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“Natural Drift (in the work) of Natalie Jeremijenko”

LAUNCHING POINT OF DIGITAL AND ELECTRONIC ART, BIOART OR A-LIFE ART, NATALIE JEREMIENKO ‘PLAYS’ WITH ARTIFICIAL INTELLIGENCE AND BIOTECHNOLOGY TAKING SEVERAL SOCIAL PRACTICES OF ACTIVIST ART ONTO HIGH-TECH GROUND, WITH THEIR ROOTS IN SOCIAL MOVEMENTS LINKED TO NEW MEDIA. ITS EXPONENTS BLEND SCIENTIFIC KNOWLEDGE WITH CRITICAL THEORY AND INTERDISCIPLINARY THOUGHT SURROUNDING THE RELATION BETWEEN TECHNOLOGY, NATURE AND CULTURE.

“Technologies are tangibles social relations. That said, technologies can therefore be used to make social relations tangibles”

NATALIE JEREMIENKO

“I tabù sono fatti per essere violati (marcel mauss)... tutto sta nel fare in modo che la transgressione non sia dennessa nei confronti degli altri!”¹

SP@GHEHTTI HACKER

Natalie Jeremijenko’s work is inscribed within this perspective, questioning the separation between science and technology, Nature and machine, information and power³.

Jeremijenko’s artistic projects are to biotechnological projects what hacker practices are to information and communication technologies. The hacker subculture, arising from the appropriation of new media, develops in the new digital environment in the way that punk and its “Do It Yourself” ideology did on the streets of European cities in the seventies and eighties. There is a radical criticism of class structure implicit in the Art, about technology and any other method of institutionalised knowledge.

1. For a detailed biography on Natalie Jeremijenko, please see ><http://visarts.ucsd.edu/node/view/491/31>
 2. “Taboos exist to be violated (Marcel Mauss)... everything rests in this transgression not affecting others!” Sp@ghetti Hacker ><http://web.tiscali.it/jackonfire/>
 3. In the portal d-i-n-a.net Jeremijenko thus explains the intention of her work:
 “The research and design practice represented in the project database is focused on the interrogation of the transformative potential of new information technologies: redressing

what counts as information, exploring tangible open-ended design strategies, and developing and applying socio-technical analysis and critique to generate, instantiate and explore alternatives to dominant information technology design paradigms”. exploring tangible open-ended design strategies, and developing and applying socio-technical analysis and critique to generate, instantiate and explore alternatives to dominant information technology design paradigms». <http://www.d-i-n-a.net/2002/it/metagallery/nj.html>

Activist art and new media

“New media art” was developed in the sixties by artists and collectives that placed the issue of communications at the centre of their experimentations and reflections. Community video and televisions allowed the field of counter-information and communications to be expanded, previously typical of printing, independent cinema and radio. In the eighties, with the use of computers and later the Internet, a new front for artistic research and production started to open up that would become known as *Net.art*.

The surprising variety of artistic productions associated with new media art have a commonality in their tendency to critically focus on mass media and a practice oriented towards the subversion of their power through the appropriation of new technologies. These consider factors of economic, social and cultural transformation as generators of a new environment for production, social relationships and the construction of a cultural ideal.

In this new setting, a type of artist appears that does not match the traditional Fine Arts curriculum but is recognised by being a producer, designer, developer, etc. in new media. The producer artist is characterised by knowing and interacting with technological media that they manage, being an expert of the digital environment. But an expert who does not keep secrets but rather shares their knowledge and makes *free copyrights* their manifesto. *Net.art* points to the redefinition of the public sphere starting from the articulation of *on-line and off-line* spaces by outlining a series of new activist practices like *netStrike* and other forms of “electronic civil disobedience”⁴.

Institutionalised art criticism, typical of the artistic avant-garde and later of the countercultures and the medial artist movement, is based on rejecting the figure of the artist as a genius and the work as an object for mere museum consumption.

Artist-producers on the Web often work in collectives and request that their work is appropriated, robbed, copied, altered and reinvented by other user-producers.

It is not simply a question of form, as the idea of artistic work as something that is unfinished implicitly carries the idea of social transformation without a synthesis point, without a pre-established goal.

Ethnographic surrealism

Apollinaire stated: “everything can have another name”⁵. The negative response of Dadaism precisely sought to put the system into crisis, throwing its same control techniques back at it and using them “inappropriately” or unusually. These ideas had returned with even greater strength and breadth, according to Argan⁶ (1981) in the global response given after World War II with the desire to overcome rational censure and release society from the superstructures of authority and power manifested in institutionalised values.

Dada then was unleashed in Surrealism, adopting its lackadaisical and transgressive attitude and procedure: collage, putting daily objects together, banal, detritus from bourgeoisie culture, trying to expand, dislocate and debunk common categories.

Ethnography, which in those years was still not a fully-defined social science, shared the climate and spirit of Surrealism and contributed to transmitting its culture by subverting superficial realities in an effort to develop the full potentiality of human cultural expression and indeed influencing almost all of the principal French ethnographers until the middle of the 50’s (with the exception of Levi-Strauss).

In line with this tendency towards the fragmentation and juxtaposition of cultural values, which were manifested in the 20’s and 30’s, especially in France, the possibility for Art and Anthropology to abandon the old and obsolete Universalist

4. Term coined by the group Critical Art Ensemble in 1996 and promoted by several other groups such as Electronic Disobedience Theatre, RtMark and eToys.

5. Apollinaire G. *Calligrammes*, trans. Anne Hyde Greet. Berkley: University of California Press. [1980[1918]:341]

6. Argan, G.C. (1981). *L'arte moderna 1770/1970*. Milan: Sanson

schemes totally insufficient for analysing cultural change was announced –according to James Clifford (exponent of New Criticism)⁶. The contemporary cultural condition coincides for Clifford with “ethnographic surrealism”, a game that on the one side is concerned with making the unknown understandable (like anthropologists in field work) and on the other hand managing to reconfigure that which is familiar to show it as strange (as surrealists do). Comparisons and criticisms are thus generated from this ongoing game, a protagonist in ethnographic and surrealist practices of everything familiar and everything strange⁸.

Anti-corporate activism

If *Net.art* continues with and develops countercultural tradition in the fight to democratise communications in the terrain

of information and knowledge technology, The proposals of Jeremijenko and the Bureau of Inverted Technology (BIT)⁹ are presented as provocative invitations to challenge the myths surrounding scientific knowledge, in particular artificial intelligence and biotechnologies.

The thread that ties these artistic practices together with the thousands of other activist practices for social transformation –from daily opposition and resistance actions to local/global initiatives on the street or the neo-liberal, anti-globalisation

movement- is anti-corporate activism¹⁰.

According to an ironic and subversive strategy, Jeremijenko and BIT pose the question of information control by providing instructions to build artefacts that, using the deconstruction of their data systems, are adapted to serve social or cultural objectives of users and communities.

Highlighting the overlapping of power and information, BIT points out the infinite possibilities opened to users when they violate the limits imposed by institutional information, whether it is contained in a statistical index or an electronic game. Information, the datum, is presented as something that is fixed, neutral and inalterable when in reality it is the result of a precise selection and intention. The *Suicide Box* project with its *Despondency Index*¹¹ and the *Biotech Hobbyist*¹² projects are other examples of how to “turn an information system upside down –dismantling beliefs, making visible what was previously hidden and challenging dominant ways of receiving information”¹³.

The basis of projects like *OneTrees and Sperm Economy* is the intention of denouncing scientific authoritarianism, the pretension of high-technology science of following objective and unquestionable laws, separated from cultural construction and social responsibility processes. There is a need to unmask the ideology and the intricate relation between research-scientific production and certain views of the

7. By New Criticism, we are referring to the cultural movement comprised of a group of North American anthropologists and studies that starting in the 80s outlined an in-depth reflection on the poetic and political implications of cultural representation. The seminar in Santa Fe in 1984 is considered a moment of synthesis of these new sensibilities [Elsa Verlicchi 1993:8]. Also see Picornell Belenguer (2003).

8. Bateson G. (1988) *Naven*. Torino: Einaudi (1936).

9. Jeremijenko has been a member of BIT since it was founded in 1991. BIT defines itself on its Web page as an information agency at the service of the Information Age. <http://www.bureaut.org/>

10. In an interview for Eyebeam, an organisation that supports students and artists in the fields of Art and technology, Jeremijenko confirms: “technological culture is produced starting from the dispersion of responsibilities. Who today is producing it? Who can say who is currently writing the code for the Microsoft operating system? No one can claim responsibility: it is like ‘okay... I did the user interface’ or ‘I created the database structure’. This condition of diffuse responsibility is the most crucial matter for understanding and perhaps taking part in technoculture. At The Bureau, conceptual authorship is left aside, which has been confusing people. Herein lies the problem: ‘is it real?’, ‘is it simulated?’, ‘what type of organisation could film suicides on the Golden Gate?’ [Suicide Box], ‘are they tricking me?’. However, it is precisely here where the question arises that makes us question the conceptual authorship of bureaucratic corporations.” > http://aleph-arts.org/pens/ingeniero_artista.html

11. “Despondency Index offers a graph that combines a financial share price indicator and the levels of social despondency. The idea, produced by Natalie Jeremijenko and the Bureau of Inverse Technology, superimposes the suicide rate in San Francisco, from 1996-2000, on top of the Dow Jones index.” >http://www.derivart.info/index.php?s=derivados_natalie&lang=en

For a description of the project, see for example >http://tech90s.walkerart.org/nj/transcript/nj_11.html. For an interesting analysis of the contribution of this project to the criticism of financial power, please see: Canet M., Rodríguez J., Beunza D. “Derivados, nuevas visiones financieras” www.derivart.info/material/derivados/DERIVADOS_final.pdf

12. Project-magazine founded in 1997 with English artist Heath Bunting <http://biotechhobbyist.org> Please also see: Natalie Jeremijenko & Eugene Thacker “Creative Biotechnology: A User’s Manual” >http://www.locusplus.org.uk/biotech_hobbyist.html “What is a biotech hobbyist and what exactly is biotechnology? Biotechnology promises to impact upon virtually every aspect of our lives, and yet the methods, techniques, and practices of biotech often remain closed off from the public, making it hard to understand exactly what it is and how it will impact our broader understanding of biology, politics, and culture. Biotech Hobbyism seeks to counteract this sense of alienation and fuel this curiosity through promoting an understanding of the means, ‘whats’ and ‘where fors’ of biotech. The Biotech Hobbyist collective includes a multi-disciplinary group of [media] artists, scientists, engineers, activists, and cultural theorists that is dedicated to working with biotechnology in a creative and critical way. Exploring the idea of ‘garage biotechnology’ - a hybrid based upon the ‘garage computing’ movements of the 1970s, the Biotech Hobbyist project aims to encourage an ethical engagement with biotechnology in the non-specialist public.

13. Biotech Hobbyist projects have uncanny ways of turning an information system against itself – of dispelling misconceptions, making visible what has formerly been excluded, and challenging hegemonic ways of receiving information” Ernestine Doubner “Natalie Jeremijenko’s Clones and Robots: Representation/Difference and Other Subversive Representational Strategies”. Parachute 112, p103.

world that constantly try to prove themselves independent of other social practices¹⁴.

Playing with the same laboratory material and its ideals for the construction of “absolutely” artificial products, such as cloning a tree, the techno-artist deconstructs the same idea of repeatability in practice that is so essential in natural sciences. *One Trees* performs the reproduction of one-hundred trees, supposedly equal due to being germinated by the same cloning process, showing how their growth patterns in different habitats of San Francisco Bay essentially depends on their interaction with the local setting. Each tree grows differently depending on the location where it was planted. Paradoxically (well, the cloned tree is called *Paradox!*), common genetic code is changed in the parameter that allows the differences to be exactly recorded, converting each tree into a type of “sensor” of environmental conditions, including the level of contamination.

In one “metalog” contained in his work “Steps to an Ecology of Mind”, Bateson (1972) explains how in order to think of new ideas and say new things, we have to undo all the ideas that we already have, dismantling them and going back to mix up the pieces again¹⁵. A metalog is a discussion about another discussion that allows, talking about apparently banal issues, concepts and categories that are often confused to be clarified. Thus, like anthropological meta-observation refers to the observation of the researcher observing themselves while they observe, making their own interference clear in the research, Jeremijenko’s meta-art and meta-creation, by being reflective about its own practice, allows a level of conceptual and critical abstraction to be accessed.

Bateson was the first anthropologist to take an interest in cybernetics and to expand the horizon of the discipline, giving it an eminently transdisciplinary focus. In his studies, he confir-

ms that the separation between Physics, Biology and Culture is somewhat artificial as it lets us not think about the three levels at the same time due to being “too difficult” when in reality, says Bateson, our minds are not even in our brains but are everywhere, since everything is connected to everything else. Ideas, like ecological systems, says Bateson, live and die depending on their adaptation and mutation capacities. What could be defined as the “Bateson-ian” sensibility of Jeremijenko is seen in her irreverent incursion into all the spheres of experience, of the physical, biological, social and cultural world, assembling and dismantling knowledge from different perspectives. Thus, Jeremijenko forays into the aseptic logic of scientific knowledge, infiltrating concepts and perspectives typical of cultural criticism.

With *Sperm Economy*, an interactive installation in Blasthaus (an alternative exhibition space in San Francisco), another paradox is shown, not by being science fiction, but due to the political and cultural implications. It consisted of inviting participants to donate their own sperm to classify it as genetic material according to characteristics like hair and eye colour, ethnic background, height, skin colour, as well as years of school or consumption patterns (categories established by the California Cryobank)¹⁶. “Visitors can then select according to their tastes the specific characteristics of each sperm and these sperm democracies, as they were called, were the object of an auction as an example of “a homemade genetic engineering project in the ‘Do it Yourself’ style that demonstrated while questioning at the same time”, with the possibility of selecting the features of the progeny¹⁷.

Activist performance and anthropological viewpoint

In Jeremijenko’s bioart, the overcoming of the authorship of the work is taken to its most extreme consequences with

14. This sensibility coincides with the criticism of the pretension of neutrality of scientific work that characterises the anthropological debate in the 80’s and that will have repercussions on the way of understanding ethnographic practice.

15. Bateson, G. (1972) *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Chicago: University of Chicago Press, p. 49

16. For a description of the project, see BIT and Jeremijenko: “Database Politics and Social Simulation. http://tech90s.walkerart.org/nj/transcript/nj_10.html

17. Hughes, *ibid* and van Dijk in Hughes: “Additional economic categories – such as consumption behaviour and market demographics – were also added and the stored sperm

were publicly displayed in nitrogen-cooled vats. Visitors could then select and blend specific characteristics of various men and these sperm “democracies”, as they were called, were then auctioned off as anonymous human sperm, resulting in “a kind of do-it-yourself, primitive genetic-engineering experiment, which demonstrates and yet questions the ability to “choose” your own offspring.” Van Dijk, V. After the “Two Cultures”: Toward a “[Multi]cultural” Practice of Science Communication, *Science Communication*. XXV, 2, p 177-190 December 2003 177-190.

the search for what has been defined as “emergence”¹⁸, that is, the work’s autonomy to be converted into the metaphoric materialisation of what is “new”, what is “unexpected”, or as Bateson would say “the difference that makes a difference”.

The matters that demonstrate Jeremijenko’s work with respect to the in-capacity of scientific categories to explain reality, including “artificial life” produced in the laboratory, share with the perspective of hermeneutic anthropology that we can redirect from Bateson to Geertz¹⁹ the need to critically approach the imbrications between reality and representation in the continuum between Nature and Culture, between technology, language and biological life as regards cultural artefacts.

In the matter of representing “otherness”, both in the case of Jeremijenko focusing on “artificial life” and the case of anthropology seeking “other” ways of understanding/comprehending the world and the human experience here, emerges the need to ask ourselves about the categories that we use to represent reality and represent ourselves, given that these categories themselves are the product of a cultural construction, a result of trying to understand the world while simultaneously being a part of it.

The richness of the ironic provocations in Jeremijenko’s work seems to be in her attempt to show the limits of a scientific epistemology that cannot be explained or controlled. Things cannot even be explained that by definition seem to be the most separate and “other” that are possible in Nature and Culture. Since being artificially created, this something would have to be able to be explained based on the same characteristics of the technology employed for its creation. Conversely, Jeremijenko shows how even “artificial life” escapes from the control of its creators and displays unexpected surprises and differences.

According to Whitelaw, the topic of the “emergence” of these differences is a constant and even one of the objective principles of bio-artists as regards the manifestation of autonomy from the work of art that shows us not only other possible worlds, but other ways of looking at them and thinking about ourselves based on them.

In this sense, Jeremijenko’s criticism of scientific determinism is inscribed within the reflection of complexity theory and critical anthropology about the need for a holistic and transdisciplinary view of reality and the ways of representing it. The need for an epistemology that instead of seeking laws, seeks relationships and meanings. An epistemology, we could say, of instability and approximation, of conflict and transformation. In figurative terms, we could imagine concentric circles or spirals in Bateson’s methodology that point out the need of returning to look at the same object in a different way each time, as regards economic, social and ideological dimensions to reframe the object in a broader and more complex framework with each interpretation²⁰. The starting point for this perspective is that the complexity of reality cannot be represented in any way but in a symbolic one that requires different points of view. According to Bateson, interpretation moves through a communicative system that he calls “ecology of the mind” when the mind is not in the brain but in shared representation.

Thus, Jeremijenko’s work, with her study of new ways of organisation for living organisms –including those that are created artificially– seems suggestive for anthropological reflection by pointing out the need to consider science as a method and a representation that shares, with other disciplines, all the conflicts and contradictions, the ideologies and theoretical suppositions that comprise every knowledge model.

18. Whitelaw M. (2004), “Emergence” (Chapter 7) in *Metacreation: Art and Artificial Life*. (Cambridge, Massachusetts and London: MIT Press).

19. Hermeneutic or interpretive anthropology was being shaped in America around the sixties and its most decisive momentum resulted in the publication of Clifford Geertz’ book (1973) “The Interpretation of Cultures: Selected Essays”. New York: Basic Books. In this text, ethnographic practice and the concept of culture itself on which anthropology rests is thrown radically into discussion.

Due to the concept of ethnography which, as a practice of cultural reading, interpretive anthropology shall pose the bases for an hermeneutic anthropology that meets the doublemeaning of analogy between culture and text, that is, that not only reading cultural symbols as a text, thus interpreting cultures, but also rereading them as an interpretive form, researching the models that construct the scientific meaning and sense of the anthropological discipline” [Mercè Picornell Belenguier, 2003:36]. Bateson G. (1988) *Naven*. Torino: Einaudi [1936].

Returning to the beginning, the transformational force of activist practices typical of new media and the accent placed on the value of the unfinished work as social and cultural capital, takes us once again to the thought of complexity, the epistemological twist that has been given to neurological, cognitive and biological sciences in general with respect to the crisis of the classic notion of objectivity and the admission of the impossibility of a synthesised point of knowledge.

Jeremijenko's works seem suggestive to us, showing that the practice of "creating life" means creating something that by definition is unpredictable; it is not enough to control the gestation process. Life always moves ahead of those who try to understand it, researchers will always be pursuing it. In the book "The Tree of Knowledge", Maturana and Varela speak of the concept of *natural drift*, contrasting it with "natural

evolution", explaining that the biological transformation/growth process is unique and responds to thousands of factors and never to a prewritten script.

Social practices and artistic creation together resist being objectified and classified according to a functionalist model and demonstrate their vitality and transforming potential as regards unfinished processes that are always in movement. In this sense, collages, fragments, deconstruction and performance (among others) become significant and useful tools, not only for subversive and transformative artistic practices, but also for critical anthropology. Dialogue between these different views and ways of doing continues being -today even more so- a fertile breeding ground to continue cultivating "minds" and "ecologically sensitive" practices.