Re-Designing Humankind

The Rise of Cyborgs, a Desirable Goal?

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Abstract The idea that human beings are imperfect is very old. But now, for the first time in history, some people, mainly scientists, have the previously unimaginable power to modify human beings. Redesigning humankind is, generally speaking, the result of a techno-scientific complex called "converging technologies", and made up of biotechnologies, information technologies, nanotechnologies and cognitive sciences. However, we are more concerned here with electronic devices directly implanted into the human body. After an overview of what might happen to humankind, we also briefly discuss as a conclusion how bright such a future might be, considering that we have two different standpoints.

In western societies – as indeed in other societies where the definition may be different from ours – there is an inherent definition of humankind which is taken for granted and which forms our common background. As it is deeply rooted in our culture, it does not need to be formulated to be an efficient guideline. In other words, designers always have – as in fact have all of us – made assumptions on what human beings are (the descriptive aspect) and what they are supposed to be (the normative aspect). These shared values are embedded in all the objects they create, even if they are not necessarily aware of it. Until a few years ago, this normative definition was a dream without any empirical results on human beings themselves, and the process of design was limited to our environment. Now, for the first time in history, some people, mainly scientists, have the previously unimaginable power to make their normative definition of humankind a reality by modifying human beings. Contrary to common ideas, biotechnologies are not the only way in which this can be achieved. In reality, the future of humankind is not only linked to biotechnologies, but to a whole raft of techno-scientific developments. Biotechnologies are just the visible part of the iceberg, one single piece in the puzzle of

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a broader, powerful, techno-scientific complex called "converging technologies", made up of biotechnologies, information technologies, nanotechnologies and cognitive sciences. Not content to use science and technology for merely therapeutic purposes, to overcome handicaps, we are also striving with these converging technologies to enhance normal abilities[1] with criteria which evolve with technical developments. As a result, the definition of what is considered as normal is continuously shifting and things currently considered as enhancements might perfectly well be considered as therapy tomorrow (Cerqui, 2002). If we keep working in this way, we have to be aware that humankind might consequently simply disappear to give birth to a new species built according to criteria that need to be clarified, as these technologies act at the collective as well as the individual level, and they "concern the future of our species more than those of individuals who are part of it" (Hottois, 1999, 8, our translation).

Even if redesigning humankind is, generally speaking, the result of converging technologies, we are more concerned here with electronic devices directly implanted into the human body. With the recent arrival of information technologies directly implanted into the body, a qualitative threshold has been crossed as these techno-scientific developments have far-reaching implications. Our main interest here is in the type of cyborgs, part human–part machine entities, that are now being practically realized in which a human brain's action is modified through implant technology. Our choice is not insignificant, as the two authors are involved in research in this field. KW was the first human being to have an implanted chip used directly to link a computer with his nervous system. DC meanwhile is an anthropologist interested in the future of humankind in the era of cyborgs. We are convinced this particular case of redesign is a very good example with which to think about the main ethical and philosophical problems, as through technological enhancement it is clear that the overall abilities of a cyborg can be upgraded from those of a stand alone human. Extra sensory input, long distance control of prosthetics from brain signals via the Internet and a telegraphic form of communication directly between two human brains have already been achieved. In the longer term it is realistically expected that this will lead to memory, mathematical, multidimensional and significant communication enhancements to basic human capabilities.

After an overview of what might happen to humankind, we also briefly discuss as a conclusion how bright such a future might be, considering that we have two different standpoints. Our backgrounds and ideas are different, and so are our degrees of optimism about the future of humankind and cyborgkind.

[1] In 2002, a five hundred pages report was published by the American National Science Foundation and the Department of Commerce with a very clear title: "Converging technologies for improving human performance" (Bainbridge and Roco, 2002).