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Text, Code and the Arts of Bio-Age

Bio Art Practice in Greece

Ioannis Melanitis

I was first introduced to the concepts of ‘code’ and ‘machine programming’ during a period of studies for my Masters of Digital Arts at the Athens School of Fine Arts (ASFA) in 1999, by computer engineers E. Tzafestas and N. Sgouros. My early responses to such notions and to their uses as tools has already been published in the form of an interview that appeared under *Futura* publishers in Greek¹. Having already completed a BA programme in fine arts focusing on painting and sculpture also at ASFA, I was exposed to the influence of the dominant at the time format of thinking and doing art, installation art in dialogue with ideas about the body drawn from cultural studies, ethnology, sociology and politics. Through my work, I wanted to underline the importance of the emergence of such a field of art practice, my work being also an attempt to theorise and visualise a ‘missing link’, even if ideas like biocode, bio art, in vivo art etc. were difficult to discuss at the time as legitimate and in equal terms valid. I contacted Stelarc at the time when he had first introduced the idea of a third ear, an implant which took him away from the data-mechanical performances to the idea of a bio-machine integration phase; an idea he managed to accomplish many years later because of the great technical difficulties he had to overcome. I arranged three presentations, at the Athens school of Fine Arts, in Technochoros-Athens and in Thessaloniki and published a text on Stelarc in the catalogue printed on this occasion under the title ‘A Body Acting Without Expectation producing movements without memory’². This dialogue led to an interview with Stelarc³ in 1999 where we discuss genetic interventions and technique strategies but also to my later publications in *Futura* magazine on Stelarc⁴.

In the same year, being present in *Ars Electronica* 1999 at Linz, I attended the lecture which E. Kac gave on the proposal of a fluorescent dog art piece, an in vivo artwork in collaboration with bio labs. This

triggered my interest on bio coding at a more substantial level, and to the idea of a “lost modernism”, the idea that after Marcel Duchamp, efforts were directed to re-invent the artwork itself not analogically, but in an organic sense, that is, alive. I then published an article in SEPE magazine entitled ‘Ars Electronica-Lifescience’, in No11, in June 2000. The same idea was explored further in my text entitled ‘Bio-art? Does modernism re-appear through the aestheticization of biotechnology?’ which appeared shortly⁵.

In 2000 I invited Joe Davis to give a lecture at ASFA, and published interviews and texts by Joe Davis, Stelarc, Marta Menezes, Eduardo Kac, and Eugene Thacker at Futura magazine¹. I translated all material from the English, under the title ‘Bioart’⁶. Texts included: ‘The bio-informational body, from digital to bio-information’ Y. Melanitis, ‘There is no pure nature’, interview with Joe Davis, ‘Ignorance is the danger’, interview with Marta Menezes, ‘A modus operandi for the artist’, by Melanitis Yiannis and also translated in the same issue ‘Bioinformatics & Biocapitalism in the Race to Map to the Human Genome’ by Eugene Thacker, ‘Romance, Supercodes, and the Milky Way DNA’ by Joe Davis, ‘GFP Bunny’ by Eduardo Kac and ‘Test tube Art’ by Marta Menezes. Other texts, interviews and book articles on bio art included contributions to journals such as *Highlights*, November 2004, issue 13 on ‘Technology’, (interview with Christina Polychroniadis, entitled ‘Bio-performance’), the publication of the text ‘Ontogenetic Art’ at ScienceArt Moscow First International Conference⁷ in Lomonosov Moscow University in 2012, a Science and Art, Lecture entitled ‘Art and biological phenomena/ Beauty as we have never seen before’, Athens 2008 , and the Susana Correia, ‘Interview to Yiannis Melanitis , Biology and Design, The design of organisms etc’.

In November 2002, I published an interview⁸ with E. Kac at *the Artzine-journal.com*, which I reproduce here as Eduardo Kac in discussion with Ioannis Melanitis ©kac-melanitis, November 2002. At the time of the interview, having already met Eduardo at the Performative Site Conference at Penn State University (1999), I was interested in the idea of artists’ strategies after the collapse of the “object”, the latter being understood as a two way direction: as an after-Duchamp ruined and replicated schema, and as a meta-digital realization possibility in the lab. Items discussed included, among

others, 'if considering a living organism as an art object is only a theoretical problem', and also how 'art can emerge from a computer screen into the physical world and that, in certain cases, can also be part of the digital network through a digital-biological interface'.

I will concentrate here on Kac's statement, that 'art is philosophy in the wild'. I think, after the KFC bunny proposal, this is an 'unescapable' statement for Eduardo and I also feel that sometimes art surpasses artists, in the sense that a very strong idea (in our case a transgenic animal as an artwork) may eliminate the artist's physical presence and produce herma, backwash, and philosophical maneuvers...

Eduardo Kac in discussion with Ioannis Melanitis

©*kac-melanitis, November 2002*

Ioannis Melanitis: In a conversation we had at an interval of your speech in the Performative Site Conference 1999, which took place at Penn State University, we discussed some lacunas in the contemporary version of postmodernity. Have we reached a stage where an artwork regains its analogue characteristics after its dematerialization by digital information?

Kac: Now that the digital revolution has achieved closure, we are seeing the beginning of what the English critic Mike Punt has called the 'post-digital analogue'. Let me clarify: when I say that 'the digital revolution has achieved closure' I'm not saying that there will not be new digital developments in the future. Clearly, new technologies will be developed. What I mean is that for many decades these new digital technologies will not be a radical departure like the Web was in the early 1990s. These new technologies will simply expand the digital revolution of the last two decades. In the near future, for example, we'll have broadband global wireless access from small portable devices. Now, when that the digital revolution has completed its main cycle, it is the field of biotechnology that is bringing unprecedented social change and prompting renewed philosophical reflection on profound issues about what is life, about evolution, about our relationship to other members of the community of life, about what it means to be human. Naturally, artists are tuned to this accelerated process and seek to participate in it, intervening

critically but also creating real biotechnological works that are alive and demand response on the part of the viewer.

Anything that is alive is analogue. Biotechnological art is alive, even if it has been designed digitally, like some of my transgenic artworks. So, transgenic art is analogue; an analogue that can emerge from a computer screen into the physical world and that, in certain cases, can also be part of the digital network through a digital-biological interface.

Ioannis Melanitis: Do you think there are differences in the way an artifact of the GFP Bunny variety has been received in Europe and the United States?

Kac: Yes, no doubt. The differences can be seen among European Countries and among different areas of the United States as well. Cultural differences always play a role in the reception of any work of art. In the case of ‘GFP Bunny’, as you recall, one key element was for my transgenic rabbit, called Alba, to come to Chicago and live with me and my family. My goal was to take personal responsibility for Alba’s wellbeing, introduce the transgenic animal in a social setting and experience dialogical interaction with our transgenic Other on a daily basis. So, in this case, probably the most outstanding example of cultural difference is the fact that in the United States rabbits are traditionally house pets. You can find rabbits served as food in the United States, but it is not very common. In France, on the other hand, the concept of a rabbit as a house pet does not exist. Rabbits are part of the French imaginary primarily as food. So, in France, the idea of bringing a rabbit home as a pet sounds as strange as the idea of bringing a chicken as a pet to an apartment in the United States. This gives the work a very different resonance, particularly because part of my goal is to create semantic tension between something that sounds unfamiliar and potentially frightening (‘transgenic’) and something familiar and cuddly (‘rabbit’).

Melanitis: Time seems to be a decisive factor in the way an artwork is received by the public. Viewers respond to the artwork (in terms of feedback) and realize some important parameters pertaining to it long after their initial contact with it. Was this the case with the GFP Bunny?

Kac: Yes, absolutely. If one looks at the 'Alba Guestbook' <<http://sprocket.telab.artic.edu/ekac/bunnyadd.html>>, for example, or at the transgenic bibliography <<http://www.ekac.org/transartbiblio.html>>, one sees the multitude of responses to the work. The work continues to generate debate, interest, fear, fascination, curiosity, and many other emotional and intellectual responses, both among art audiences and the general public. As biotechnology becomes part of popular culture, the reception of 'GFP Bunny' will continue to change.

Melanitis: You are Associate Professor at the Art Institute of Chicago. What exactly do you include in your lectures on art history?

Kac: I teach many classes on a variety of topics. Two examples: 'History of Art and Technology' and 'Art and Biotechnology'. In the first class I offer an overview of media art in the twentieth century, from Radio in the 1920s to the emergence of biotechnology in the late 1990s. In the second, I focus on biotechnology, examining 'biopolitics', the question of genetics in art, aspects of biopop, and questions of information, context and meaning in biotechnology.

Melanitis: Could you analyse your latest work 'The Eighth Day'?

Kac: 'The Eighth Day' is a transgenic artwork that investigates the new ecology of fluorescent creatures that is evolving worldwide. I developed this work between 2000 and 2001 at the Institute for Studies in the Arts, Arizona State University, Tempe. The piece brings together living transgenic life forms and a biological robot (biobot) in an environment enclosed under a clear 4 foot diameter Plexiglas dome, thus making visible what it would be like if these creatures would in fact coexist in the world at large. All creatures express the GFP gene through bioluminescence visible with the naked eye. The transgenic creatures in 'The Eighth Day' are GFP plants, GFP amoebae, GFP fish, and GFP mice. A bio bot is a robot with an active biological element within its body which is responsible for aspects of its behavior. The bio bot created for 'The Eighth Day' has a colony of GFP amoebae called *Dyctiostelium discoideum* as its 'brain cells'. These «brain cells» form a network within a bioreactor that constitutes the 'brain structure' of the bio bot. When amoebas divide the biobot exhibits dynamic behavior inside the enclosed environment. Participants on the Internet can take the

point of view of the bio bot and active control it. 'The Eighth Day' creates a context in which participants can reflect on the meaning of a transgenic ecology from a first-person perspective.

Melanitis: What is the role of the artist nowadays according to Eduardo Kac?

Kac: The idea of the artist laboring in isolation in his studio and crafting an individual ornate object for detached contemplation is as anachronistic as the idea of the scientist sitting under a tree and being hit by an apple. The artist is not a decorator. The artist is a philosopher (not with a hammer, but with a wireless computer and a cloning toolkit). I feel that art must overcome the anesthetic condition and the state of inertia we live in, and awake our cognition and sensoriality. Why? While other fields have similar goals (literary philosophy, for example), art can reach out to a larger audience (potentially a global audience, as in GFP Bunny) and accomplish this goal. Art is philosophy in the wild.

Melanitis: How could one define the measure of novelty in an artwork so as to distill a methodology of art strategy?

Kac: Clearly, novelty per se is meaningless. It is important to consider the level of inventiveness of the work itself, the seriousness of the artist, the context created by the work, its resonance in its time, and its life beyond its time. There are many other factors that play a role in the successful reception of a work of art. Sometimes, even though the work is revolutionary, it may take about 50 years for the art audience to fully realize this, as in the case of Duchamp's «Fountain», from 1917. In other cases, 50 years pass and the public still does not realize the true importance of a groundbreaking artwork, as is still the case of Moholy-Nagy's *Light-Space Modulator* (1930). At the same time, as Joseph Kosuth ('Art After Philosophy', 1969) once put it: "The "value" of particular artists after Duchamp can be weighed according to how much they questioned the nature of art; which is another way of saying "what they added to the conception of art" or what wasn't there before they started.

Artists question the nature of art by presenting new propositions as to art's nature. And to do this one cannot concern oneself with the handed-down "language" of traditional art, as this activity is

based on the assumption that there is only one way of framing art propositions.’

Melanitis: In your opinion, does every novel artwork elicit a political reaction from the viewers?

Kac: No. In fact, many novel works elicit indifference from viewers. Again, many factors play a role, but the level of inventiveness of the work itself, the seriousness of the artist, and of how a work is contextualised, is critical for the realization of the work.

Recent work: A transgenic butterfly named Leda Melanitis or Art at the Threshold of Ontogenesis

In my current practice, initiated after 2000, I explore information exchanges between organisms and biotechnological methodologies. My current project is called Leda Melanitis. My surname, Melanitis, is derived from the Greek root melas (μέλας), dark, as in deprived of light; a property which in the first place probably attracted Linnaeus in naming the inspected butterfly. The idea for this project emerged from philosophy, especially the ideas of Antiphon, the Sophist. While reasoning about the relationship between words and objects, Antiphon makes a unique observation, namely that “nothing real corresponds to the name of an object”, leaving onomatology in the realm of pure chance, while true knowledge becomes inaccessible. Accuracy to the Name becomes a key point in Antiphon’s thinking and should be scrutinized: “Names can be erroneous... The concepts we use are not delimited by the exact way objects are”. That is the initial point for making LEDA MELANITIS. The project is conceived as a ontogenetic project: the proposal requires a gene of mine to be micro-injected into the butterfly named Leda Melanitis (Leda Melanitis is the name of the Common Evening Brown of the Containing group: Melanitini, named by Linnaeus 1758).

By adding information to the core of the natural world we participate in a procedure of conceptualizing life. I conceive of this process as a series of entropic changes of the artistic whole. Artistic ensembles, as I define them, are environmentally spatial-temporal events that have a certain initial amount of entropy (here in the form of disorder), without known outcomes. The purpose of

artistic activity may be considered and calculated in relation to the amount of spillage from 'normality'. The artist's intervention, the biologist's or the experimenter's generally, make changes to the system's entropy. In this light, my current art and the injection of my gene injection in the butterfly *Leda Melanitis* aims at transcending the entropy restrictions of a text (Figure 1).

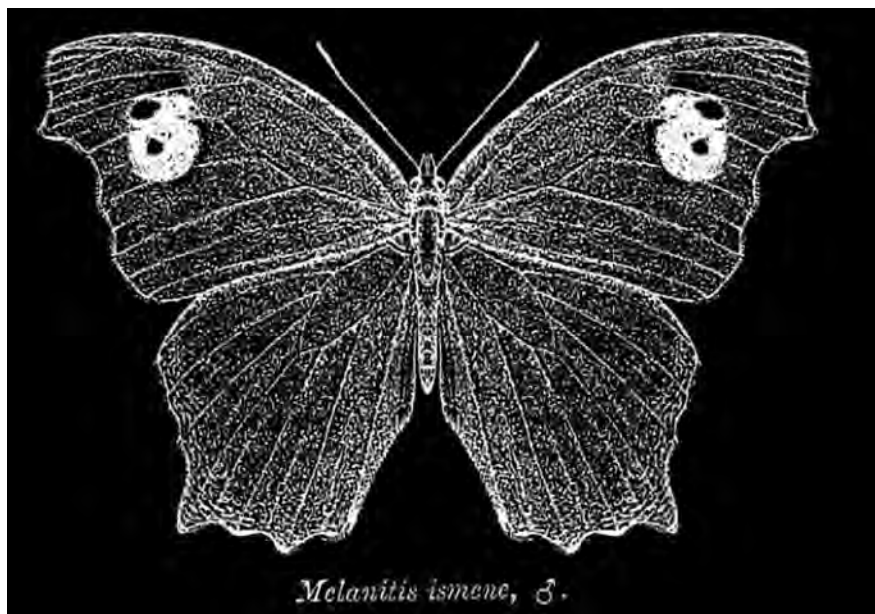


Figure 1: Ioannis Melanitis *Leda Melanitis First Breed*, 2016.
Image Courtesy of the artist.

Notes

1. Tzafestas, Elpida. 'Humans, Machines, Environments', interviewed by Y. Melanitis in Greek, *Futura magazine*, No7, spring 2001: pages 139-156.
2. Zombie and cyborg bodies: Exoskeleton, extra ear and avatars <http://www.melanitis.com/Kimenon.html> , accessed 30/10/2017.
3. Stelarc/ Interview by Melanitis Yiannis, www.melanitis.com/StelarcInterview.htm , accessed 30/10/2017.
4. Stelarc, 'The Obsolete Body', interview to Y. Melanitis, *Futura magazine* No7, Spring 2001 pages 112-125.
5. Bio-art? Does modernism reappear through the aestheticization of biotechnology? <http://www.melanitis.com/bioart.html> and 'Bioart?' *Artzine-journal.com*, issue 2. accessed 30/10/2017.
6. Yiannis Melanitis, 'Bioart', *Futura magazine*, No8, Spring 2002: pages 241-319.
7. Yiannis Melanitis, 'Ontogenetic Art', *ScienceArt*, Moscow, First International Conference, Lomonosov State University: 284-289, 2012, ISBN 978-5-98540-031-1, <http://www.science-art.ru>, accessed 30/10/2017.
8. http://www.melanitis.com/KAC-_INTE.html, <http://www.ekac.org/greek/inkacgr.html>, issue #3, english and greek text, accessed 30/10/2017.