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Concerning Soft Power and other crossroads in culture in the biotech era

This is Not a Bioart Exhibition

↑ *Soft Power*, Amarika Project, 2009.

«The most profound technologies
are those that disappear. They weave
themselves into the fabric of everyday life
until they are indistinguishable from it».
Mark Weiser

For most people, biotech continues to belong to the realm of science-fiction. They imagine it as a field of highly specialised knowledge inhabited by visionary scientists who conduct weird experiments in distant laboratories, or at best, as the subject of a discussion of the limits and benefits of genetic engineering, conducted by media icons like Dolly the Sheep with leadership from hard-line Catholic doctrine. Yet biotech is the star technology of the twenty-first century. It is the one that has most utterly woven itself into our everyday living habits —to a far greater extent than the Internet or the mobile phone— and it is one of the technologies that moves most money worldwide. It is the *soft technology* par excellence, interiorised and naturalised to the point of paroxysm, literally merging with our bodies. It is also the one that best embodies the fantastic myth of the cyborg, a theory developed in the 1980s by Donna Haraway. But in the biotech era, or what Jeremy Rifkin calls *the biotech century*[1], that hybrid between man (woman) and machine is no longer either a cyberpunk utopia or a diversion of experimental philosophy, but a reality watered down and sold in everyday consumer products.

Any talk of biotech must first and foremost refer to the pharmaceutical and food industries. Every day we consume food that is a product of genetic engineering, with high doses of hormones, chemicals and antibiotics; food that is ever cheaper, hardier and visually more attractive, mass-produced to satisfy the demands of industrial consumption. We regularly apply the latest innovations from the pharmaceutical industry, too: medicine, antidepressants, contraceptives, surgery, prostheses, implants and organ transplants. With the sequencing of the human genome in 2003, the development of life sciences qualitatively moved up a gear: it is now technologically possible to produce life artificially; the borders between species are becoming blurred; the difference between living and inert is being diluted, the very idea of life as an ontological reality requires a new definition. But secondly, any talk of biotech means addressing one of the most lucrative industries of our times, an industry that is R&D intensive and one that is closely linked to the proliferation of patents; to which vast sums are devoted; on which so many hopes rest with regard to the mutation of the economic model; an industry whose aim is the potential exploitation of living matter in all its forms, human, vegetable or animal.

This is the scenario in which the *Soft Power*[2] project was inspired. Its aim is to contribute a broad perspective on biotechnology showing it in all its complexity, as a *bio-political narrative*, linked on the one hand to market liberalisation and privatisation of live resources and on the other hand to the emergence of a new culture of *design of the self*.

BIOART AS A TRAGIC GENRE

Observing science from *non-science* (whether from the perspective of social sciences, those bastard daughters of rationalism, or from art itself as a laboratory of the imaginarium) it appears to be an inevitable halting point of thought as a situated and political practice. *Soft Power* is openly located in that interstice between disciplines but it is far removed in its approach from that traditionally found in the categories of *bioart* and *sci-art* which, despite their youth and the inherent limitation of any label, already have their own history, their heroes and their godfathers. Throughout the 1990s and especially since Eduardo Kac's famous fluorescent rabbit, bioart has been characterised by an acritical and celebratory perspective dressed up as dissemination. It is essentially literal (large photographs of cells and proteins), spectacular (like «the creation of a leather jacket made with the cells of an unborn cow»[3]) and replete with solemn slogans (such as «thanks to genetic engineering humans will be able to live to 150»[4]). The result is what Jacqueline Stevens calls *the genetic narrative*: «the tragic genre of our time»,

which has acted as a letter of introduction for a scientific iconography serving the interests of the bio-economy.

The declared goal of many of the most iconic bioart events of the 1990s was to foster a positive spirit of public opinion that was favourable to biotech and to reduce the ethical resistance most people felt —and still feel— about this type of research, even if they are not fanatical Catholics. When the American Museum of Natural History staged the exhibition «The Genomic Revolution» in 2002, Frederick Seitz, a member of the museum's board and author of numerous market studies on European consumers' perception of biotechnology, said: «I said you need to have a good exhibit on DNA [...] Enthusiasm for [genetic technologies] needed to be boosted a bit." Among the sponsors of the show was the Richard Lounsbery Foundation, an organisation with interests in the biotech industry of which Seitz was a director. Another example of this *revolving door* situation between the art world and the biotech industry could be seen in the exhibition «Paradise Now» held in New York 2000, whose sponsors included the pharmaceutical company Affymetrix, Orchid BioSciences and Variagenics and the PR firm Noona/Russo Comm, which specialises in marketing campaigns for the bio-industry.

With this background, it is hardly surprising that a programme of activities on biotech should initially be identified with such antecedents, unless an effort is made to 1. openly state that it is not (and for this reason in every e-mail sent out inviting guests to *Soft Power* clarified that it was not a bioart exhibition) and 2. select artists whose work is unambiguously separate from that tradition both in terms of the media and the message. *Soft Power* contains no fluorescent bunnies or photos of proteins; not even a healthy dose of biological or genetic technology. Despite the diversity of media used (video art, installations, maps, murals and posters), all the pieces in the exhibition have one common denominator: they forge a link between the level of the micro political —the level of personal decisions as to health, physical or mental well-being, food and sexuality (decisions that are taken in the area of the private and the everyday)— with the sphere of macro politics, in which biotechnology appears in all its least idyllic and most brutal guise.

THE HARD FACE OF SOFT POWER: WAR, MONEY AND (VERY) NATURAL RESOURCES

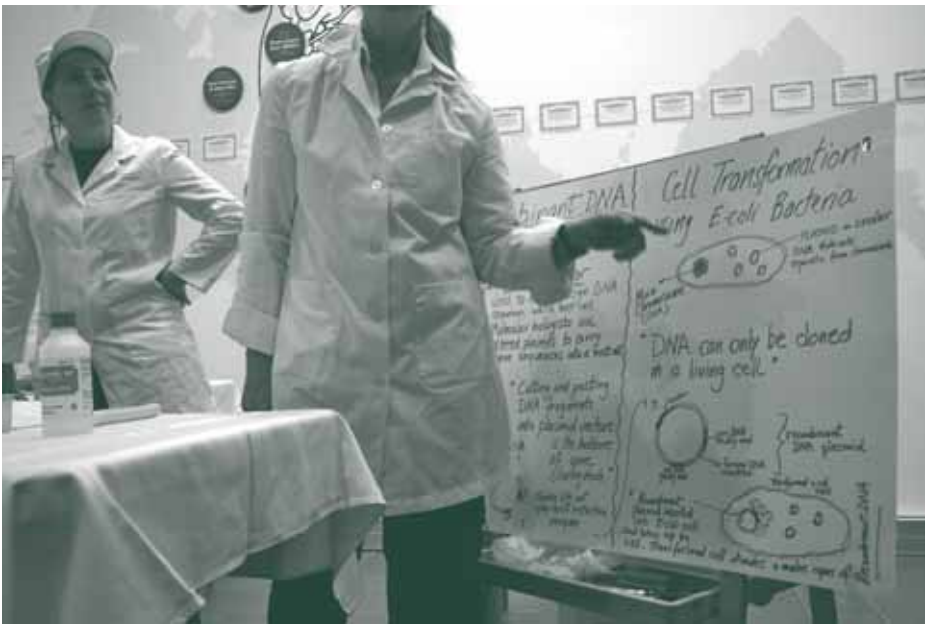
In one of the accompanying texts to their pieces, the group Bureau d'Etudes says: «Imagine the creation of a world government that controls the processes of access to state power. Then imagine that those who control these processes are linked to financial powers, that they share the same aims, the same overall strategy and the same ideology, and that they come together to agree on the rules, to administrate the world's resources and technical systems and to control, via information, the individual behaviour of hundreds of millions of people. Imagine that billions of people are managed through the most classical procedures of military dictatorship and war. What we would be looking at would be an organised complex of companies that control or seek to control, for their benefit and their goals, the functions previously monopolized by the state (schooling, army, research) but also the very functioning of living things...»

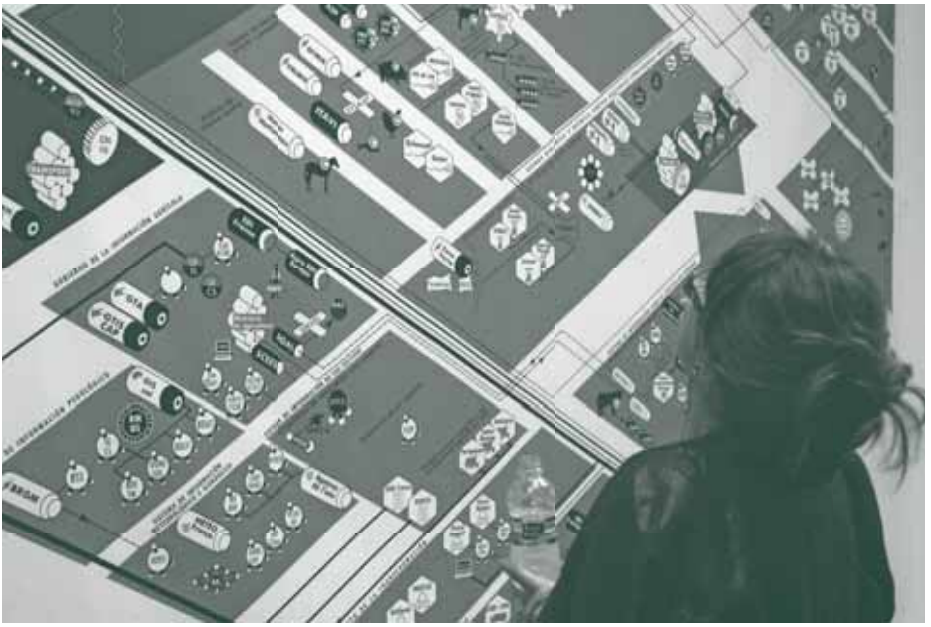
Before they were widely marketed as consumer products, silicone implants were tested on prostitutes during the Vietnam war; just as today, despite their success, the hormone complex marketed as Viagrama is still at experimental phase in the bodies of young American soldiers (because it is said to raise their level of aggressiveness). The toxin present in the famous «Agent Orange», used as a biological weapon in Vietnam —whose consequences are still being felt today in the form of different genetic malformations— was developed by the present transgenic seed leader, Monsanto[5]. The Human Genome Project itself, which was responsible

for mapping the human genome, grew out of what was previously known as the Manhattan Project, a research programme begun by the US Energy Department to study genetic mutations caused in the Japanese population by the Hiroshima and Nagasaki bombs[6]. Like the Internet, GPS and nearly all other technologies, biotech traces its roots back to the military. And like all technologies turned into a macro-industry, its development is inseparable from the liberalisation of international markets and a re-definition of the public arena in which state sovereignty yields to the advance of the private area, represented in this case by large corporations from the food industry and Big Pharma.

In the midst of a mutation in the industrial model, biotechnology is a promising field with potential in diverse activities. One of these is the opening up of private clinics in developing countries to cater to the growing market for organ transplants and assisted reproduction. This is the case, for example, of the two hospitals planned for the small fishing town of Aqaba[7], in southern Jordan, half-way between Europe and East Asia (from where most of the organs for the black market come) and the many artificial insemination clinics that have been opened in countries in the former USSR to which heterosexual and homosexual couples from Europe and the US travel, attracted by what has already become known as *fertility tourism*. The reason is obvious: in poor countries, living resources such as kidneys, corneas, eggs and semen, are also cheaper. It's a pure question of supply and demand. The same thing happens in the sphere of arable and livestock farming with the mass purchase of potential farmland in Latin America and Africa, where the astronomic figures bandied about give some idea of the amount of money the industry has at its disposal. In Sudan alone, the Arab Emirates have invested in 378,000 hectares of land, the Abu Dhabi Fund for Development has bought 30,000 hectares, South Korea 690,000 hectares and the American company Jarch Capital has increased its holdings to 800,000 hectares, all to be used for industrial agriculture. The UK has leased 25,000 hectares in Angola and is negotiating the lease of a further 125,000 hectares in Mali and Malawi. The Chinese company ZTE International has bought 2.8 million hectares in the Democratic Republic of the Congo and the Chinese government has asked Zambia for two million hectares for manufacturing bio-fuel[8].

In this spectacular growth process, it is worth mentioning the case of Spain. As well as the traditional agricultural industry in regions such as Almeria, an effort is now being made, openly led by the public powers, to increase biotechnological development at all levels. Although the economic recession has cooled expectations, Spain is the eighth country in the world in biotech investment and currently has 257 active companies in the field, four times more than in 2003. The leading company is Digna Biotech, founded by the University of Navarra, which has already received €15 m from the private sector (financiers include El Corte Inglés, Alicia Koplowitz, Amancio Ortega and the BBVA) and 10 million directly from public coffers[9]. Not coincidentally, the Minister of Science and Innovation, Cristina Garmendia, before taking on the ministerial portfolio, was one of the heavyweights in the Spanish biotech industry as chairperson of Asebio (a company that forms part of the EuropaBIO corporate complex, directly financed by biotech leaders such as Monsanto and Merck). This would explain, for example, why 80% of MON-810 corn is grown in Spain, the only variety of trans-generic corn legalised in the EU (it is banned in Germany and subject to a moratorium in France, Greece, Austria and Hungary)[10]. It would also explain why the documentary «The World According to Monsanto» by French journalist Marie-Monique Robin has not yet been shown on TV3, despite the fact that the Catalan channel is one of the co-producers, and that Tele5 only broadcast it in the early hours of the morning.





↑ *Soft Power*, Amarika Project, 2009.

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«Biotechnology is more effective than wars and more aggressive than bombs» says the Indian environmentalist activist Vandhana Shiva. Yet the biotech industry would be nothing without the essential legal support it receives under the current legislation on intellectual property, which has smoothed the way for the world's genetic heritage to be marketed. Legally, the TRIPS agreement[11] allows human genes to be *patented* provided that the «inventor» can demonstrate «novelty, non-obviousness and «utility». The legal dimension is completed with a complete network of institutions and organisations intermediating between the public and private spheres, such as the Intellectual Property Committee (IPC)[12], the World Intellectual Property Organization (WIPO), Committee 133[13] and the bio-banks distributed around the world[14].

The result is that the raw materials of the biotech industry (tissues, cells and genetic sequences) are not commonly owned, but are the property of pharmaceutical companies and private research centres. Some examples taken from the research project «Cell Track. Mapping the Appropriation of Life Materials» by the group subRosa will serve as an illustration: the gene that controls HIV infection has been patented by the American agency Human Genome Sciences; embryo cloning procedures by Edinburgh University; stem cells from the human umbilical cord by Biocyte; the gene thought to be responsible for breast cancer (BRCA1) by the pharmaceutical Myriad OncorMed; the genetic mutation factor in asthma (Interleukin-9) by Magainin Pharmaceuticals and Genera Corp. A very similar situation occurs with plant seeds, in the hands of the giants of the food industry: the use, conservation and commercialisation of seeds is not free —as one might expect of something that by definition has no owner since it is the fruit of nature— but is instead subject to patent regulations. Thus an apparently insignificant gesture such as extracting a seed from a fruit or vegetable to plant it in a home vegetable garden becomes an offence under copyright law. Thousands of farmers have already been taken to court by GM multinational Monsanto. By law, if a variant of a seed owned by that company is carried (for example by the wind) to the field of a farmer who has not paid to use it, the farmer may be prosecuted by Monsanto because that situation, however natural and random it may be, prevents the multinational from «fully enjoying its monopoly status»[15].

This is precisely the point at which biotechnology comes into conflict with ethical objections related to the way in which, as human beings, we approach the relationship with other life forms and even with each others, as natural producers of biotech capital. Generally speaking, the debate on advances in the biotech industry has been led by two polarised stances which often over-simplify the problem. On the one hand, there are those who argue in favour of a radical deregulation of biotech (elimination of testing and reduction of public interference in the bio-economy). Such people class any criticism as being an attack on progress and the development of science. On the other side are those who consider that biotechnology threatens the foundations of western society such as the family, hetero-patriarchal sexuality and reproduction. This controversy has become particularly relevant in the case of research using embryonic stem cells, begun in the US in 1997, against which arguments have been levelled that are very similar to those used against abortion: embryonic manipulation destroys the embryo, which is considered to be a potential human being. With *Soft Power* we wanted to add a different point of view to this debate, shifting the axis from the moral to the economic sphere: the issue is not so much the industrial or artificial production of life, but the conditions under which it takes place, indicated by a new form of colonialism that exploits the living resources of the planet, of human, plant or animal origin, and places them at the service of the market.

THE BIO-POLITICAL ECONOMY OF *DESIGN YOURSELF*

During the 1920s, the visionaries Edward Barney, nephew of Sigmund Freud and official founder of marketing and artifice of Philip Morris's successful advertising campaign to sell cigarettes to the non-smoking half of the population (women), began to apply the theories of psychoanalysis to mass consumption and political communication policy. His great success was to realise that what really explains consumers' decisions —about goods and services or about ideology— are irrational urges rooted in the collective unconscious. This is precisely the field from which biotechnology operates. From Icarus and Doctor Frankenstein through to Robocop, by way of all the variations on the cyborg aesthetic, humans have always needed to control their surroundings and control themselves, designing a future of perfection that affords them shelter from time, hardship and disease. With its promise of a hi-tech humankind, biotechnology takes us back to that old dream of programmable subjectivity. In this dream, thanks to the advances of life sciences, we will at last be able to decide our own fate, conquer aging, physical deterioration and death and create for ourselves a natural surroundings adapted to our sovereign needs as global consumers. A paradigm of the globalised *design yourself* culture, the biotech revolution opens a new chapter in the discussion begun by Michel Foucault in the 1970s on the concept of bio-politics: government of people through the control of bodies, minds and all aspects of life, especially those related to the sphere of subjectivity.

Historically, self-design has taken many forms but the least favourable has undoubtedly been the philosophy of eugenics or the improvement of the race. Eugenics began in Germany under the Third Reich with the first experiments on human beings and public selection policies, such as the T4 programme, that were intended to eradicate people with physical and mental deficiencies, homosexuals, gypsies and in general anyone viewed as unsuitable from the point of view of racial hygiene. At the end of the Second World War, the knowledge accumulated by Nazi scientists travelled to the United States —and with it went its philosophical base, the ideology of eugenics. This was reflected in a number of policies on «population control» such as laws on sterilisation for the most underprivileged sectors («Fewer children of bad parents and more children of good parents» was the slogan) down to programmes such as the Negro Project, whose purpose was to «oversee» reproduction of the black population in the southern states[16]. The 1960s saw the second wave of eugenics, directly related to the liberal doctrine of *free choice* and the consumer society, a trend which has stretched down to our times, and which has become more radical with economic liberalisation. However aberrant it might sound, in an AI clinic the semen of a poor black man, with no higher education or with a homosexual parent is *cheaper* than that of a white man with university studies, high purchasing power and no deviant genealogical background[17]. From the moment in which the biological resources come into play on the market, racial discrimination no longer needs a philosophical basis because the very laws of supply and demand take over. It is then that biotechnology can clearly be seen to be a *bio-political narrative* closely associated with the industrial production of a specific type of subjectivity. As Beatriz Preciado says, the idea is to «invent a subject and produce it on a global scale"[18].

Questioning the direction being taken by biotech development means questioning both the extension of the capitalist logic to all areas, including life itself and the authority of science and progress, which are viewed as a set of univocal items of knowledge; neutral, objective and apolitical. It therefore means analysing life sciences as a techno-social network and bringing them into dialogue with other tiers of reality: on the one hand, the cultural codes associated with a specific technological innovation and the use made of it; and on the other, the economic and institutional powers that work on this technology and place it on a given path. From this

point of view, biotech encompasses many of the concerns that lay behind the first techno-activism movements, such as free access to knowledge, the creation of an accessible information environment and the never-ending fight for *commons* and against intellectual property; with the noticeable difference that the battlefield no longer lies on the Net, in the hardware and in the software, but in our own bodies, which have become research laboratories for new life sciences.

Notes

1 Rifkin, Jeremy, *The Biotech Century*, Tarcher/Putnam New York 1999.

2 «Soft Power. Art and technologies in the bio-political era» is a programme of activities on biotechnology organised by Proyecto Amarika Proiektua and held in 2009 in Vitoria-Gasteiz.

3 I am referring to the series «Victimless Leather» by the group Tissue Culture & Art, formed by Ioanat Zurr & Oron Catts. Although in their work these artists openly criticise the current use of biotech and they seek to «make the public face up to the moral implications of using parts from dead animals», their projects use the most spectacular gene iconography, characteristic of works traditionally included in the bio-art label.

4 «The Genomic Revolution», an exhibition held in the American Museum of Natural History from May 2001 to January 2002.

5 Robin Marie-Monique, *El mundo según Monsanto*, Peninsula 2008.

6 Stevens Jacqueline, «Biotech Patronage and the Making of Homo DNA», *op.cit.*

7 Adi Schwartz, «Desert Dream. Aqaba» published in *Monocle* No. 26, September 2009.

8 Bureau d'Etudes, «La Bella Durmiente», 2009 edition, published for *Soft Power*.

9 Federico Barciela, «Los inversores temen a la biotecnología», published in the Sunday business supplement (*Negocios*) of *El País* on 26 July 2009.

10 Héctor Rojo «El lobby de Monsanto en el gobierno», published in *Diagonal* N°111 (April-May 2009).

11 TRIPS (Trade Related Intellectual Property Rights) is an agreement of the World Trade Organisation (WTO), negotiated in the Uruguay round of the 1985-1994 GATT, which considerably extended the scope of patents.

12 The US Intellectual Property Committee is made up of 13 large American corporations including DuPont, Monsanto and General Motors. These corporations were key instruments in developing the TRIPS.

13 Committee 133 of the European Union is the instrument that enables a close relationship between the Commission and private companies and makes it possible to impose pre-decided policies on the member states. Committee 133 is made up of high-ranking state civil servants and representatives of the Commission. Legally, it is only an advisory body, but in reality it is one of those forums of arbitration, unknown to most citizens, where the future of the average European is decided. Committee 133 is the centre of decision making and the real power behind the EU's trade policy. It takes its name from Article 133 of the Amsterdam Treaty.

14 Biobanks play a key role in the bio-economic industry since they are in charge of selecting, preserving and labelling the raw material of the biotech industry, such as DNA sequences, manipulated genes, lines of stem cells, transgenic organisms and processes of cloning and in vitro insemination.

15 Robin Marie-Monique, *El mundo según Monsanto*, *op.cit.*

16 subRosa, «Cultures of Eugenics» in «Cell Track. Mapping the Appropriation of Life Materials».

17 subRosa, «Fertility Tourism and Egg Donor Handbook» in «Cell Track. Mapping the Appropriation of Life Materials».

18 Preciado Beatriz, *Testo Yonki*, Espasa Calpe 2008.