

When man makes himself

– a few reflexions from *Homo Artefactus*, a project group within the Danish Council of Ethics

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(*typed from the hand written manuscript*)

Ladies and gentlemen, good morning! I am here representing the national Council of Ethics in Denmark – a body working in almost all fields of biomedicine and biotechnology. One of our main focus areas for the time being concerns ethical dilemmas deriving from the integration of man and intelligent machines. I am chairing the work in this special area, evolving under the chosen heading *homo artefactus*. And basically I am here (together with our secretary, Mr. Laursen) to pick up important informations and opinions; because we are still in an investigative phase. I would of course be happy to contribute just a bit to this workshop, but I have to premise the remark that we are yet far from drawing conclusions on these issues.

Before adressing the roboethic questions proper I should inform you a bit on the danish Council of Ethics. It was established by law in 1987 following a heated debate on the new type of ethical problems arising in areas such as assisted reproduction, fetal examination, genetic screening, etc. This is exactly the tide of new ethical confusions and reflections that Brian O’Connell referred to yesterday (dating its origin back to the 1960’s, whereas I would not go that far).

The Councils task is partly to advice the danish parliament and its government – partly, and more important, to stimulate serious and continous debates in the public on bio-ethical issues. This public conversation we danes believe to be the core of democracy.

The Council has 17 members – 8 are appointed by the government, 9 are appointed by the parliament. Members come from all sectors of society, and we are not exactly experts, neither in biotech-research nor in ethics. By the way: In this last field one cannot be an expert, I believe.

This may become obvious now, when I am going to tell you a little on the proceedings of our investigating project-group *homo artefactus*.

We are addressing the issues at three levels:

1. Repairing

First level concerns the uses of intelligent machines to give back to people body parts or bodily abilities that has been lost as a consequence of an accident or a serious disease. (Why an American audience find this so funny as we saw yesterday in the videoclip shown by Kevin Warwick, I simply do not understand.) This is the use of cybernetic technologies for prostheses and 'orthoses' that very few people would contest to be a real progress for humanity. And the few who does that just have to take a glance at the paralysed patient in Kevin's clip – a lot of similar pictures and films are abundant at the Internet, be it Parkinson's patients, be it stroke victims, be it car accident victims etc.

Nevertheless, in our project group we are able to identify ethical concerns even at this level. I'll just give you one example: the concern about dependency of producers. If a certain patient, Mr. Jones, has an intelligent device implanted in his brain to stimulate and control the movements of (some of) his limbs – say, after some kind of paralysis – what will happen then if something goes wrong with the device? Maybe it needs a simple repair; maybe it needs to be replaced by another identical device. What then, should Mr. Jones (and his family) do if, say, the company producing those particular devices has gone broke? Or it may have undergone a hostile takeover whereby repair and spare parts for the devices have become too expensive for Mr. Jones. Who should pay the price for that? Mr. Jones himself? Or the state of Denmark?

I would not say that these are overwhelming ethical dilemmas. Not at all. They belong to the kind of nitty-gritty questions that both we and our legislators typically *have* to address – so that the uses of these technologies are regulated on a rational basis before they are introduced and unforeseen problems arise.

2. Enhancing

The second level concerns the uses of intelligent machines to *enhance* human capabilities. This is the level that for the time being is preoccupying the Research Directorate-Generale of the European

Union since, in the 6th framework, the bulk of funding in robot science and development has been given to projects entitled 'beyond prosthetes', 'beyond orthoses' and the like.

Of course, the enhancement cluster of ethical dilemmas in robotics are not so different from those arising from genetic enhancement and several other kinds of enhancements. Many discussants also insist that the limit between repairing and enhancing is a perforated one, that the distinction is blurred and always in a flux. I agree with this point of view.

Amongst the ethical issues that are almost identical at the two levels mentioned – repairing and enhancing – are for instance the health safety and risk problems stemming from various brain implants. Something similar could be said of the privacy and surveillance problems that can be discussed whenever a chip is implanted in an individual and hence will be possible to trace – so that agents or authorities, without authority so to speak, can follow the whereabouts of that particular person.

On the other hand, I do insist that cybernetic *enhancement* of humans poses some quite new – or at least some very particular – ethical dilemmas.

To illustrate this let me just mention the discussion on enhancement put forward by the American philosopher Michael Sandel. It is only one of several contributions we have been discussing in our Danish project group, but one well suited to be put forward at this occasion, here in Genova.

"If [cybernetic] human engineering does make the myth of the 'self made man' come true", writes Sandel, then "it will be very difficult to view our [various and very different] talents as gifts for which we are indebted rather than as achievements for which we are responsible. This would transform three key features of our moral landscape: humility, responsibility and solidarity."

1° A world open to cybernetic enhancement would certainly tend to pay respect to those who take care to do this and give low prestige to those who don't. Today all kinds of human varieties arrive unbidden, but this new community would probably not welcome the unbidden. It would, in Sandel's words, be a gated community writ large. Today the awareness that our talents and abilities are not wholly our own doing restrains our innate tendency towards hubris. What will happen to a culture that loses this restraint?

2° This would probably cause an explosive inflation of responsibility. Think about how parents already today stress extremely to back up their childrens efforts to become world class football players or world class scientists. – In a world where you can buy all kind of enhancements we will no longer admire Ronaldinho for his unbelievable, almost miraculuos gifts; we will just say that his parents bought the right thing. And the losers, in sports and in schools – they are all responsible themselves. There will be nothing left to revel.

3° The consequences of this for social solidarity seems obvious. Why should anybody pay taxes to give social security to the irresponsibles? Cybernetic (and genetic) enhancement would spell the doom, not only to the welfare-state, but also to insurance-companies!

3. 'Cyborging'

The third level we are dealing with in our danish project group concerns the *cyborgs* – i.e. the beings that are not solely humans anymore. Also at this level we can speak of a blurred limit because, as Giuseppe Longo mentioned yesterday, any kind of technology implemented changes mankind. The ability for hunters to use firepower does so. The ability to drive automobiles does so. Mankind is not the same before and after the implementation of such technologies.

Nevertheles, the creation of a new species of posthuman Cyborgs is essentially different from all technological innovations up till now, in that man is not only adding som new items to the enormous heap of artefacts on which he stand, but at the same time drags himself down to be part of that heap and an artefact himself. To my mind this new turn of history calls heavily on ethical reflections – of which I can offer you only a few small glimpses:

1 I was happy to be reminded yesterday, primarily because of the starting presentation of Paolo Rossi, that robot-the-word as invented by the czech playwright Karel Čapek designates something belonging to what the ancient greeks understood as the unfree world. The greeks made the very important distinction between the realm of freedom, i.e. the public sphere, where any free citizen should stand forward to argue, in words and in deeds, what he considers to be good, to be true and to be beautiful – by this also designating the direction in which he wants his community to move. And, on the other hand, the realm of necessity, i.e. the private sphere of economics and of labor. A robot

according to this view-of-the-world, is simply a slave and should of course not be endowed with any "right of freedom".¹

Today that classical view is contested both by the socialist and by the neoliberal ideologies who share the perception of the economic life and the realm of labor as the most important one, perversely to be the world of freedom. This is the reason why anybody, including the esteemed Kevin Warwick, can suggest that we really have no *public* choice: the posthumane-'oids' are coming, and they are going to take over. The only choice we have – according to Kevin – is the individual choice of *rejecting or experimenting* with some kind of cyborgisation of ourselves.

This line of argument I consider to be a betrayal of the greek foundation of our democracies. According to the greek and democratic way of thinking we of course have the *public choice* that robots are slaves and should remain so. Nobody should be misled to think about robots as living organisms – be it proto-human, human or post-human organisms. And maybe this choice should also regulate the shapes and forms in which computer-engineers can design new generations of robots?

2 The vision of post-humanism feeds upon the conviction (as we heard several times yesterday) that intelligence is akin to the ability to proces digital informations – to make calculations – in a huge number in the course of a very short time. In brief: intelligence is data processing power.

Having the privilege to be speaking in one of Northern Italys former Renaissance Republics, I personally find it worthwhile reminding you all about the marvels of arts and science that sprang here 500 years ago. Thus, it was much more than just an extraordinary dataprocessing power that (e.g.) brought Leonardo da Vinci to imagine his flying machines or brought Michelangelo to his great tragic sight of a human civilization without craftsmanship, without the art of hands, without *il bottegas* – the reason why he made his last sculptures with such huge arms and hands.

I would say that the vision of post-humanism is also a deflation of humanism. And Paolo Dario can tell you a long story about how and

¹ In our Atelier-debate following this presentation, Ron Arkin reminded me of the plot and the course of events in Čapeks play. I would still insist, however, that the conflict prompting the rebel of the robots in Čapek is not in the final end their status as slaves, rather the human stupidity – including the endeavour to create robots in the shape of humans.

why robot engineers nowadays need the help of brain researchers to get on exploring the mysteries of human intelligent capacity.

3 The cyborg fantasy is based on the assumption that human personality (or 'identity') and consciousness is based in some kind of mind or soul functioning completely independent of matter. This is not only rubbish, as professor Longo so amusing and elegantly demonstrated yesterday. It is rubbish of high power since it was induced in western thought more than 400 years ago by the french philosopher Rene Descartes – and has been here ever since.²

This is the root of our present indifference or even ruthlessness towards matter, that is to say: nature. It didn't help much that the danish scientist Niels Bohr proved (I believe it was in the 1920^{es}) that no scientist can avoid to be an influencing element in his own experiment. The idea of an observing and analysing subject standing completely outside the proces is an illusion, Bohr proved.

But the cartesian mindset of subject/object – subject having no extent in space, no matter – still prevails in many popular contexts, including almost all thinking about the environment. It also prevails in the cyborgisation-communities since they cannot exist without this illusion. Let me just remind you that the term *cyborg* was invented by Clyne and Klines during their investigations of the possibilities for humans to make very long journeys in outer space. That requires the ability to get energy from other sources than our earthly metabolism and oxygation of blood.

To my understanding the goals of Clyne and Klines are still the ultimate *utopia* motivating all cyborgisation and post-humanism: the thrift to escape 'Prison Earth' and let mankind be colonisation masters on far away solar systems, all over the universe.

The propensity to expand is very conspicuous in our present civilisation. I won't contest the belief that humankind will ultimately be able to create the technology to travel in space and settle 'embodied' in robots far away from this blue planet. But I will contest that we should do so. For our own sake, we should not.

And this is a real public choice we have to take.

Thank you for listening.

² I am fully aware that good arguments can be put to support the theses that the origin of this extreme mind/matter-dualism goes much longer back in time. I even share it myself. But this is hardly the right place to discuss such a question.