

Art as a laboratory – Guy Ben-Ary's work

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The present paper deals with the work of an Israeli artist, Guy Ben-Ary. His work is a prime example of artistic practice in the field of bio art. Bio art provokes critical thinking about the place and role of people in today's world. The main purpose of the article is to describe changes in contemporary artistic practices within the framework of art as a laboratory, the aim of which is to study reality.

KEYWORDS: bio art, posthumanism, new media art, laboratory, tissue culture, collectivity, Ars Electronica, art world, Guy Ben-Ary, SymbioticA

I believe art plays an important role in encouraging engagement with, and critical reflection on, a unique cultural moment where we are witnessing the unprecedented evolution of bio-technologies and various modes of liminal lives that defy traditional understandings of life.

Guy Ben-Ary[1]

In the 1980s, Bruno Latour drew attention to the importance of broadening the understanding of the category of the laboratory and opening it up to new cultural and social practices characteristic of modernity. In his work *Give Me a Laboratory and I will Raise the World*, he wrote: "Indeed, I hope to convince the reader that the very difference between the *inside* and the *outside*. and the difference of scale between *micro* and *macro* levels, is precisely what laboratories are built to destabilize or undo".[2] Crossing borders and tearing down doors hitherto closed makes it possible to use the metaphor of laboratory to describe activities in the field of artistic culture, which is defined by collectivity and research. Bio art, created at the intersection of science, art and technology, has developed a completely different paradigm of functioning in the world of art, expanding traditional exhibition practices with new educational and research formats. Exceeding the limits and redefining the basic elements of aesthetic experience, deconstructing the categories such as works of art, authorship, creation and reception, it became an example of the critical artistic practice. The main objective pursued by bio art is to shift the scientific discourse and leave the space

[1] G. Ben-Ary, G. Ben-Ary, K. Hudson, B. Rossa, T. Visosevic, N. Thompson, *Kwestie żywotności i inne absurdalne scenariusze*, [in:] *Nervoplasica. Guy Ben-Ary. Bio-robotic art and*, Łaznia Centre for Contemporary Art, Gdańsk 2015, p. 187.

[2] B. Latour, *Give me a laboratory and I will raise the World*, <<http://www.bruno-latour.fr/sites/default/files/12-GIVE-ME-A-LAB-GB.pdf>> [accessed: December 25, 2018].

of an isolated laboratory and enter the area of art, more broadly the area of the world. Bio art raises questions concerning ethical, political and cultural conditions of social life. It proposes a new form of art in which the model of individual human work based on the creation of an object of art is replaced by a collective, human as well as non-human creative practice entailing the “creation of life”.

Bio art fits into the broader context of post-humanist reflections on the place and role of people in the world, which necessitates a redefinition of anthropocentrically-oriented reality.[3] In this new coexistence of what is human with what is non-human and technological, humans cease to be the centre of the universe and come into close relationship with the environment. The works of Guy Ben-Ary, an American artist of Israeli origin, are examples of practices embedded in a broader discussion on contemporary transformations of art created at the crossroads of art, science and technology, which are best reflected in the metaphor of the laboratory, defining the way in which art is created and functions in the world.

Guy Ben-Ary and bio art

Guy Ben-Ary was born in 1967 in Los Angeles and moved to Israel with his parents at the age of two. He studied law at Tel Aviv University, and during his apprenticeship, he decided to leave Israel. He grew up in Israel, so he feels attached to Israel, and feels that he belongs to the land and its people. In an interview given to me, he said: “I always feel Israeli.”[4] Even when his works do not refer to what is currently happening in Israel, he always emphasizes his belonging to the nation of Israel. In 1999, he joined the team working on Oron Catts and Zurr Ionat’s Tissue Culture & Art Project. Initially, he stayed in Australia for only six months. After that time, he decided to stay longer, and started a computer course at the University. In 2001, Guy Ben-Ary became a member of the pioneering artistic and research project SymbioticA[5], the Center of Excellence in the Biological Art. It is a ground-breaking art-research project established in 2000 in the School of Anatomy and Human Biology at the University of Western Australia. It was created by Miranda Grounds, a professor of cell biology; Stuart Bunt, a professor of neurobiology; and Oron Catts, an artist. From then on, Guy Ben-Ary headed the Image Analysis and Acquisition Facility (IAAF) at the Institute for Anatomy and Human Biology at the University of

[3] More about the posthumanism v. R. Braidotti, *Po człowieku*, trans. J. Bednarek, A. Kowalczyk, Warszawa 2014; N.K. Hayles, *How We Became Posthuman. Virtual Bodies in Cybernetics, Literature, and Informatics*, Chicago, London 1999; D.J. Haraway, *When Species Meet*, Minneapolis, London 2008; *The Nonhuman Turn*, ed. R. Grusin, Minneapolis, London 2015; *Bio-techno-logiczny świat. Bio art oraz sztuka technonaukowa w czasach posthumanizmu i transhumanizmu*, ed. P. Zawojski, Szczecin 2015.

[4] Personal interview with Guy Ben-Ary, January 26, 2019.

[5] More about the History of the SymbioticA v. M. Michalska, *SymbioticA – on the Border Between Art and Science. How Western Australia Became the Capital of the Third Culture*, [in:] *Nervoplasica. Guy Ben-Ary. Bio-robotic art and*, Łaznia Centre for Contemporary Art, Gdańsk 2015.

Western Australia. The work undertaken by SymbioticA fundamentally changed the way of understanding an artistic practice which uses new, hitherto unknown, tools of creation. The works of Guy Ben-Ary have been presented all around the world in prestigious venues and festivals from the Beijing National Art Museum through San Paulo Biennale to the Moscow Biennale. His work can also be seen in the permanent collection of the Museum of Modern Art in New York.[6] The nomadic biography of Guy Ben-Ary, corresponds very well with the art he creates. His works are characterized by dynamism, interdisciplinary relations and interactions with technologies, materials, work methods and aesthetic rules that go far beyond the boundaries of art to date, establishing new hybrid links between art, science and life.

Ben-Ary's work is based on transgenic, nomadic relationships that fit into the broader context of the bio-art, which poses major definition problems. Monika Bakke distinguishes two categories, trying to capture the diversity of its practices. The first one is art that deals with biological themes in some way. The second is art based on wet biological media, which recently has been the dominant way of thinking about bio art.[7] Eduardo Kac, the creator of both the concept of bio art and its canonical work, the transgenic rabbit *GFP Bunny* (2000), claims that:

in its specificity bio art cannot be classified as ready-made, conceptual art, situationism, or social sculpture. [...] Bio art creates not just new objects, but, more tellingly, new subjects. [...] While modern and contemporary art have produced objects (painting, sculpture, ready-made), environments (installation, land art), events (performances, happenings, telecommunications exchanges), and immaterial works (videos, digital pieces, Web sites), bio art has as its *core materials* ontogeny (organism development) and phylogeny (species evolution), and it opens itself to the entire gamut of life processes and entities, from DNA molecules and the smallest virus to the largest mammal and its evolutionary lineage.[8]

Kac's position is close to Oron Catts's approach to bio art, which defines the products of his artistic practice as *semi-living*: the quasi-existence of biological forms. The co-founder of SymbioticA and the founder of Tissue Culture & Art Project defines it as follows:

a new class of object/being in the continuum of life: the semi-livings are constructed of living and nonliving materials and are new subautonomous entities located at the fuzzy border between the living/nonliving, grown/constructed, born/manufactured, and object/subject. While the semi-livings rely on the vet/mechanic, the farmer/artists, or the nurturer/constructor to care for them, they are not human imitations and do not attempt to be human replacements. Rather, they are a new class of object/being that is both similar to and different from other human artifacts.[9]

[6] <<http://guybenary.com/bio/>> [accessed: January 27, 2019].

[7] M. Bakke, *Bio-transfiguracje. Sztuka i estetyka posthumanizmu*, Poznań 2012.

[8] E. Kac, *Introduction. Art that looks you in the eye: hybrids, clones, mutants, synthetics, and transgenic*,

[in:] *Sign of Life. Bio Art and Beyond*, ed. E. Kac, Cambridge, MA, 2007, pp. 19–20.

[9] O. Catts, I. Zurr, *Semi-living art*, [in:] *Sign of Life. Bio Art and Beyond*, ed. E. Kac, Cambridge, MA, 2007, p. 232.

The idea of creating semi-living artistic objects is part of the philosophy of the entire SymbioticA research collective, which also manifests itself in Guy Ben-Ary's individual projects. Bio art, in its various realizations, unambiguously breaks off from the idea of representation, which is very vivid in the history of art, in favour of a uniquely understood category of presence. It is not about any strategies of creative representation of life, but about its creation, or "breeding".^[10] In this sense, life is in no way presented via the media, but it becomes a medium of art itself, though dependent on the technology and human intervention that calls it into existence.^[11]

Art as a laboratory

The biological laboratory is my studio where the creative process takes place, and tissue culture, tissue engineering, electrophysiology, microscopy and other biological techniques are my artistic mediums. My research is inter-disciplinary and the production of the artwork usually involves the collaborative effort of artists, scientists and engineers.^[12]

The words of Guy Ben-Ary well reflect the nature of art, which provokes thought about the fundamental issues related to life and death. Bio art is an example of artistic practice whose creative methods require great understanding and interdisciplinary knowledge in the fields of biology, neurology or genetic engineering. Completely new, closed, socially-isolated spaces are adapted to creative work by artists who transform art studios into laboratories. The fundamental change also concerns materials and tools of artistic expression, which, due to the high cost of purchase/maintenance and their technological sophistication, were until recently reserved exclusively for researchers. Working with living biological material such as cells, tissues, and liminal beings calls for the use of appropriate methods and equipment which allows to "breed" a work of art. Microscopes, incubators, test-tubes, and Petri dishes replace the traditional tools of artistic work, such as an easel or a brush.

Latour's postulated opening of the laboratory category results in the breakdown of the inside/outside dichotomy, the constant questioning of what is visible and accessible and what is hidden and beyond the public gaze, which is realized in bio art on many levels. One of them is the institutional context, which could serve as an example of Latourian "translation", "transfer", and "displacement".^[13] Translation encompasses

[10] R. Kluszczyński, R. Kluszczyński, *Wprowadzenie*, [in:] *Crude Life. The Tissue Culture&Art Project + Oron Catts i Ionat Zurr*, Centrum Sztuki Współczesnej Łaźnia, Gdańsk 2012, p. 10.

[11] A problematic issue is the way in which bio art is presented to the public. Due to the fact that bio art is the creation of independent lives, semi-living lives are limited in time. Hence, many projects are known only from documentation, usually photographic or film. The best example of this type of exhibition strategy is the work of Eduardo Kac GFP Bunny, known only

from the documentation created by the artist himself. V.A. Byerley, D. Chong, *Biotech aesthetics. Exploring the practice of bio art*, [in:] "Culture and Organization", vol. 21, no. 3, 2015.

[12] G. Ben-Ary, G. Ben-Ary, *Bio-Engineered Brains and Robotic Bodies: From Embodiment to Self-Portraiture*, <<http://guybenary.com/wp-content/uploads/2016/08/Bio-Engineered-Brains-and-Robotic-Bodies-From-Embodiment-to-Self-Portra...pdf>> [accessed: January 25, 2019].

[13] B. Latour, op.cit.

es practices, spaces, and strategies of art presentation in the field of art and science. On the one hand, the laboratory leaves the previously-enclosed walls, entering a completely new, not fully-prepared gallery/museum space. On the other hand, methods of artistic creation are applied to scientific research activities, subject to strictly defined research procedures. A two-way transfer of knowledge, experience and skills forces radical changes in the perspective of the organization of both worlds. The world of science has adapted relatively easily to the new situation involving artistic cooperation. The history of the ties between art and science dates back to the 1960s and the first artistic projects using the potential of the new computer media. To this day, the world of art still reacts in a very varied way to activities in the field of art and science.[14] It is, fortunately, becoming more and more open to the works created at the intersection of art, science and technology. The initial reluctance of art galleries towards the works of bio art, high costs of organizing adequate conditions for their presentation or legal regulations for an extended period of time made it impossible for bio art to enter the wider public discourse. Most of the first exhibitions carrying the label of bio art were presented outside the official mainstream art world. The main reason for such a state of affairs was probably well-prepared institutions, which had a very rich experience in presenting art utilizing new technologies as their media. Nevertheless, it was equally significant to open up to new developments within art which escaped unambiguous classifications, and which transcended the boundaries of the traditionally understood aesthetic situation. For those reasons alone, one of the first exhibitions of the Tissue Culture & Art(ificial) Wombs took place in 2000 as part of the Ars Electronica Festival, one of the most important new media art festivals in the world. For this event, artists and scientists constructed a tissue culture laboratory in the gallery space, which allowed them to not only present the results of the work, but also to open the audience to new conditions of the creation of art at the junction of science, art and biotechnology. The living sculptures of Guy Ben-Ary, Oron Catts and Ionat Zurr presented at that time took the form of *Semi-living Worry Dolls*, which were grown by the artists from mouse cells onto polymer scaffold. The innovative activities of SymbioticA, which crossed the boundaries of artistic practice, were noticed by the jury of the Prix Ars Electronica, which in 2007 awarded the Australian Laboratory the first Hybrid Art prize. In the verdict's statement, an innovative approach to the use of new methods of artistic research based on previously



Fig. 1. Lab work. Guy Ben-Ary

[14] More about relations between new media art and mainstream contemporary art v. S. Szykowna, *Poza*

światem sztuki – o nowych mediach z perspektywy sztuki współczesnej (in print).

unavailable tools and technologies of science was noticed. They emphasized a completely different perspective on the functions of artistic activity, which within the laboratory democratizes access to natural or biotechnological knowledge. Therefore, it creates an open platform for the exchange of knowledge and proposes new, previously unknown directions of the development of art in which such knowledge can be widely used:

In a sense, this art is *philosophy in action*. In a society so saturated with and desensitized to visual representations shown in all kinds of media, this kind of art actually deals with the direct, and sometimes visceral, presentation of processes and outcomes of life manipulation. This direct experience, both of the artists who develop the work and the audiences who are exposed to it, generates a reaction and a discourse that could not have been achieved by traditional representative media.[15]

Thus, the metaphor of the laboratory enters the context of the world of art, introducing into its rigid institutional framework new and untamed actions aimed not so much at creating artifacts, but at creating life. The world of science, on the other hand, is enriched with a new perspective of creative activity, applying elements of aesthetic sensitivity into the space of a scientific laboratory. Oron Catts notes that “what bio artists do is allow scientists to look at the implications of their work in a different light and look at how knowledge can be applied in many different ways”.[16] The encounter of these two worlds creates a transgressive space for exchange, opening human perception to experiences arising from the clash of art and science which would be unlikely in other conditions.[17]

Collectivity

By definition, a laboratory is not just a space for conducting research equipped with appropriate specialist devices, but also a specific organizational structure that regulates the work of people within it and the relations between them. A characteristic feature of bio art is its collectivity: cooperation, rather than individual work of an artist. Guy Ben-Ary notes:

Collaboration is an essential element of my art practice, and as a researcher in SymbioticA, all the projects in which I have been involved are in sympathy with the collaborative structure and philosophy it fosters. Rather than seeing art/science collaboration as one in which art is employed by science as a *legitimate tool to aid scientific research to communicate big ideas in an engaging and intuitive manner*. [18]

His words well reflect the specificity of artistic work within the framework of bio art as collectivity and cooperation are inscribed into the actions utilizing the potential of the laboratory practices which are impossible to carry out independently of institutional support and

[15] <<http://archive.aec.at/prix/showmode/11884/>> [accessed: December 20, 2018].

[16] A. Byerley, D. Chong, op.cit., p. 208.

[17] R. Kluszczyński, op.cit.

[18] G. Ben-Ary, G. Ben, K. Hudson, B. Rossa, T. Viosevic, N. Thompson, op.cit, p. 217.

the commitment of numerous people. That is why all projects of the Israeli artist were created in cooperation with people knowledgeable in various fields, starting from the first activities undertaken with the Tissue Culture & Art Project, together with Oron Catts and Ionat Zurr. As part of this project, *Pig Wings* (2000–2003) were jointly created. The work, in its assumption, referred to the iconography of wings present in Western culture (devilish bats, angelic birds, neutral dinosaurs). Pig wings were artificially bred and then assigned the aforementioned shapes. Additionally, appropriate corresponding colours were also used to mark them – devilish red, angelic blue, and neutral green. Another joint work of the artists was the famous *Disembodied cuisine*, presented for the first time at the international biological art exhibition L'art biotech in Nantes, France in 2003. The project was continued and developed in various forms, but the main idea remained the same. It was about using frog cells to breed tiny steaks, which were later on consumed by participants of the events in the company of the amphibians during the exhibition. The project referred to a specific artistic strategy defining a unique interaction with living systems – “to consume them as food”.[19] What is interesting is that the artistic project which, in the artists' opinion, was only “the irony of transforming meat into the ultimate engineered matter”, is nowadays considered “as a potential alternative for the production of animal proteins for human consumption.”[20]

Disembodied cuisine to some extent fits into the rules of “relational aesthetics” of Nicolas Bourriaud[21], referring to the artistic practice of the 1990s, which instead of focusing on the visual aspect of works, preferred to create situations conducive to building interpersonal ties. It was not only meant to create relations between the artists and participants, but also among the participants themselves. The work of the Tissue Culture & Art Project, however, broadens the idea of the meeting, including the non-human perspective on the participants, who are both the subject of the event and the object of consumption. This juxtaposition of different perspectives is a critical commentary on the species relations that define the way people function in a world that is currently undergoing post-humanistic revision. Guy Ben-Ary's latest projects, carried out mainly within SymbioticA, are also the result of the work of interdisciplinary project teams, involving both artists and scientists. Ryszard Kluszczyński describes them as “neuroart”, as in all of them, the biological component plays an important role, namely the bred networks of neurons.[22] For example, *The Living Screen* (2005)

[19] Ibidem, s. 242.

[20] The problem is that in vitro meat is produced from animals' blood plasma, therefore we couldn't say that this kind of meat is victimless. V. O. Catts, I. Zurr, *Countering the engineering mindset: the conflict of art and synthetic biology*, [in:] *Synthetic Aesthetics. Investigating Synthetic Biology's Designs*

on Nature, ed. A.D. Ginsberg, et. al., Cambridge, MA, London 2014, p. 36.

[21] N. Bourriaud, *Relational Aesthetics*, Dijon 2002.

[22] R. Kluszczyński, *Wprowadzenie do twórczości Guya Ben-Ary'ego*, [in:] *Nervoplastica. Guy Ben-Ary. Sztuka biorobotyczna i jej konteksty kulturowe*, Centrum Sztuki Współczesnej Łaźnia, Gdańsk 2015.

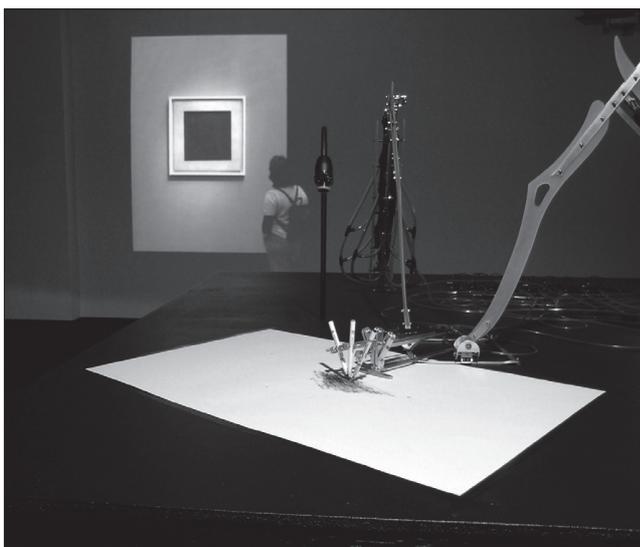


Fig. 2. Project *Meart – The Semi Living Artist*. Guy Ben-Ary

is a collaborative project with Tanya Vi-sosevic (a moving image artist, film theorist and educator) and Bruce Murphy (an Optical Engineer working in the field of biomedical diagnostics) that investigates the interface between the biological arts, film theory and cinema history. Another project, *Meart – The Semi Living Artist* (2001–2006), which is an embodiment of the cybernetic brain, was created in collaboration with the SymbioticA team and Steve Potter’s neuroengineering laboratory, in particular with Phil Gamblen, Douglas Bakkum, Iain Sweetman, Oron Catts and Stuart Bunt.

The installation consists of two basic parts, namely the “brain” and the “body”. The former was bred out of rat neurons at the Georgia Institute of Technology in Atlanta, and the latter is a robotic arm that reacts to impulses flowing from nerve cells and draws two-dimensional images. Guy Ben-Ary’s newest project – *CellF*, also referred to as “the world’s first neural synthesizer” [23] – was created with the assistance of Douglas Bakkum, Mike Edel, Andrew Fitch, Stuart Hodgetts, Darren Moore, Nathan Thompson.

This independent instrument was created from cells taken from the artist himself, to a certain extent forming his external brain. It stimulated creation of sounds. Guy Ben-Ary’s work is part of a rich tradition of experimenting with music/noise/hum, which was started by an Italian futurist, Luigi Russolo, and continued through Pierre Schaeffer with his *musique concrete* and John Cage’s conceptual art. [24]

A characteristic trait of bio art is new institutions and laboratories founded for the purposes of the new genre. They bring together various people representing the worlds of science and art who conduct an ongoing dialogue between themselves, establishing new forums for the exchange of knowledge and experience. In addition to SymbioticA [25], established in 2000, there are also other programmes in the world of bio art, such as Artists in Labs (AIL) [26], which has been ongoing since 2003 at the Cultural Research Institute of the University of Arts in Zurich, or BioArt Lab [27] at the New York School of Visual Art, which was established by Suzanne Anker in 2011. Oron Catts and

[23] <<http://guybenary.com/work/cellf/>> [accessed: December 27, 2018].

[24] K. Hudson, *Dysonanse CellF*, [in:] *Nervoplastica. Guy Ben-Ary. Sztuka biorobotyczna i jej konteksty kulturowe*, Centrum Sztuki Współczesnej Łaźnia, Gdańsk 2015.

[25] <<http://www.symbiotica.uwa.edu.au/>> [accessed: December 27, 2018].

[26] <<https://www.zhdk.ch/en/researchproject/418324>> [accessed: December 27, 2018].

[27] <<http://suzanneanker.com/bio-art-lab/>> [accessed: December 27, 2018].

Ionat Zurr launched another art laboratory, Biofilia[28], at the University of Aalto School of Arts, Design and Architecture in Finland, which was deemed SymbioticA's younger sister.[29] All the aforementioned projects/institutions promote a transfer of knowledge between artists and scientists, crossing the boundaries of disciplines and constantly undermining the principles of classical aesthetics and art. The creation of new institutions dealing with the creation of art-science may clearly indicate the progressive breaking down of barriers between "scientists" and "humanists", as described in 1963 by C.P. Snow, and the creation of something in the shape of a "third culture"[30], which could be seen as a space for dialogue and cooperation that transcends the boundaries of individual disciplines, different languages, concepts or methodologies.



Fig. 3. Project *CellF*. Guy Ben-Ary

Guy Ben-Ary's work is an excellent example that illustrates the transformations of artistic practice under the influence of science and technology. Art reacts in the wake of a wider trend of post-humanistic reflection on the human condition, which questions the uniqueness of people in the natural world, and the growing interest in and development of genetic engineering. The category of the laboratory enables one to see art as a tool of social change, which revisits people's ideologies concerning life, death, body or feeling. It makes one aware of what is absent in the public discourse. The artist himself argues that:

In my work, I use bio-technologies in a subversive way, attempting to problematise them by putting forward absurd and futuristic scenarios. Strategies are employed to help lure viewers into exploring the artworks in a manner that draws viewers into a dialogue about the future of these technologies and encourages them to re-evaluate their own perceptions and beliefs.[31]

Ben-Ary's work in the field of bio art constantly poses questions pertaining to the close relations between the world of science, genetic engineering, biotechnology and the world of our everyday experience. At the same time, it also provokes its recipients to think critically about the place and role of people in the future.

Conclusions

[28] <<https://www.aalto.fi/biofilia>> [accessed: December 27, 2018].

[29] M. Michalska, op.cit., p. 49.

[30] C.P. Snow, *Dwie kultury*, trans. T. Baszniak, Warszawa 1999.

[31] G. Ben-Ary, G. Ben, K. Hudson, B. Rossa, T. Viosevic, N. Thompson, op.cit., pp. 188–189.

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