

Foreword: To Cybernetic Beings

There can be no doubt that the age of the cyborg is upon us. But what does this mean and what effect will it have on all of our lives? In particular how do robots fit in to this and what will it mean to human life expectancy and human capabilities? Attempts to even consider answering such questions can be felt to be extremely problematic. Perhaps the subject is too embedded with sci-fi predictions, maybe the technology involved is, for a number of reasons, difficult to understand, even the way it is presented in the media often has a tongue in cheek approach to it.

What this book by Ivana Greguric attempts to do is to tackle the subject head on in a way that is readily understandable to everyone who, at least some of the time, uses their ability to think. I believe that she succeeds in accomplishing her task to the extent that this book could easily become a standard reference for all things cybernetic, particularly as they relate to the future. In the past I have been critical of some articles in the field written on this, or a related topic, in that the author lacks the necessary technical knowledge and as a result the conclusions drawn are often so far removed from reality as to be laughable, although they may be what some people want to hear. I do not have such a criticism of this book. Underpinning much of the western philosophy of today is the concept of our existence and what form this takes. Descartes, Kant and others attempted to answer questions such as Who am I and how do I know that I exist? Early in this book Greguric tackles this philosophy head on in terms of what it all means as far as cybernetic beings are concerned. In particular with a brain that is possible part human part machine network, does this mean that 'I' becomes 'We'? Potentially, as the author points out, it could be the end of philosophy as we know it.

Concepts such as transhumanism and cyborgs are examined in terms of the different forms possible. For those unsure of what a cyborg is, this in depth analysis readily parades the variety of possibilities that exist. Each one is critically examined in turn in terms of what it actually is. In doing so, integrated bionics, animal cyborgs and even insects are discussed. At the same time the work of movers and shakers in the field is investigated, principally that of Stelarc, Eyeborgs, Steve Mann and, I am delighted to say, my own work.

Overall, as you will see, the book is extremely readable and you do not need a degree in philosophy or technology to follow what's going on. In bringing this about, Greguric successfully weaves into the text popular terminology that has become widely used. Examples of this would be Hacking humans, Biohackers and Neurohacking. Also, topics of considerable interest, such as how the research being carried out affects life expectancy, are treated as a natural progression.

On reading the book I found some topics that may well come as new, but strongly related, input for many. I would include in this organ exchange and organ replacement, particularly when considering using technology as a form of replacement. But also matter and energy exchange comes into this category, as

does, what I find most interesting of all, information exchange organs. The culmination of this is however a more general concept of human enhancement and what this can lead to.

What I also like about the book though is that Greguric also considers some of the social effects of cyborgisation. These include the effect on sports, both in terms of future developments but also effects that we are starting to see now. Arts also are considered here, particularly in terms of performance arts. In considering such topics there is a gentle introduction to the sexy side of robots and robotics to investigate what's really possible and what might be possible in the future. Of course as far as the future is concerned we cannot go far without looking at what all this will mean as the onset of cyborgs and robotics directly affects humans. How will humans co-habit with cyborgs and robots? Will the singularity definitely happen? What are artificial brains? Is immortality in a sense possible? As a novel addition to this section of the book Greguric includes transcripts from a number of one-to-one interviews she carried out with experts in the field. These succeed in putting much of the book's contents into context.

For me the book in its entirety is an excitingly modern, comprehensive coverage of the field of cyborgs and human enhancement. It gives a plethora of opinions as to where things are headed and what this might mean. It employs philosophy, technology and futurology in a very friendly and readable way to present, what could be a difficult, and to some people a very different, topic in a palatable form. In that way the book can be read through rather in the form of a storyline or alternatively it can be dipped into for specific pieces of information. Enjoy!

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