The Future's So Bright I Gotta Wear Shades!
Futurism, fascism and information overload

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Gentlemen, we can rebuild him. We have the technology.
We have the capability to make the world's first Bionic Man.
Steve Austin will be that man. Better than he was before.
Better . . . stronger . . . faster.
(ABC/Universal: The Six Million Dollar Man, 1973)

Machine Envy
Near the beginning of this century, members of an Italian avant-garde art movement that labelled itself Futurism became known for their craving for a union between man and machine. Their poetry abounds with imagery like "[airplane] wings […] asleep in the flesh of man" and hybrids such as "man-torpedo-boat. Their boast was that "we will conquer the seemingly unconquerable hostility that separates our human flesh from the metal of motors".

Prior to the inception of the Futurist movement in 1909 the world had been swamped with technical and scientific discoveries. The automobile, the airplane, the telegraph, the telephone, the radio and a number of other artifacts had just been invented and made available to the general public. The observation that technology was so much faster, stronger and more efficient than un-augmented humans must have been the cause for some anxiety. The Futurists translated this anxiety into machine worshipping, viewing racing cars, airplanes and howitzers as the ultimate prosthetic appendages. Man alone was slow, earthbound and weak. Machine-extended man was to overcome these defects and emerge better, stronger, faster.

The use of the word "man" in the above quotes is not a coincidence. Woman -- even in the limited role as a means of reproduction -- was deficient and should be abandoned and replaced by some prosthetic device as soon as science had made the required discoveries. Seeing an airplane lift its passengers into the sky makes Futurist poet Filippo Tommaso Marinetti reflect:

I confess that before so intoxicating a spectacle we strong Futurists have felt ourselves suddenly detached from women, who have suddenly become too earthly, or, to express it better, have become a symbol of the earth that we ought to abandon. […] We have even dreamed of one day being able to create a mechanical son, the fruit of pure will, a synthesis of all the laws that science is on the brink of discovering. (Marinetti 1991, p. 83)
The politics of Futurism was proto-fascist. Their enthusiasm for the future was closely tied to a hatred for the past (and a few other things as well). Their enthusiasm was reserved for technology, speed, noise, power, pollution and war. Futurist founding father Marinetti was standing beside Mussolini at the 1919 inception of the Italian Fascist Party. He was elected to its Central Committee and for a short time ranking second in the party hierarchy, just eclipsed by Il Duce himself.

Part of the Futurist program was clearly designed to terrify and to shock the public. In the Futurist Manifesto, Marinetti spews forth his hate for humanity (in general) and women (in particular).

Art, in fact, can be nothing but violence, cruelty, and injustice. […] We will demolish museums, libraries, academies, moralism, feminism, every opportunistic or utilitarian cowardice. […] We will glorify war -- the world's only hygiene -- militarism, patriotism, the destructive gesture of freedom-bringers, beautiful ideas worth dying for, and scorn for woman. (Marinetti 1909)

And an amateur Freudian skimming Futurist prose for sexual symbolism will without doubt smirk at the sight of sentences like these:

We want to hymn the man at the wheel, who hurls the lance of his spirit across the Earth. […] We will sing of the greedy railway stations that devour smoke-plumed serpents. (ibid.)

Among other things, Marinetti and his friends seem to be inflicted with some degree of machine envy.

The Art of Noise

Everything trembled in the enormous building, and we ourselves, from our ears to the soles of our feet, were gathered into this trembling, which came from the windows, the floor and all the clanking metal, tremors that shook the whole building from top to bottom. We ourselves became machines, our flesh trembled in the furious din, it gripped us around our heads and in our bowels and rose up to the eyes in quick continuous jolts. (Céline 1932)

The above quote is from the novel Journey to the End of Night (Céline 1932) and describes a visit to a Ford automobile plant. The imagery describes the plant as a sensory attack on the worker, and how this makes the worker part of the machine. Céline does not describe this as an enjoyable experience, but it was just this sort of all-out sensory attack that would exhilarate any true-blooded Futurist.

The Futurists staged performances that simultaneously would combine poetry, pyrotechnics, painting, music, sculpture, abuse, dance, theatre and political debate. Futurist Cinema was described as "painting + sculpture + plastic dynamism + words-in-freedom + intoned noise + architecture + synthetic theatre" (Marinetti et al 1916) where the idea was to "project two or three different visual episodes at the same time, one next to the other" (ibid.). Futurist authors did rarely limit themselves to a single, sequential narrative flow. Instead their stories intermingle a multitude of plots and sub-plots in some sort of collapsed language where punctuation and adjectives has been dispensed with in order to properly convey to the speed and power of modernity. Futurist painters not only adopted the multiperspective approach of the Cubists; they also strived to collapse a multitude of points in time and space into a single

Nowhere is this more clearly expressed in Luigi Russola's Futurist music manifesto -- The Art of Noise:

Futurist musicians must substitute for the limited variety of tones possessed by orchestral instruments today the infinite variety of tones of noises, reproduced with appropriate mechanisms. […] The variety of noises is infinite. If today, when we have perhaps a thousand different machines, we can distinguish a thousand different noises, tomorrow, as new machines multiply, we will be able to distinguish ten, twenty, or thirty thousand different noises, not merely in a simply imitative way, but to combine them according to our imagination. (Russola 1913)

In Futurist art, sensory overload is elevated to aesthetic principle. Enjoying the sound and fury of machines is all part of growing up and being hybrid.

**The Person as Peripheral**

The product of print culture was rational man. In print, things happens in sequence, logic proceeds from premise to conclusion, the reader controls the pace and adjusts it to what she finds comfortable and comprehensible.

At the end-of-the-millennium, we no longer live in a print culture. Today the rackety channelscape that goes by the moniker "new media" distributes vast amounts of sensory data in every form except print. The linear logic of a sequence of printed pages is largely replaced by a ubiquitous hyperlinked information space that "substitute all-at-onceness for one-thing-at-a-timeness" (McLuhan 1967). The space-time of new media's GUIs, MTV, CNN and WWW is compressed in all dimensions, fast-forwarding through its programming and striving to provide infinite views of the world through a singular access point. This is off course what McLuhan's "global village" is really all about: to pull us within the reach of the thundering noise of the tribal drums.

Paraphrasing McLuhan: The "content" of new media - rap music, videos, advertising, shoot'em-up's, soundbites, hyperlinks - are just decoys ("the juicy piece of meat carried by the burglar") engineered to draw attention from the fact that message is not the programming, but in the form of delivery. Like Céline's Ford automobile plant, the din of new media invades its users until resistance is futile, at which point they become assimilated. New media reverse the roles: No longer are the users media consumers - they are media food. The users are the real content of new media - the prey of advertisers, merchandisers and influence-agents. This is why the key to understanding new media is information overload. The channels deliberately try to overload the sensory system of whoever they’ve managed to grab the attention because programming is cheap but attention is a scarce and costly commodity. The three most important activities conducted by and through new media is selling, influencing and brand building. Every executive advertising and lobbyist knows that information overload = pattern recognition.

This reversal of roles in turn reverses the prosthetic relationship between man and technology. McLuhan points out that:
by continuously embracing technologies, we relate ourselves to them as servomechanisms. That is why we must, to use them at all, serve these objects, these extensions of ourselves, as gods or minor religions. (McLuhan 1964, p. 46)

Instead of creating Bionic Man, we have spawned a prosthetic technology that reconstructs its user as a peripheral device whose sole purpose is to receive messages.

**Mirrorshades**

In *A Conversation on Information* Italian critic Umberto Eco (1995) notice that there in practice is little difference between having access to a source that provides no information (such as Pravda in the old days), and one that provide it in such vast quantities that it impossible to retrieve the relevant bits (such as the 700 page Sunday edition of the New York Times). The inference is that while information deprivation was the sign of Soviet communism, information overload is its capitalist counterpart.

The noise of new media has created a demand for a new type of prosthetic device: The information lens, filter, mirror and agent.

Steve Johnson (1997) comments on this particular trait of new media, and how it seem to have evolved the agent or filter as a sub-species: For instance, instead of watching the "raw" videos provided by MTV, one can enlist the agency of Beavis and Butt-head - two animated characters whose inane running commentary on whatever is shown on the tv-screen relieves the viewer from the strenuous task of making up his or her own comments.

Huge amount of new media programming are of similar filter-format: Digests, abstracts, summaries, spin-offs, samplings, interactive satellite television program guides, all other sorts of guides, hot lists, cool lists[2], web context sites, search engines, the movie about the making of the movie - and the web-site of the television series of the game of the movie of the song.

These secondary and tertiary formats exist primarily because repetition is good for brand-building, but the ratings show that they also are genuinely popular with the public. A significant portion of media users prefer the prosthetic of a guide or filter rather than exploring mediascape on their own.

In one sense, books provide standardised knowledge, new media individualise it. Filters and search agents will not only compose our own personal newspaper containing only the news that we are interested in -- they promise designer news, where anything that may upset you, alarm you, or make you think, doubt or reconsider our position can be sanitised away. The real problem of new media is not the noise; it is the new media's ability to provide designer noise. A consequence of turning the user into media content is to make the user the celebrity. Virtual paparazzi track, log and analyse our prosthetic electronic personas in order to deliver programming that will have the maximum impact on our sensibilities.

But the scariest message of new media is its *ubiquity*. We no longer do things, such as reading a book, or use a computer. We are instead in effect invited to become parts of the technological systems we interact with. Our digital persona becomes our filter and our agent into an increasingly virtual world. It is as if we have replaced not only our arms, feet, ears and eyes, but also ourselves -- and established a total prosthesis in our place.
Convergence
The gene is by far the most sophisticated program around.
- Bill Gates, quoted in Business Week, June 27, 1994

Microsoft's CEO Bill Gates is personally financing the research of Leroy Hood, who in 1991 was appointed to the awkwardly named chair of "William Gates III Professor of Molecular Biotechnology" at University of Washington, Seattle. Hood's research is gene therapy. Identifying inferior or undesirable genes and replacing them with better, stronger and faster versions.

Microsoft already enjoys incestuous business relationships with its siblings in the hardware industry, media industry and telecommunication industry, where co- and cross-ownership ensures that the din and delivery of programming spans all significant channels, infrastructures and distribution modes.

Is the next logical step a merger between the software-hardware-media-telecommunications industry and biotechnology?

The Forgotten Art of Memory
Being disconcerted with the prosthetic nature of technological innovation is not a prerogative of modernity. In the dialogue Phaedrus, Plato (428-347 BC) have Socrates point out that the invention of writing as a prosthetic for memory:

will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. (Plato, Phaedrus)

A trained memory was considered of vital importance from Antiquity and through the Renaissance. Yates (1966) argues that without being trained in the art of memory, it is impossible to fully grasp the iconography of Giotto's paintings, the structure and detail of Dante's Inferno or the form of the Shakespearean theatre. Because we, despite Socrates dire warnings, have allowed ourselves to become reliant on the written word for memory, that art is now lost - and with it a part of our human heritage.

An even stronger criticism of prosthetic technology is levered in the ancient Chinese tale about Tzu-Gung and the old man. The traveller Tzu-Gung meets an old man hard at work, and explains to him at great length how he can ease his burden by making use of a lever. The old man responds angrily:

I have heard my teacher say that whoever uses machines does all his work like a machine. He who does his work like a machine grows a heart like a machine, and he who carries the heart of a machine in his breast loses his simplicity. He who has lost his simplicity becomes unsure in the strivings of his soul. Uncertainty in the strivings of the soul is something which does not agree with honest sense. It is not that I do not know of such things; I am ashamed to use them. (quoted in McLuhan 1964)

Andrew Yeaman (1994) argues that "growing a heart like a machine" this is exactly what happens to people who use prosthetic technology indiscriminately. He calls the phenomena "cyborgization" - i.e.:
When a person … gives self-control over to a computer and accepts the default options without question, that person has become a cyborg. (Yeaman 1994)

Yeaman gives a number of plain, everyday examples of "cyborgization": A librarian who responds to every request for assistance by running an electronic search that produces vast output utterly irrelevant to problem (Yeaman finally finds what he is looking for by bypassing the librarian and thumbing through the indices of selected books in the appropriate section of the library); or a student whose conditioning to computer based spell-checking results in the student being incapable of learning the fundamentals of spelling -- including such concepts as homonyms (the student even argues that "forth grade" must be correct because the computer has suggested it).

**Cracking the Shell of Human Culture**

Artifacts shape society. Neil Postman observes that:

New technologies alter the structure of our interests: the things we think about. They alter the character of our symbols: the things we think with. And they alter the nature of community: the arena in which thoughts develop. (Postman 1992, p.20)

Yeaman's concept of "cyborgization" is a description of an unconscious and involuntary phenomena (he also cites examples of being prey to it himself). Yet one of the more significant phenomena to emerge is the increasing number of people who actually want to become cyborgs.

I first became aware of this in 1996, when Morten Søby (a fellow at the University of Oslo and a minor celebrity on the Norwegian new media scene) published his own version of the Cyborg Manifesto in the leading Norwegian daily for debate and criticism: Dagbladet. At the time, Søby staged a major exhibition/symposium named ELECTRA Philos at the prestigious Henie-Onstad Art Centre, and was cruising the meta-media circuit (i.e. acting as a media filter to his event). Søby titled his manifesto "Vi blir kyborgere", which is a pun that does not translate into English. The first two words means "We become" and the final word "kyborgere" is what Lewis Carroll called an "envelope word" containing both the Norwegian words for "cyborgs" and "citizens". Søby concludes his vision for the future:

The only responsible intellectuals are those jacked into the Internet and the data-distributed space. This is where we find the pieces of the jigsaw puzzle mapping the new virtual epoch. One cannot understand cyber-culture from the outside. What matters is to move beyond its leading edge. We must think faster than Bill Gates. Attempts to revive the modern autonomous subject are futile. Goodbye, human being, welcome cyborg!

(Søby 1996, my translation)

While Morten Søby may have been overdosing on Haraway (1991) (and failing to grasp her irony), an even stranger group of people seems to have taken lethal quantities of Nietzsche and Ayn Rand. This is the Extropians, who first surfaced in 1994 through an exhilarating review in Wired Magazine:

People have dreamed such dreams before, of course: they've wanted to fly like eagles, to run like the wind, to live forever. They've dreamed of becoming like the gods, of having supernatural powers. The difference is that now, suddenly, all of it is entirely possible. For the first time in history, science and technology have caught up to the wildest of human
aspirations and hopes. No ambition, however extra-vagant, no fantasy, however outlandish, can any longer be dismissed as crazy or impossible. This is the age when you can finally do it all. (Regis 1994)

The most extraordinary thing about Extropians is that they seem to be dead serious. Their website (Extropy Institute Online) comes complete with Manifesto, FAQ and detailed explanation of fundamental principles. They define Extropy as "a measure of intelligence, information, energy, vitality, experience, diversity, opportunity, and growth" and Extropiansism as "The philosophy that seeks to increase extropy". They goes on to explain that this is a "transhumanist" philosophy where the meaning of "trans" seems to be the application of "science and technology creatively to transcend 'natural' limits imposed by our biological heritage, culture, and environment" (More 1995).

The great moment for Extropians is when this transcendence occurs. This event is called a "Singularity" in their jargon, and calculated thusly:

The most common guess is that the near edge of the Singularity is due about the year 2035 AD. The strongest argument for the timing of the singularity is the trend in computers. They aren't terribly smart right now, but that's because the human brain has about a million times the raw power of today's computers. The brain has something like 10^11 neurons with 10^3 synapses each with a peak firing rate of 10^3 Hz, for a raw bit rate of 10^17 bits/sec. A 66 MHz, 64-bit chip has a raw bit rate of 4.2x10^9. You can buy about 100 complete PC's for the cost of one engineer, giving you about 4x10^11 bits/sec, or about a factor of a million less than a human brain. (Extropian FAQ)

Without dwelling too much on the merits on this calculation, let me just quote from Wired magazines rendezvous with the Extropians, from this year's April edition:

Attending the Media Lab event are a handful of borgs who would love to hop into a faster-than-light space transport and drive straight into the Clynesian future. They drift around the edge of the party, wearing Japanese laptops strapped to their chests and home-made keypads attached to their wrists. When I try to chat with them, the conversation keeps slipping into well-worn grooves. They tell me they are Extropians, like Hans Moravec and Timothy Leary, who are getting ready to upload their psyches, jettison our exhausted planet, and blast off for the intergalactic frontier. They combine Buck Rogers naïveté with a wide streak of paranoia. They are hungry for prosthetics and yearning for time travel. They shadow the party like doppelgängers, reminding us that this technology has its dark side. (Bass 1998)

More than any single group, the Extropians echoes the Futurists of nearly a centuries ago in their discontent for humanity as-is. More than anything these sentiments seems to be pulled from fiction such as the 70ies kids' television series Six Billion Dollar Man and Bionic Woman (sometimes with tragic consequences as children inflicted self-injury in order to obtain a bionic arm or an eye), and the genre known as "cyberpunk" where prosthesis and artificial implants are the major plot-points in liberating the individual from "the prison of his own flesh" (Gibson 1984, p. 12)

In the extended essay "Data Trash", two professors of Political Science, Arthur Kroker and Michael A. Weinstein, excavate the smelly landfills of high modernity. This is their rendition of the fantasy of prosthesisizing the entire human body:
The wired body is perfect. Travelling like an electronic nomad through the circulatory flows of the mediascape, it possesses only the virtual biological form of a multi-layered scanner image. Abandoning the heavy referential history of a central nervous system, the wired body actually grows a telematic nervous system that is freely distributed across the electronic mirror of the Internet. A product of neural tapping and image processing, the wired body is the (technoid) life-form that finally cracks its way out of the dead shell of human culture. (Kroker & Weinstein 1994, p. 1)

The irony here is of course that after abandoning the "dead shell of human culture", there is very little except the noise of new media left to sustain the wired body. Kroker and Weinstein is not optimistic about where this leads:

The lead rocket, Humanity … have crashed: Anti-humanism is a fact, a condition, not a position. Something better than the flesh has seduced and intimidated it, the technological imaginary - virtual reality. (Kroker & Weinstein 1994, p. 45)

**The Ghost of Futures Past**

I find the original Futurist project horribly anti-humanist. Like their political cousins in Germany, the Futurists viewed humanity as fundamentally flawed and in dire need of improvement. While their German cousins approached this project with German efficiency -- and proceeded to murder a sizeable part of humanity -- the Futurists "solution" for creating superior human beings through technology-as-prosthesis failed because it was confused, impractical and without any real power behind it. But failing is its only redeeming feature.

What I would like to discuss with you, is to what extent the ghost of Futurism is still rummaging the world, dressed in the guises of new media, virtual reality and genetic engineering? To what extent has Futurist-style resentment for un-augmented human-ness permeated modern culture and influenced the way we live, think, work and design?

And looking at the more constructive side. How can one, as scientist, researcher, designer or critic partake in the development and use of technological artifacts without augmenting the anti-humanism and demolishing of human culture that I fear is afoot in many of the projects currently carried out by the industry and in research establishments?

Is the problem that the argument that technology *should* be used for augmenting human ability is fundamentally flawed? Lies the merit of technology not in its possibilities in that direction, but in the fact that it *is* separate from the human condition? And is the fallacy in our attempts to "conquer the seemingly unconquerable hostility that separates our human flesh from the metal of motors"?

As Borges reminds us, it is imperfection that makes human memory more pleasant than that of a computer:

I cannot walk through the suburbs in the solitude of the night without thinking that the night pleases us because it suppresses idle details, just as our memory does. (Borges 1988)

**Notes**

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