Text by Emile De Visscher.
Tranlasted from French by Communications Européennes.

Conclusion

Self – Transformation

Eventually, we may raise the question of the relationship that designers have with their tools. According to L. Sève who interprets the thought of Karl Marx, man is a being who produces his own means of subsistence, and thereby produces himself[1]. Would it be a step too far to maintain that, by externalising new processes and means of production, designers modify themselves? Some very interesting traces of the designer/tool relationship can be found in this opus. Anton Alvarez, for example, says that his machine is part of himself, a part of his body, and in this sense, cannot be passed on. In her essay, Ragna Ragnasdottir quotes Michel Serres, a philosopher as prolific as he is poetic: "The hand is no longer a hand when it has taken hold of the hammer, it is the hammer itself, it flies transparent, between the hammer and the nail, it disappears and dissolves"[2]. When I asked her to expand on this point of view in greater depth, she replied that some of her tools, after a long period of practice, become extensions of her body, and that damaging them is like breaking a tooth. So these designers refer to their tools as externalised organs. While this conception of technology is fairly classic – it is found particularly in paleo-anthropological theories about the development of the first tools as "objectified" organs – it raises the question of the interdependence of human beings and their many prostheses. Our bodies are not strictly demarcated by our skin, we base our lives on technical devices (glasses, computers, telephones, cookers, the Internet, mains water supply pipes, cars, etc.), we are constructed by and we construct with these technologies. Our bodies are not strictly natural. We are all cyborgs, half-biological / half objects. Technophobic discourses, from this perspective, come down to rejecting our very bodies, since they are already technical. They come down to a conception that dissociates the body from the mind, which it is unnecessary to critique here. The main question, rather than rejecting or supporting technology in general, becomes more a matter of modulating our relationship to technologies, knowing which technical devices we wish to depend upon, which technical features are going to make up our cyborg bodies. By constructing new tools, designers equip themselves with new, experimental and imperfect organs on which they can act, work, bond with and change themselves.

The image of a technical device / organ is all the more interesting because it also permits thinking of technicality not simply as a new way to be able to produce, but also as an object of care. The body, if not listened to, if not maintained, becomes a burden, a constraint. It is the same for technical devices and techniques: if they are not practised, observed, manipulated, maintained, they once more become pieces of metal and cables, old constructions that get in the way and that you drag around.

Indetermination

This question of prostheses raises a bigger question currently being widely debated about the notion, classic in design, of usage. While technology has often been thought of as a means to an

end, this notion is contradicted by many examples and current thinkers. How can a gun be thought of solely as a means to an end? No one a priori wants to kill. The gun transforms and produces the inhumanity of man, just as man shapes and transforms materials into guns. Bruno Latour maintains that technical ways of existing go far beyond their character of objects to serve a function. Technologies carry "trajectories", which act as much on other technical devices as on the people using them, they have their own agency. From this point on, it must be considered that technology goes far beyond the intention that underlies it. Once perfected, it opens up a field of applications and forces limited only by its deployment. This has nothing to do with the straightforward vision of a means to an end defined by man in advance, of a tool created simply to be used. The tool transforms and distorts its creator, who then has to juggle with forces and intentions that he could never even have imagined.

The designers in this book do not make functional products, they seek to create operations, tensions, articulations. Technologies' existence is not primarily linked to use, a technical device can be developed for itself or for a whole series of independent uses. Some technical devices and technologies have been developed with no uses in mind, others have found a use after many digressions, some still have no uses. The invention of the steam engine described by Hero of Alexandria in the second century BC had to wait 2000 years to be put to practical use. Hans Otto Von Hush, Professor of Design at Parsons NYC, maintains that it is absolutely essential to move towards design "stressing potential over possibility"[3]. According to his dichotomy, possibility is determined in advance, it is linked to an object whose use is predicted. Potential, on the other hand, is open-ended, it leaves room for appropriation and undefined practices. In the same vein, he maintains that design "needs to look more at capabilities than commodities"[4] in other words, that it should focus on the capacity for action it provides rather than at the functions it brings with this or that commercial product. The machines, tools, protocols and processes presented do not have a preconceived use. Although they may give rise to chairs, bowls or tables, their primary objective is to produce and show new potentials. "Design is ultimately the art of the possible"[5] as Susan Yelavitch argues.

Empowerment

In this cyborg production, it could be said that designers seek, individually or collectively, to increase their ability to act upon the world. Without determining how or why in advance, they want to be able to induce movement in the surrounding materials. They seek to master a telekinetic power - to make the materials around them shift and react. Although this image of the designer / telekinetic may be surprising, it corresponds fairly well to the fantasy of the machine: a machine can transport molten materials, it can transform liquids to gases, it can lift gigantic loads. By developing their own machines and tools designers give themselves powers they never previously had. They give themselves the ability to immobilise twisted wood, to assemble wires at incredible speed, to mould gigantic forms or dip chandeliers in wax. They seek to construct mechanical prostheses to increase their power, like fantasy superheroes. The term 'power' is used here in the Aristotelian sense. In fact, the Greek philosopher defined

power, 'δυναμ' (dunamys), as opposed to actualisation 'εργον' (at work). Δυναμ (dunamys) refers to "what may be, what may be envisaged" indeed "that which is at the origin of movement"[6], while 'εργον' (en-ergon) relates to what has happened in something, has become reality. Increasing his or her power is not to produce more functional objects. Increasing power is to increase the ability to alter one's environment. For the designer, the tool and the instrument have the power to perform numerous actions and achieve particular formations; these tools are new capabilities. Aristotle said that a lyre has the ability to produce such and such a sound, it carries these sounds as a power, but the piece played with this lyre is a finished form, it no longer has power strictly speaking. In the same way, the machines and protocols presented in this work are all objects carrying a multitude of different potentials within them, they allow these designers to set matter and energy in motion, to "e-motion" their milieu. The same process could even create "100 different events or more".

Material Speculation

A criticism often levelled against these projects lies in the fact that they end up only in museums and they produce exclusively luxury objects, between artist crafts and gallery prototypes. In this sense they would not be able to impact society profoundly. They are either too expensive to produce, or too slow, or non-functional, or even unfinished to become everyday commodities.
This criticism is not confined solely to the projects of this opus. Radical Italian design from the 1970s, British interaction design, the performative design presented in the first issue of *Obliquite*, have all suffered the same criticisms. Anthony Dune, in its own way, responded intelligently: he supports the urgency of developing alternative proposals in order to get away from industrial and commercial prerogatives and be able to reflect and construct a desirable future collectively. The status of the model, presented in exhibitions and subject of debates, would thus have more impact than an industrial product that should not shock or disturb if it is to sell easily. In that respect, Anthony Dune has successfully justified a speculative design practice.
Yet it seems to us that his remarks differ from the practices in this opus in respect of the speculation's fictional character: the great majority of projects developed under the banner of interaction design, also described as design fiction, places itself among the dystopias, utopias or alternative histories. The projects presented here are not conditioned by the existence of an imaginary society.

There is no use of extraterrestrial material, human cloning, islands without technology or devastating bacteria. The speculation simply concerns a proposal in the direction of "producing differently" that it is not possible to validate or invalidate but is open to debate and may give rise to actions. Barbara Adams describes it perfectly: "design in these instances is entrusted as a way to think and construct knowledge through fabrication. More than that, it opens forums for meaningful actions"[7]. These projects therefore constitute a form of questioning about the future, a call to action, a "what if?"[8] applied to materials. Their exhibition and diffusion allow moving away from a determinist technical consideration, a vision of complex, linear and ineluctable industrial progress. Encountering and having experience of other processes and other materials, accessible and

staged, thus calls for reflection on our ways of life and by extension, if one follows Rifkin, our intellectual considerations: "*science owes more to the steam engine than the steam engine does to science*. In other words, our intellectual abstractions are often only explanations of what we are already doing in experimenting with our technological inventions."[9]

These projects could thus be called "material speculations", not in the general sense of a critical enquiry based in a physical object as Garnet Hertz and Ron Wakkary puts it[10], but literally using material transformation processes to speculate on new production and consumption practise and power structures. Each project is, on the one hand, truly real, operational, physical, practical and commercially viable ; and on the other hand, projectional, speculative, critical, imaginary and incompatible with current industrial society. To me, the great interest of all these projects lies in the fine line built by this tension.

1. SÈVE, Lucien. *Penser avec Marx aujourd'hui: Tome 2: "L'Humain"?*. Paris: La Dispute, 2008
2. SERRES, Michel. Quoted in: PALLASMAA, Juhani. *The Thinking Hand: Existential and Embodied Wisdom in Architecture*. Hoboken, NJ: John Wiley & Sons, 2009, p.48
3. VON HUSH, Hans Otto. Quoted in: *ADAMS, Barbara; YELAVICH, Susan, Design as Future Making*. London: Bloomsbury Publishing, 2014, p.48
4. *Ibid.* p.183
5. YELAVICH, Susan. *Op. cit.* p.15
6. ARISTOTLE. *Métaphysique - Delta*. Paris: Vrin, 2014, p.49
7. ADAMS, Barbara. *Op. cit.* p.22
8. Gardar and Sarah specifically use this "what if?" sentence.
9. HENDERSON, Joseph. Quoted in: *RIFKIN, Jeremy. La Troisième Révolution Industrielle: Comment le pouvoir latéral va transformer l'énergie, l'économie et le monde*. Paris: Les Liens qui Libèrent, 2012, p. 271

10. WAKKARY, Ron; ODOM, William; HAUSER, Sabrina; HERTZ, Garnet; LIN, Henry. *Material Speculation: Actual Artifacts for Critical Inquiry*. Aarhus, 2015. Conference paper accessible at https://www.researchgate.net/publication/281374466