

Cyborgs: short incursions into Science-Fiction literature

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Introduction

Cyborg, a novel by American Science-Fiction author Martin Caidin was published in 1972. In 1974 the novel was adapted for a television serial and gained a certain renown. Indeed, one might easily remember the adventures of Steve Austin, the *Six million dollar man*. However, such a superhero figure seems today completely out of date. In 2003, *Der letzte seiner Art*, a novel by Science-Fiction author Andreas Eschbach, somehow sanctioned the end of the cyborg as a hero, his decline but also his return to humanity. Indeed, the cyborg is no longer a superhuman endowed with stupefying powers and capable of all achievements. He's rather become a suffering man, still extraordinarily powerful but whose cogwheels are seized up, getting rusty, and whose life is becoming increasingly painful.

This evolution shows to what extent Science-Fiction literature is not homogenous. Although often despised, this literary genre can approach the issue of the development of science and technology in an adult, serious and original perspective. The specific structure that characterises novels also offers a different though not less pertinent approach than science. By bringing humanness and often political aspects into the reflection about science and technology, Science-Fiction literature is able to adopt a different perspective on these matters and it puts forward questionings that are often neglected. This is precisely what we are about to endeavour here.

Our task is not to enumerate Science-Fiction studies on cyborgs. We will rather aim at choosing a few relevant works, which will allow us to develop original questions about this new figure of humanity. We will also leave to others the duty to proceed to a genealogy of the cyborg in fiction. This could easily date back to 1940 (to the superhero figures that are, in the United States, *Captain America*, who is transformed by a serum in order to fight against the Nazis, and one of the associates of *Captain Future*, scientist Simon Wright, a human brain integrated into a robot).

Science Fiction literature: a starting point for reflection

Science Fiction has often been considered a minor genre of literature. However, an increasing number of works show that Science Fiction is not just a mirror, more or less entertaining, of social representations in a given period of time. Its relationship to reality is complex. Sometimes, its intuitive approach, taken over by the specific structure of a fictional narrative, gives a surprisingly perceptive survey of certain social tendencies, should it be in literature or cinema. One could refer to studies which have been undertaken at the University of Lausanne (Switzerland), compiled by Guido (2006) and Haver & Gyger (2002) as well as to a whole body of relatively recent scientific literature. Such research provides a fascinating outlook on the possibilities offered by Science Fiction to researchers who, without any prejudice, take the time to uncover works that are sometimes difficult to grasp but which conceal an important potential regarding sociological or anthropological reflection. As examples, we can cite Featherstone and Burrows (1995) dealing mostly with the cyberpunk current, and Bukatman (1993), who offers fascinating insights into the discrepancies between reality and *virtuality*. We could also consider Breton's works (1995) which greatly contributed to the history of artificial creatures (from the Golem to Isaac Asimov's robots, and Dr. Frankenstein's monster). However, it is not our purpose to give an exhaustive bibliography which would soon become daunting.

In my point of view, it is judicious to consider Science-Fiction like a "detour", as French anthropologist Georges Balandier (1985) expresses it. Indeed, in order to make the most of the whole potential given by Science-Fiction, we are forced to go beyond its simple status of an *object of knowledge* that one must dissect and analyze. However, it is out of the question to put Science-Fiction and scientific discourses on the same level. Their argumentative constraints are obviously not similar and fiction offers a level of narrative freedom which has no place in science. For the researcher wanting to understand social changes, particularly those linked to the development of science and technology, an incursion into Science-Fiction proves a very fruitful source of original ideas and new relationships. Science-Fiction often manages to link things that one could not have immediately imagined being together. In a previous article, I explored cyberpunk novels such as William Gibson's in order to show that the multiple

transformations of the human body (electronic implants, genetics, etc.) and its disembodiment in cyberspace could be compared with the high demand of flexibility in the contemporary business world. A similar approach allows Arnold (1998) to show that the film series *Terminator*, which notably present the evolution of humanoid robots, can be paralleled with the transformations of the industrial model of Fordist production. Such an alienating but reassuring model leads to another one, whose production becomes increasingly flexible and fast and which worries American workers like those of the automobile industry.

We can now focus on the two novels cited in our introduction. Admittedly, as a detour, only Eschbach's novel deserves the attention of anyone seeking high literary qualities in a work of literature. In opposition, Caidin's novel is, at this level, very poor, but in my opinion, the comparison of both reveals something new concerning the current studies on cyborgs.

Two perspectives on the cyborg

Though of poor literary quality, Martin Caidin's novel is of interest because it probably influenced a great deal of the representations that one has of the cyborg nowadays, i.e. a human being whose limbs and other body parts (eyes, for instance) are replaced by electronic prostheses. Such artefacts would increase the physical abilities of the modified subject. However, considering the scientific article that coined the term "cyborg" (*cybernetic organism*, Kline & Clynes, 1960), we can notice that the emphasis is mainly put on aspects we can call *pharmacological*. Indeed, it was mainly a matter of modifying body chemistry by using various sorts of products, medicines, stimulants, etc. The first goal was to allow the human body to adapt and explore this new kind of environment: the extra-terrestrial space.

It is of course much more spectacular to narrate the adventure of a man who can record images with his eye-camera or who can run a hundred meters in three seconds. Such a choice is made in *Cyborg*, in 1972. The novel has a utopian dimension. The project leading to the repairing of Steve Austin (a fighter pilot victim of a terrible accident) and to his transformation into a cyborg is a total success. Sent on a mission by the American Army, he reaches all his goals and the novel finishes with a happy-end, him falling in love with a charming secret agent. Everything is going beautifully. The novel eventually tells the success-story of a new weapon belonging to the United States once more fighting against the communist enemy. This new weapon, although human, allows science to succeed in a flawless project.

Things become much more interesting thirty years later with Andreas Eschbach's novel. Explicitly inspired by the figure of Steve Austin, the German novelist tells about Duane Fitzgerald's daily difficulties as a retired cyborg of the American army, who is discreetly established in a village situated on the Irish coast in northern Europe. In fact, a negative perspective is given: if Fitzgerald is the "last representative of his species", it means that the cyborg's creation project completely failed. Although capable of exceptional achievements, the different cyborgs have been forced to retire or died precociously because the requisite technology has never been sufficiently mastered. Computer bugs and system breakdowns that paralysed or killed these soldiers, guinea pigs of the American army, are innumerable.

It is not our purpose to list the various episodes leading the secret services to try to get rid of this last living cyborg, bothering because he proved the failure of a project that must be kept secret. On the contrary, it is much more interesting to describe Duane Fitzgerald's daily life. Indeed, Andreas Eschbach's cyborg is no superhuman but rather a simple man with all the ensuing physiological and psychological constraints. One must try to imagine his face, distorted by the weight of his bionic eye, much heavier than his "normal" remaining eye. He eats tasteless porridge because his intestines have been cut and shortened in order to implant an "onboard" computer. He is *frozen* in full action by a system breakdown as the software of a computer with a bug would be. One must imagine this invalid and pre-retired cyborg being lonely, reading Seneca^[1] when suffering from bouts of melancholia. One must also notice the impossibility of any sexual life, because Fitzgerald's physical strength would be too dangerous if he lost emotional control. Besides, the beginning of the novel sets things up at once; Duane Fitzgerald is confined to bed due to a momentary paralysis. In brief, the cyborg isn't working as expected. Therefore, there are numerous factors preventing a cyborg from being happier than any other human being, despite technological "improvements". In a certain way, one can say that the body resists its transformation.

From the transformation to the disappearance of the body?

I wish to make a "detour" through William Gibson's *Neuromancer* not only because this work is a major influence on my own reflections, but also because it covers a broader setting. In *Neuromancer*, Duane

[1] Lucius Annaeus Seneca (often known simply as Seneca) (ca. 4 BC–AD 65) was a Roman Stoic philosopher, statesman and dramatist.

Fitzgerald would be an example among others, almost common, describing how it is possible to modify a human being.

The setting of *Neuromancer* is a little more futuristic. The narrative takes place in a great Tokyo-type metropolis: it is an urban, anarchic scene, where a parallel life has developed in cyberspace; a fusion of the internet and virtual worlds in which the characters can be integrally immersed. The experience is complete: the body may stay in one place, facing the screen and the keyboard, as in a trance, but the soul can move around without any geographical limits, from one bank of data to another, from one site to another. All this happens in a three-dimensional environment without bringing the body into play. The immersion into cyberspace is possible thanks to cranial connections. The world described in *Neuromancer* is filled with a great number of strange characters and different entities. This novel presents not only all kinds of different cyborgs^[2] but also genetically modified people, artificial intelligence and conscious beings. There are also what Gibson calls "constructs", individuals who are fully downloaded onto the network and deprived from all corporeal existence. There is a whole range of transformed human beings or artificial creatures stemming from the spectacular development of computer science and biotechnology. The borders are evanescent, our categorisations of human and machine hardly find their places.

While analysing Gibson's novel and comparing it to all kinds of scientific and technological projects or with vulgarized or techno-prophetic literature, what is striking is not so much the absolute originality of techno-scientific developments that one can find in Science-Fiction literature. What really changes is the setting or rather, the context, and the social environment. For too many scholars, engineers or popularisers, the social world is disconcertingly simple: everything goes, as if technologies were invented in a social vacuum, as if the surrounding world did not exist or at least, was motionless, without constraints and resistance. A utopian world, rigid and stiff, outside time and space. In contrast however, Science-Fiction re-establishes technologies in fiction, narratives, movement, society. In such a society, there are power struggles, needs for domination, there are human beings, desires, conflicts.

Despite the apparent freedom or liberation provided by cyberspace, the characters in *Neuromancer* are no less typically submitted to constant coercion. Torn between the interests of multinationals, states, criminal organisations or autonomous artificial intelligences (usually very powerful), these characters do not really have free reign in having their bodies transformed. The labour market somehow dictates their choices. There is a sort of generalised competition leading to the wildest corporeal transformations. For instance, let us consider the ensuing consequences for a computer scientist: does he or she really need a body for programming? A contract killer, a prostitute, a packer in space? Wouldn't it be useful to have several supplementary arms? Couldn't an actor or actress be forced to have a camera implanted in the eye? One can imagine all sorts of examples. Rather than paying the services of a translator-interpreter, wouldn't it be faster and more advantageous to get an electronic implant in the brain? What is certain is that the reach of bodily transformations goes far beyond surgical or medical aspects. There are more important consequences and more data to consider: who can or must modify himself/herself, how and according to what criteria? It is not a simple task. Who, among scientists, law courts, insurance companies, administration, employers, bio-ethic committees, religious authorities, etc. can decide what is permitted or not?

It is now important to say a couple of words on the body resistance mentioned above with regard to Andreas Eschbach's novel. In *Neuromancer*, some have noticed an apology of disembodiment or augmentation of the body. It is actually the opposite: Gibson points out that his great religion consists in believing that flesh and blood are wiser than the intellect (Dery, 1996). The soul can get lost, but what the blood feels, believes and tells is always true. In Gibson's novels, the body thwarts the soul's wandering and its disappearance into cyberspace. A key-passage shows Case, the hero, or rather "anti-hero", during a coupling session to cyberspace: he is trapped by an artificial intelligence which has created a virtual space in order to keep him for neutralization. Things are very well organised: the hero finds himself on the beach of a fictitious ocean, where calm and serenity prevail. Linda, Case's deceased lover appears, numerically reconstituted. Case is not far from giving way to this illusion and forgets to come back to reality, thus abandoning his body and leaving it to die. However, and it is fundamental, Case resists and succeeds in extracting himself from this perfect but illusionary environment. His soul is saved and his body (of flesh and blood, what Gibson sometimes calls "meat") has won. Without extrapolating or going too far, we can interpret that struggle of the flesh as a resistance linked to the constraints weighing on the novel's characters. In a world of absolute mobility and total flexibility, where

^[2] We did not take the questions of definition into consideration. The basic difference between cyborgs and robots or androids resides in the fusion of a human being with a machine. Despite this minimal criterion, there are thousand of ways to be a cyborg: the implant of a "simple" pacemaker, the complete transformation of the body, the eye-camera, but also artificial limbs and organs, doped athletes, a soul downloaded into a network, etc.

everything should constantly move and change, there are elements of stability, foundations that have to be stabilised. Although transformed in thousands of ways, the body in *Neuromancer* remains a fundamental anchor for one's identity. Holding out against disembodiment also means resisting the dismemberment of our identity and therefore the constraints that are weighing on us.

Conclusion

As claimed above, our goal was to present a few relevant examples and not an extensive study on cyborgs in fiction. We just skimmed over the subject and left a lot of unanswered questions. However, it seemed sensible to refer to relevant themes and precise examples in order to propose some perspectives for in-depth reflection. The next example is precisely aimed at attracting, once again, the reader's attention by proposing a final original perspective on cyborgs. *Modular Man*, a Roger McBride Allen novel written in 1992 raises some interesting questions regarding the definition of the cyborg as well as its juridical, political and economical implications. This novel does not refer to any philosophical tradition but most of the narrative takes place in law courts. The summary describes a rather comical situation: a vacuum cleaner is charged with the murder of his owner. In fact, the owner, although handicapped, is a brilliant technician and had modified his vacuum cleaner in order to download his soul into it, leaving his body to irremediable death. The charge is then turned against the owner who is now residing in the apparatus, and is thus accused of having killed himself. Although grotesque, such a situation raises a lot of interesting questions, and the very question of what is "human" is at stake here. Is the character still himself? Who is he? Is such a cyborg human – in our example, a vacuum cleaner "inhabited" by a human soul? If it is not, can it be destroyed? If he is, how can his identity be defined in a juridical perspective? One can easily imagine problems such as succession, civil rights, property which can emerge from that situation. The soul of the character being trapped into a vacuum cleaner, one can ask whether the latter has become the owner of the family house? Is his insurance coverage still valid? Can he keep his passport? Is he still the father of his children?

Such pragmatic aspects make us smile. But what would happen if that bizarre vacuum image is replaced by the body of a humanoid robot? The day human beings more closely resemble cyborgs, like Steve Austin and Duane Fitzgerald, will cause these questions to emerge. Here resides one of the major, though paradoxical, contributions of Science-Fiction: it forces us to ask a whole series of practical questions which are sometimes beyond engineers' and scientists' considerations.

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