

# Forward/Backward - Living/Still

Jens Hauser

jhauser@club-internet.fr

Let's step back a moment and try a transhistorical thought experiment: What if we considered nowadays art that deals with biological systems as a contemporary *vanitas* version of yesteryears tradition of Still Life? At first sight, this approach may seem awkward. Of course, Still Life – the depreciative French term for it is *nature morte*, dead nature – consists in depicting inanimate natural or man-made subject matter, and in recomposing the isolated fragments of life in a different manner. However, while by the 15th century Still Life objects were often meant to enhance religious paintings of spiritual *gravitas*, later, its highly detailed optical realism became independent and focussed on material *vanitas*, while being increasingly considered at the lowest order of artistic recognition by the dominant academia who established hierarchies of genres based on their subjects. Why weren't they appreciated, those skulls, pocket watches, hourglasses or candles burning down that contrasted with the sumptuous arrangements of fruit, flowers and banquet tables laid with fine crystal? They were symbolic reminders of life's impermanence and human's transitory nature.

Art that concretely deals with carbon-based biological systems is ephemeral by its very nature. The artists featured in *Still, Living* act less by pure technophile affirmation of anthropocentric biotechnological prowess or cognitive dominance over the non-human than by reflected scepticism towards our current notions of progress. Despite the accelerating rate of technological innovation and the growing impact of techno-scientific discourses on economy, worldviews and belief systems, this field of art indeed slows down, scales down, by its re-materialization. No plug-and-play here. Growing needs stillness, even in a field of growing interest. Our thought experiment has to deal with an apparent paradox. As biology's ascent to the status of the hottest physical science has been accompanied by the massive use of biological metaphors in the Humanities, this has also generated a wide range of biotech procedures that are providing artists simultaneously with the topics and new expressive media: transgenics, cell and tissue culture, plant and animal selection and breeding, homografts, synthesis of artificial DNA sequences, neurophysiology or synthetic biology. Artists are in the labs. But at the same time, the phenomenological engagement with *wetwork* that artists can now experience has not led to an overall "Promethean" impetus to absolutely wish to inform living matter, based on the concept of our own physical architecture as information. Despite the growing prominence of the engineering approach in contemporary life sciences, artists tend to remember that biology not only is about manipulation but also about observation of the logics of life. Bio-media and bio-topics in art today indicate a still unclear post-digital paradigm of what W.J.T. Mitchell describes as "the Age of Biocybernetic Reproduction", in which the *cybernetic* refers to the control and communication, and the *bios* as being the subject to control but which "may

resist that control, insisting on *a life of their own*".<sup>i</sup> Biological art touches on the visceral at the same time that it produces meaning. It does not only picture or represent but gives a feeling of being linked to the presence of a holistic *bios*.

BEAP, the Biennale of *Electronic Arts*, has been the first experimental art festival worldwide to regularly include *wet* biological art practices since its beginning. *Still, Living* now explores the relation between biological systems at the micro and the macro scale, questions the primacy of logo- and phonocentrism, stages the silent running of invisibility and physiological experiences, looks into trans-species relationships and soft architecture, and considers our bodies as a battlefield for biopolitical thinking as well as tactical biomedica use. What is *new*? New media transforms artistic expression, and today new media is not necessarily only about digital media anymore. But the *newness factor* itself is very old, as much as technological flux is intrinsically dynamic. *Still, Living*, with the quality of the ephemeral which is inherent to the works, remembers Still Life, in that every minor detail can gain great symbolic importance. It is striking that in the early 20th century Still Life of European Modernism responded to mechanized industrialisation by Cubist-derived abstraction which amplified the isolation of objects in the world. Today though, after a certain disenchantment from Modernism, artists who are in contact with the ever increasing fragmentation resulting from the life sciences often seem to deliberately wish to contrast the molecular micro level with a systemic macro level that is expressed through ecological concerns, interest in cognitive ethology and the corresponding epistemological challenges.

Another change appears in art that deals with biological systems. It has been commonplace for Still Life to integrate animals as equivalent to other inanimate objects, thus stressing the large gap separating them from the human form, be they dead or alive. A good example is Jean Siméon Chardin's *The Silver Tureen* (1728) in which a curious cat looks at a dead hare and a soup bowl. Now, a biotechnological art display such as *NoArk* by the Tissue Culture & Art Project, in which cells from various organisms are fused, questions the scientific relevance of anthropocentric classification in the light of contemporary chemotaxonomy, and criticises the biblical roots of displays seen in our Natural History museums. *NoArk* is also a good example of what the German philosopher Nicole C. Karafyllis calls a *biofact*<sup>ii</sup> – a neologism which melts the *artefact* and the *bios*, a hybrid between an epistemic thing and a living being or system and in which the central characteristic of growth is induced through technical treatment. *Skin Culture* by the French duo Art Orienté objet, as well as ORLAN's prototype of a transracial, composite *Harlequin Coat*, are further examples of a strategy to enlarge the metaphorical potential of biological artwork by metonymy. Whereas metaphors function by similarity between two fields, metonymy works by contiguity and association. Materially speaking, the signifier and the signified overlap. The medium of expression – the cells – is identical to the signified, which has an influence on how we may perceive those *biofacts* through co-corporal projection. What this gives rise to is a realm of emotional tension and interplay between two possible modes of perceiving the action: the viewer switches back and forth between the symbolic realm of art, and the "real life" of materials and performative processes that are being put on display and that is being suggested by organic presence. In this light, the *Bleeding Angel* – a staged event that survives through its sculptural remains – by S. Chandrasekaran & Gary Cass also underlines the performative component in such art. Knowledge is not a still value, interpretations of scientific data are in motion

and ephemeral, such as the vanishing images that Paul Vanouse creates in his live experiment *Latent Figure Protocol* by running DNA samples on a reactive gel.

Art Orienté objet, with their cultured, hybridized and tattooed skin composed of the artist's own epidermis and pig derma, and destined to be grafted by collectors onto themselves, revisit the question of animal experimentation and enquire about "the damages of Humanism that is understood as prime motor of technological development, (...) by disaggregation of a positive relationship with nature, and above all, without the ethical sense of existence which relies on the respect of the other."<sup>iii</sup> Reverse strategies of this kind are frequent. Brandon Ballengée asks whether progressive techniques can be used to breed backwards. His long-term experimental project *Species Reclamation Via a Non-linear Genetic Timeline* cynically turns over Noah's ark spirit, by recreating an extinct frog from close extant species, thus harbouring the illusion that new technology might be able to undo damage to the environment caused by past human technologies. Can artists re-enrich biodiversity? Verena Kaminiarz' double-headed flatworm in *Ich Vergleiche Mich Zu Dir* is struggling for the right direction. Natalie Jeremijenko's *OOZ: For the Birds* is ZOO backwards, a zoo where animals remain by choice and engage in interspecies communication with humans. Likewise, Beatriz da Costa's *PigeonBlog* engages homing pigeons in collecting pollution data to collaborate in the quest for a cleaner environment that benefits all species. Even Zbigniew Oksiuta's gelatine architectural objects from his *Breeding Spaces* series, conceived as a possible future organic habitats in space, have an ecological undertone as they are fully biodegradable.

Naturally, art that deals with biological systems is difficult to display and to maintain in a gallery situation. And although its a/live character can be seen as intrinsic, the preservation, presentation and mediation of frequently ephemeral projects is often assured either in the form of material remnants that refer back to the process in the manner of a synecdoche, or by film, photo or video documents. This is the case, as an example, for *Immolation* by the Critical Art Ensemble. The video installation treats the subject of the use of incendiary weapons on civilians after the Geneva Convention, and shows their devastating effects to the body on the cellular level. Like a film still refers to the moving images, the video here acts as a placeholder for the live experiment. As art theorist Boris Groys states, "art documentation as an art form could only develop under the conditions of today's biopolitical age, in which life itself has become the object of technical and artistic intervention. In this way, one is again confronted with the question of the relationship between art and life – and indeed in a completely new context, defined by the aspiration of today's art to become life itself, not merely to depict life or to offer it art products."<sup>iv</sup>

Thinking about biological art in the light of *Still Life* of course does not exclude other thought experiments. There are many perspectives to look at *Still*, *Living* and the artists oscillate between unstable utopia and fruitful dystopia.

**Art Orienté objet (France)**  
**Marion Laval-Jeantet & Benoît Mangin**

***Skin Culture***

*Skin Culture* is the fruit of the artists' experimenting on themselves. Skin cells have been biopsied, cultured, hybridized and tattooed to form a cabinet of curious biotechnological self-portraits, like contemporary totems, and destined ideally to be grafted by collectioners onto themselves. *Skin Culture* originates from experimental work the group has been undertaking with American laboratories in the Boston area in 1996, while being enroled as *guinea pigs* in the "Framingham cohort", a group of individuals who volunteer to submit to extensive medical tests as part of a longitudinal study whose aim is to create a natural history of the living body: "We carefully tattooed these tissue samples with the emblems of our desire to belong to a marginal tribe that is dedicated to the preservation of rare species. So we decorated ourselves with the most popular animal imagery in fashion in tattoo parlors in the United States: varied imagery, honorary totems that would transform our skin into a type of wallpaper, a fleshy *toile de Jouy*. No new materials here: just us, recycled in our unrefined state as works of art with our utopias... small self-portraits that you can find attaching or that you can attach."

**Bio**

Marion Laval-Jeantet and Benoît Mangin founded Art Orienté objet in 1991 as a collaboration intended to resemble that between a playwright and a stage director in constant dialogue. During the last fifteen years their work has been focussing on "the sciences of life" in general, from the life sciences to ethology and trans-cultural psychiatry.

**Brandon Ballengée (USA)**

***Species Reclamation Via a Non-linear Genetic Timeline: An Attempted Hymenochirus Curtipes Model Induced By Controlled Breeding***

This long-term experimental project involves breeding Hymenochirus family frogs. Brandon Ballengée has been working with what he believes to be several domesticated sub-species, while attempting to selectively breed generations 'backwards' to produce a Hymenochirus curtipes: "An investigation into historic scientific literature leads me to believe that H. curtipes is a shorter limbed wild-type version that differs considerably from the domesticated laboratory frogs that I began with. In what Darwin referred to as regression, I have breed like with like attempting to resurface historically described physical traits. When exhibiting this project in a museum or gallery context, I display documentary photographs and text explaining the progression and methods employed within this project. But more importantly though, I exhibit the multiple generations of the living Hymenochirus frogs. I consider them to be the actual artworks. Each generation is stylistically different just as each individual animal is unique and should be viewed simultaneously as a living creature and a work of art." Ballengée's projects involve exploring the historical origins and current practice of artificial selection and/or genetic engineering.

**Bio**

Brandon Ballengée is a NY based artist who explores the boundaries between art, science and technology by multidisciplinary works out of information generated from ecological field trips and laboratory research. He has collaborated with numerous scientists to conduct primary biological research and has collected specimens for several scientific organizations. In addition, he regularly conducts workshops in ecology, field biology and genetics at urban parks, zoos, petstores and fish markets.

**S. Chandrasekaran & Gary Cass** (Singapore/Australia)

***Bleeding Angel***

*Bleeding Angel* aims to establish how certain human activities such as the act of standing, bleeding and drinking attributes to be part of human consciousness, and these attributes are part of everyday reality. By interpreting these attributes as part of everyday reality the project deals with the notion of divine that lies latent within and then act on decision making and problem solving during encounters with the others. In this performance, the Cyborgian system bleeds with wine and stages the interaction between living bacteria and a metallic machine. As the Cyborg bleeds it produces a self-healing skin-material. The Cyborg represents several bodily properties such as skeletal systems, ossification, bleeding, bruising and skin formation. During this process, the audience can participate by drinking the wine. The *Bleeding Angel* intends to express how bodily functions of the Cyborgian systems such as smelling, bleeding and producing of skin-like material relate to the Human body during the performance process.

**Bio**

Singapore born S. Chandrasekaran is well-known for his performance works since 1983. He has been lecturing at various art colleges, and was the Head of the School of Fine Art at LASALLE-SIA College of the Arts/Singapore. Presently, he is pursuing his Doctor of Creative Arts at Curtin University. Gary Cass is a scientific technician with the Faculty of Natural and Agricultural Sciences teaching laboratories, and has been a scientific collaborator with SymbioticA. He has worked with many art projects engaged with biological specimens in these labs.

**Beatriz da Costa** (Germany/USA)  
with Cina Hazegh and Kevin Ponto

### ***PigeonBlog***

*PigeonBlog* enlists homing pigeons to participate in a grassroots scientific data gathering initiative designed to collect and distribute information about air quality conditions to the general public. Pigeons are equipped with custom-built miniature air pollution sensing devices enabled to send localized information to an online server without delay. Pollution levels are visualized and plotted in real-time over Google's mapping environment, thus allowing immediate access to the data for anyone with connection to the Internet. The pigeon "backpack" consists of a combined GPS/GSM unit and corresponding antennas, a dual automotive CO/NOx pollution sensor, a SIM card interface, a microcontroller and standard supporting electronic components. This project uses homing pigeons as reporters of current air pollution and seeks to achieve two main goals: 1) to re-invoke a sense of urgency around a topic that has serious health, environmental and political consequences, but often lacks public action and commitment to change; and 2) to broaden the notion of grassroots scientific data gathering while building bridges between scientific research agendas and activist oriented citizen concerns.

### **Bio**

Beatriz da Costa is an interdisciplinary artist and researcher. She works at the intersection of contemporary art, science, engineering and political activism. Her work takes the form of public participatory interventions, locative media, conceptual tool building, and critical writing. Recent interests include interspecies collaborative efforts in order to promote the responsible use of natural resources and environmental sustainability. Beatriz is an Associate Professor in the Arts, Computation, Engineering (ACE) graduate program at the University of California, Irvine.

## **Critical Art Ensemble (USA)**

### ***Immolation***

*Immolation* is a video installation concerned with the subject of the use of incendiary weapons on civilians after the Geneva Convention and the *Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons* of October 1980. This video chronicles the major war crimes of the United States involving these weapons on a (macro) landscape level, and contrasts it with the damage done to the body on the (micro) cellular level. To accomplish this task, CAE grew human tissue at the SymbioticA Art and Science Collaborative Research Laboratory in Perth, Australia, and using their micro-imaging lab shot the micro footage. In addition to this imagery, CAE uses film footage of present and past wars that have used immolation against civilian targets as a strategic choice for the sole purpose of terrorizing entire populations. The goal is to provide a different way of imaging, viewing, and interpreting the human costs of these war crimes, in contrast to the barrage of media imagery to which we have become so desensitized.

### **Bio**

Critical Art Ensemble (CAE) is a collective of tactical media practitioners of various specializations, including computer graphics and web design, wetware, film/video, photography, text art, book art, and performance. Formed in 1987, CAE's focus has been on the exploration of the intersections between art, critical theory, technology, and political activism. The collective has performed and produced a wide variety of projects for an international audience at diverse venues ranging from the street, to the museum, to the Internet.



**Verena Kaminiarz** (Germany/Canada)

***Ich Vergleiche Mich Zu Dir***

The video piece *Ich Vergleiche Mich Zu Dir* (in German: I compare myself with you) features planaria, a type of flatworm that has the ability to regenerate body tissue. The artist has caused the planaria to grow a second head. Both heads have control but the choice of the direction of motion is not always settled on unanimously between both heads so that the altered worm engages in a visible struggle between the two heads – an endless search for an undefined and unreachable goal as well as the spectacle of an uncanny decision being made. Therefore the piece alternates between failure and success: the successfully altered worm becomes a failure as it attempts to control its own basic decision making processes. "I believe that this oscillation between failure and success mirrors the processes of genetic research in a larger sense, as the successes of today may become the demons and monsters of tomorrow", Kaminiarz says. With the immensely magnified projection of the planaria a dialogue is opened up surrounding the issues of modern scientific experimentation in relation to the human form. Through anthropomorphism the planaria's role changes from one located in elementary biology, to one of tragic realism.

**Bio**

Verena Kaminiarz' art practice involves using scientific equipment but deviating from conventional methodology. She has completed her BFA in Vancouver/Canada in 2002 and is currently graduating with an MSc. Biological Arts from the School of Anatomy & Human Biology at the University of Western Australia.

**Zbigniew Oksiuta** (Poland/Germany)

***Breeding Spaces***

Zbigniew Oksiuta is convinced that the principles of biological transformation of energy into form will be the main topic of this century: "Human expansion has two cardinal directions. The first one is directed inwards, into the micro cosmos of Life, the world of molecules, genes and chromosomes. The second one is leading us into the macro cosmic space, into the ocean of planets and stars. As we conquer outer space, investigate weightlessness and plan settlements on other planets, this tremendously large spectrum requires a new form of thinking in order to investigate our physical and spatial living conditions beyond the known structures, forms and norms."

*Breeding Spaces* is a project that envisages vegetable matter as a live habitat, an isolated spatial entity that takes up, transforms, and synthesizes matter and energy from its surroundings by biological means. Oksiuta's technological principles are: 1) the use of biological polymers as construction material (*spatium gelatum*), 2) the creation of spatial forms under water, using neutral buoyancy (*isopycnic systems*), 3) the generation of biological containment as a *pneu* (*liquid bubble*), 4) the processes of self-organization and internal tensions in the polymer surfaces as sources of the amorphous shape formations (*bending energy*), 5) the creation of biological containments in a different scale: a cell, a pill, a fruit, a shelter, a cosmic "biosphere" (*space garden*).

**Bio**

Zbigniew Oksiuta's projects are a crossover of architecture, art and biological sciences. Graduated from the Faculty of Architecture at the Warsaw University of Technology in 1978, Oksiuta scrutinizes dynamic systems that are known to transfer information and energy through liquid medium. He also produces and directs films, and lectures on architecture and art internationally.

**The Tissue Culture & Art Project** (Australia)  
**Oron Catts & Ionat Zurr**  
NoArk Vessel design in collaboration with Marcus Canning

### ***NoArk***

*NoArk* is a research project exploring the taxonomical crisis induced by life forms created through biotechnology. *NoArk* takes the form of an experimental vessel designed to maintain and grow a mass of living cells and tissues that originated from different organisms. This vessel serves as a surrogate body for a collection of living fragments; it can be seen as a tangible and symbolic 'craft' for observing and understanding a biology that combines the *familiar* with the *other*. As opposed to classical methodologies of collection, categorization and display that are seen in Natural History museums, contemporary biological research is focused upon manipulation and hybridization, and rarely takes a public form. *NoArk* uses cellular stock taken from tissue banks, laboratories, museums and other collections. It contains a chimerical 'blob' made out of modified living fragments of different organisms, which are living together in a techno-scientific body. Like the cabinets of curiosity that preceded the Natural History museum's refined taxonomy *NoArk*'s unified collection of unclassifiable sub-organisms acts as a symbolic precursor to a new way of approaching a *made nature*.

### **Bio**

The Tissue Culture and Art Project (TC&A) has explored the use of tissue technologies as a medium for artistic expression since 1996, and in 2000 became one of the core research projects at SymbioticA, The Art and Science Research Laboratory, School of Anatomy and Human Biology, University of Western Australia (winner of the prestigious Prix Ars Electronica for Hybrid Art 2007). ARTRAGE Director Marcus Canning last collaborated with TC&A in 2003 as part of the BioFeel exhibition at PICA during the inaugural BEAP.

**Paul Vanouse (USA)**

***Latent Figure Protocol***

*Latent Figure Protocol* takes the form of a media installation that uses DNA samples to create emergent representational images. The installation includes a live science experiment, the result of which is videotaped and repeated for the duration of the gallery exhibit. Employing a reactive gel and electrical current, *Latent Figure Protocol* produces images that relate directly to the DNA samples used. In the first experiment, a copyright symbol is derived from the DNA of an industrially-produced organism (a plasmid called "pET-11a"), illuminating ethical questions around the changing status of organic life and the ownership of living organisms: "A *DNA fingerprint* is often mis-understood by the lay public to be a single, unique human identifier. Its complex banding patterns imagined as an unchanging sentence written by mother nature herself that corresponds to each living creature. However, there are hundreds of different enzymes, primers and molecular probes that can be used to segment DNA and produce banding patterns. These banding patterns that appear tell us as much about the enzyme/primer/probe as the subject that they appear to reproduce. My point is that the DNA gel image IS a cultural construct that is too often naturalized."

**Bio**

Paul Vanouse has been working in emerging media forms since 1990. Interdisciplinarity and impassioned amateurism guide his art practice. His electronic cinema, biological experiments, and interactive installations have been exhibited in 19 countries and widely across the US. Vanouse is an Associate Professor of Visual Studies at the University at Buffalo, NY where he is also co-Director of the Emerging Practices MFA program.

**Orlan** (France)

### ***Harlequin Coat***

*Harlequin Coat* presents the realization of a composite, organic coat, made from an assemblage of pieces of skin of different colors, ages and origins. This prototype of a biotechnological coat, consisting of in vitro skins in coloured diamond shaped petri dishes, will be made to symbolise cultural crossbreeding. This project continues Orlan's investigation into hybridisation using digital photography. Her recent series, entitled *Self-Hybridation: Précolombienne*, *Self-Hybridation: Africaine* and *Self-Hybridation: Indiens d'Amérique* endeavored to crossbreed beauty canons of other cultures and other media (sculpture, photography, painting) with the artists own image. The *Harlequin Coat* project develops and continues the idea of crossbreeding and hybridisation, using the more carnal medium of skin cells. This work on the figure of the Harlequin is inspired by the text "Laïcité" written by French Philosopher Michel Serres, in which he uses the Harlequin as a metaphor for multiculturalism. *Harlequin Coat* seeks to raise various questions: "Can skins of different colors be cultivated? What kind of information can be obtained from the donors? Can a person still be the owner of his or her cells? Does self-ownership continue to exist at the fragmented level? How are such issues perceived in various countries, and especially in the context of a non-western viewpoint?"

### **Bio**

Orlan is an internationally renowned French artist who has been active in photography, video, sculpture, installations and performance since 1965. She wrote the *Carnal Art Manifesto*, and from 1990 to 1993 conducted a series of nine surgery-performances in which she refigured her face and created new images referring to non-Western cultures. Orlan is currently an artist in residence at SymbioticA.

**Natalie Jeremijenko** (Australia/USA)

***OOZ: For the Birds***

*OOZ* is *ZOO* backwards. Unlike the traditional zoo, the distributed interfaces of *OOZ* are sited where animals themselves decide to inhabit, i.e., they are there by choice. Like a traditional zoo, *OOZ* is a place where animals and humans interact. However, the interactions around the *OOZ* differ substantially from those in a zoo. *For the Birds* is part of the *OOZ* interface between people and birds, and consists of a series of perches equipped with sensors for birds to land on. Birds can use this interface to trigger sounds, lights, dispense food, squirt water, or shoot at other birds. The perches emit an audio file that translates bird concerns into human dialect for communicating directly with their human neighbours. The birds explain the complex ways in which people enjoy the environmental services birds provide. Through day-to-day use birds learn to use the perches to rudimentarily communicate with visitors. The *OOZ* bird-operatable communication technology resembles experiments in operant conditioning, a technique that works equally as well on humans as it does on animal models. "This is not a new concept for the birds", Jeremijenko says. "Urban birds use human technology for their own purposes, from electricity infrastructure to signage systems which provide shelter. However, it's a new concept for humans – that we share our technology and urban systems with non-humans."

**Bio**

Named one of the inaugural top young innovators by the MIT Technology Review, design engineer and technoartist Natalie Jeremijenko is a Professor of Art, Computer Science and Environmental Studies at New York University where she is the director of the xdesign Environmental Health Clinic. She is also a visiting professor at the Royal College of Art/London.

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<sup>i</sup> Mitchell, W.J.T.: *The Work of Art in the Age of Biocybernetic Reproduction*. In: *What do Pictures want? The Lives and Loves of Images*. Chicago, 2005, pp. 309-335.

<sup>ii</sup> Karafyllis, Nicole C. (Ed.): *Biofakte. Versuch über den Menschen zwischen Artefakt und Lebewesen*. Paderborn, 2003.

<sup>iii</sup> Laval-Jeantet, Marion: *Les Culture de peaux d'artistes d'Art Orienté objet*. In: Hauser, Jens (Ed.): *L'art biotech*. Nantes/Trézélan, 2003. P. 61.

<sup>iv</sup> Groys, Boris: *Art in the Age of Biopolitics. From Artwork to Art Documentation*. In: *Documenta 11\_Plattform 5*. Ostfildern, 2002; pp. 108-114.