Cancer is definitely one of the goals of gene therapy. Almost 50 percent of the most common cancers are known to be linked to damage of a single gene: p53.

6 Cancer Therapies

⁹ Kaku (2011).

New cancer treatments and therapies will be available and they will all be designed to attack this disease at its molecular and genetic roots. Some of the most promising treatments include: 1) antiangiogenics, which consists of stopping blood supply to a tumor so that it does not grow anymore; 2) nanoparticles, which involves the application of «smart bombs» targeting cancer cells; 3) gene therapy, especially developed for p53 gene; 4) new drugs designed to target cancer cells; 5) new vaccines against viruses that can cause cancer.

I have barely caught a glimpse of our near future. I cannot foresee anything beyond 2040 or 2050. Experts say that it will be possible to design children upon request, reverse aging and even search for immortality.

American scientist William Haseltine was encouraged to state the following: *“It is true that we are running out of rope but we have talked about the project of being able to modify this in the future. First of all, prolong the duration of our life multiplying it by two or three. And perhaps, if someday we clearly understand the brain, we could make it and the entire body last indefinitely. And I don’t think that’s going to be an unnatural process.”*¹⁰

4 Role of Medical Humanities

My pondering about the role of medical humanities gave few squalid fruits. I am sure this is indeed an open question which deserves a constant and tireless reflection. My thoughts are far from being a prophetic prediction or a revelation like an oracle. They are only temporary considerations about the role of medical humanities in the immediate future. I dare not do more.

I highly appreciate that maxim that is possibly more valid today than ever before: *“We learn more from actions and experience than from speeches”*. In medical education it is an unquestionable truth, almost an axiom.

1 Be Careful

“Post-truth governs as that ‘sentimental lie’ born to shape public opinion and ignore reliable facts and verifiable data. It is a special way of constructing deceitful discourses which eventually convince people because they are attractive, reassuring or perhaps convenient”.¹¹

2 For the Future, ‘Do Nothing’

I cannot imagine great Greek philosophers, artists and scientists from the Renaissance, wise men, poets and playwrights of all ages doing something of what they did, and thinking of us as inhabitants of their future. I cannot imagine writing *The Divine Comedy*, *Don Quixote* or *Hamlet*, thinking about the effect that their works would

¹⁰ William A. Haseltine (born October 17, 1944) is an American scientist, businessman, author and philanthropist. He is known for his groundbreaking work on HIV/AIDS and the human genome.

¹¹ Valenzuela (2017).

have had on the inhabitants of early 21st century. This makes me say that everything that medical humanities must do must be done now. They will be able to influence future medicine if they develop freely and deal with usual issues creatively. Values such as imagination, creativity, determination, opportunity, generosity and commitment will let the humanities in medical contexts expand and consolidate.

3 No More Complaints or Apologies

To be honest, I am tired and swamped by those humanists who complain about our current medicine. I think we need to stop blaming science and technology for having twisted human drift. If humanities want to have a relevant role in future medicine, they will have to be proactive, give practical solutions to complex problems, and also generate and maintain reflection environments where doctors could talk about themselves and medicine critically. These areas of reflection should be intensely suggested in educational institutions and places where medical practice is performed. They should become an excellent opportunity to exchange and share arguments as well as emotions, frustrations, feelings, fears and hopes.

Contexts for strengthening relationships have proven to be useful in preventing professional burnout caused by dissatisfaction of doctors, violence against health personnel, and fragrant devious competition inside therapeutic teams. They serve to remind doctors that they are common people, that means, they are vulnerable, imperfect, and at times full of vices and virtues.

4 Befriend the Hard Sciences

Once and for all, the humanities must approach hard sciences, they must be twinned with those disciplines considered basic and core in the training of doctors. The idea of discriminatory binarism must be abandoned and switched to a synergic collaboration with clinical sciences. It will be hard for physicians to consider their patient as a unit valuing both perspectives. This proximity will lead medical humanities to stop being peripheral knowledge and become important whenever they are needed during a class or a consultation, at a hospital and in medical research centers.

The time for interdisciplinarity has come. Co-leadership, free discussion and mutual empowerment should be a regular medical practice. The time has come to listen to and interpret patients' voice to promote their participation and commitment in the medical act. Patients' participation and commitment is essential. A citizen in a vulnerable condition, in other words 'a patient', is called to openly teach us to be doctors.

5 Work in Heterogeneous Fields

Humanities as a whole, including medical humanities, are definitely heterogeneous, varied, unpredictable and often contaminated by ideologies. It is a field of dissimilar, contrasting and even conflicting interpretations, where a single truth becomes weak and is not welcome. Subjectivity and deliberation must necessarily prevail. Arguments and respect must facilitate harmonious solutions and keep away that harmful binarism of winners and losers.

Knowing the field of the humanities, it seems almost impossible to reach final agreements in all future issues. I am hopeful we make framework or more specific agreements in certain and particular situations.

6 Leave Nostalgia Aside

By being nostalgic for a past that is definitively gone, by feeling ‘*saudades*’ of what could have been but did not happen, we miss the opportunity to look at the future without recognizing the basic objective of a humanized medicine. This means to ‘safeguard the person’ and all the persons involved in a medical act: the patient, the doctor and the family. The humanities must stand as guarantors of human interaction in healthcare.

7 Serenity

Man can be expected to cultivate an attitude of detachment due to discernment and a meditative calm attitude. He has an urgent responsibility of learning how to say ‘yes’ or ‘no’ to technological demands and opportunities, as the case may be. He must know that technological mechanisms are not always neutral and can end up altering human behaviour.¹²

My reflections are obviously wishful thoughts. Windstorms will come and disrupt everything inviting human beings or our descendants to imagine unpredictable ways of healthcare. A peaceful and contemplative attitude would let us wisely consider our present socio-ecological challenges. If we keep in mind tolerance, prudence and an undisturbed look, our approach could be useful for finding efficient means that appreciate and respect people, nature and our planet.

Journalist Iñaki Gabilondo inaugurated the expert forum ‘The patient of the future’, organized by Healthinking, as stated below:

‘We are living times of fast transformation and stupor. Someone once said that the last moans of a dying person are like the first cries of a newborn baby. Maybe that’s why we know that one world is going away and another is being born. But it is difficult for us to interpret the signs’.¹³

To conclude, I would like to share the first part of Walt Whitman’s poem:

“Do not Let”

Do not let the day end without having grown a bit, without being happy, without having risen your dreams.

Do not let overcome by disappointment.

Do not let anyone you remove the right to express yourself, which is almost a duty.

Do not forsake the yearning to make your life something special.

Be sure to believe that words and poetry can change the world.

Whatever happens, our essence is intact...

¹² Adapted from Dugin (2018).

¹³ <https://ethic.es/2019/09/el-paciente-del-futuro-salud/>

Acknowledgements I am expressly thankful to Maria Teresa van Nieuwenhove, teacher of English graduated from *Facultad de Filosofía y Letras (Universidad Nacional de Tucumán- Argentina)*, for her commitment and accuracy in my paper's translation. Thank you Maria Teresa! You have done a perfect work!

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