

THE AESTHETICS OF REASON AND CARE

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Growing art

Ionat Zurr and Oron Catts' establishment of the Tissue Culture and Art Project in 1996 marked the beginning of the mature phase of their work, centred around concepts they had already been carefully considering and examining. As the name itself indicates, the project combined artistic practices with others that previously had never been placed within the spectrum of the arts.¹ The growing of living tissue had so far been the domain of biology² (and in particular a specialized field within it – biotechnology) and not a form of artistic activity. Catts and Zurr's proposal for linking art and biology led to the birth of biotech art, which due to the nature of their artistic practices, can also be described as tissue culture art or art of cultivated artworks. The biotech art they created, along with artistic endeavours involving gene technology that developed alongside it through the work of artists like e.g. Joe Davis, Eduardo Kac and Marta de Menezes (genetic or transgenic art), is now considered the primary trend in contemporary bioart.

With sort of a conflictive tension between them, these two major trends in bioart – biotech and genetic – together attest to a much more extensive process, that is, the interaction between the worlds of art and science, resulting from creative dialogues that are developing between them, and leading to a profound transformation in artistic practices (leading to new forms and tendencies) and in art and aesthetic theory, as well

¹ Anatomical knowledge, traditionally used in artistic work, did not lead to artistic practices like those of Oron Catts and Ionat Zurr and other artists involved with the SymbioticA laboratory.

² As well as in medicine and biomedicine.

as in humanist culture in general.³ On the other hand, these interactions are being developed and implemented in such a manner that they are also capable of meaningfully affecting the world of science.⁴ They initiate a discussion about life, a process that in the context of the constructive and creative practices of modern biology, which have led to the creation of the branch known as synthetic biology, is undergoing a profound transformation. Life has ceased to be merely a fundamental aspect of the environment to be researched, becoming a new dimension for human creative practices: in science and – more recently – in art, as well.

Unfortunately, these transformations have not as yet been accompanied by equally ground breaking scientific studies and analyses capable of leading to a corresponding transformation in the concept of life itself, one that would make it possible to successfully adapt this category to a new paradigm of living forms. Reconciling our concepts about life, formulating new formulas and definitions that would lead to a concept of life that adequately encompasses its present manifestations, including the changing manifestations of human life, is an exceptionally important and urgent task. The category of life plays an essential role in the discourses of both the biological sciences and – more importantly – philosophical disciplines, in all the concepts that shape contemporary visions of reality. Being tied to outdated categories inadequate to today's diversity of forms of life deprives these discourses, according to Catts and Zurr, of their cognitive value, thereby rendering them powerless as a means of dealing with the emerging dilemmas in this field. This powerlessness is particularly acute when we discover how badly bioethical reflection is suffering as a result, as it is clearly unprepared for a reconsideration of traditional norms or a confrontation with real problems.⁵ The bioart of Ionat Zurr and Oron Catts aims above all to respond to these very problems. In its attempt to tackle the challenges described, it considers the continuum of life, its categorisations, variations and definitions, as well as the

³ See, for example, a number of the texts in the volume *Towards the Third Culture. The Co-Existence of Art, Science and Technology*, ed. by R. W. Kluszczyński, Center for Contemporary Art Łaźnia, Gdańsk 2011.

⁴ Another issue is raised by the question to what extent the scientific world is willing – if at all – to accept these effects; See: S. Bunt, *Cybernetics and the Interactions Between Pure and Applied Sciences and the Humanities*, paper delivered during the International Symposium on Electronic Art 2011 in Istanbul, isea2011.sabanciuniv.edu/paper/cybernetics-and-interaction-between-pure-and-applied-sciences-and-humanities; as well as R. Malina, *Third Culture? From the Arts to the Science and Back Again*, [in:] *Towards the Third Culture*, op. cit., pp. 22-30.

⁵ See: I. Zurr & O. Catts, *The ethical claims of Bio Art: killing the other or self-cannibalism*, *Australia and New Zealand Journal of Art: Art Ethics Double Issue* Vol. 4, No. 2, 2003/Vol. 5, No. 1, 2004, pp.167-188.

consequences of the processes transforming it, for life itself and for our attitudes towards it.

The reflections presented above point to the fact that the transformations taking place in the domain of art, which are the subject of the present essay, are apparently nothing more than a response to processes that have radically transformed the scientific world over the past several decades, complementing and, in many cases, even replacing its traditional goals and cognitive tasks with new types of creative activity. In terms of biology itself, which is currently developing in the direction of biological engineering, we can see its research project – the expansion of our knowledge about the world of life forms – is currently being reshaped in favour of a desire to construct a paradigm for its transformation or creation.⁶ Thus, as if in response to this ongoing transformation of the biological sciences, art is also changing its objectives and methods of operation, proceeding in the opposite direction of science, that is, enriching its creative perspectives by introducing new research objectives. What particularly seems to engage Oron Catts and Ionat Zurr within this field is reflection on the social consequences of the above-mentioned transformation of the biological sciences.

From extended body to semi-living sculptures. Exploration of the continuum of life

Analysis of the social consequences of the transformation of the biological sciences, including, in particular, the development of synthetic biology – a field closely linked to science and engineering, dealing with the design and creation of biological parts, devices and systems that do not yet exist in nature, as well as the redesign of existing ones⁷ – demands not only a diverse range of scientific reflection on the broader consequences of these processes, but also their being brought into the domain of cultural studies and social research, and, last but not least, into the sphere of everyday life. In the face of the fairly limited amount of academic work conducted in this sphere, Ionat Zurr and Oron Catts take up both of these tasks in their work. On the one hand, their artistic

⁶ See: SymbioticA Research Group, *Fish & Chips. The Current Status of the Research*, [in:] *Ars Electronica 2001. Takeover. Who's doing the art of tomorrow*, Springer: Wien – New York 2001, p. 141.

⁷ See: www.synberc.org/content/articles/what-synthetic-biology. See also: S. A. Benner and A. M. Sismour, Synthetic Biology, Synthetic Biology, "Nature Review", Vol. 6, May 2005, pp. 533-543; as well as syntheticbiology.org.

endeavours and the publications accompanying them ⁸ aim to destabilize and deconstruct some of our fixed conceptions about the classification of life forms, and likewise, our resulting understanding of them. On the other hand, in their artwork they engage in activities (both in the preparatory phase and during exhibitions) related to the fields of bioengineering, bringing the problems associated with these fields out of the science lab and into galleries and art institutions. This, in turn, makes these issues the subject of reflection in terms of the disciplines of cultural theory, anthropology, and aesthetics, and introduces these – by incorporating them into the structure of experience through which viewers consider their artwork – into the realm of everyday life. In terms of these latter interactions, of particular importance are the public rituals of feeding and killing semi-living works that the artists conduct in the exhibition space. As a result of these actions, technical issues from the domain of synthetic biology become part of intellectual life in a broad sense, while the art that initiates these debates becomes a transdisciplinary space for scientific and artistic interaction.

Catts and Zurr's semi-living sculptures grow as a result of, and seemingly in response to, their concept of the Extended Body. This category, also referred to as *biomass* by the artists, includes the living cells and tissues scattered across research laboratories and medical institutions, isolated and separated from their parent organisms. The Extended Body thus functions as a theoretical construct – a link, on the one hand, between the parent organisms and the biomaterials separated from them or grown from their cells, and, on the other hand, between the semi-living sculptures and the above-mentioned semi-living fragments, isolated in their existence, their life maintained solely by means of life-support apparatus. As Catts and Zurr have stated, neither biological nor cultural classifications of life forms take into account in any way the presence in the world of these fragmentary, but also independent, entities. This is one of the main reasons they have expressed the belief that the current definitions and taxonomy of life need to be discussed and revised. They are rooted in concepts that predate the advent of biological (genetic and tissue) engineering and, as a result, are scarcely adequate to the currently existing multiplicity and diversity of life forms. And yet, despite their obvious anachronicity, they not only continue to define highly specialized, scientific definitions and stratifications of life, but also determine cultural attitudes (in all their diversity),

⁸ See: O. Catts, I. Zurr, *Towards a New Class of Being: The Extended Body*, "Intelligent Agent" 06 Feb. 2006.

horizons and paradigms concerning every possible aspect of life: philosophical, moral, and legal.

According to the perspective proposed by Ionat Zurr and Oron Catts, every body, integral or extended, is in various ways a network connecting all its components. Yet, the lives of these parts cannot be added together or fused to form a single, primary model of life. Their irreducible multiplicity and diversity is a challenge articulated by semi-living sculptures, a challenge addressed to both their viewers, and to the guardians of the system organising the biological sciences, the guardians of the foundations of education about life, who often hold their positions for ideological reasons.⁹

The aesthetics of reason and care

In considering the relationships between art and science on the theoretical level,¹⁰ I once proposed distinguishing three levels of reference. In the first of these, art uses the practices of science, making use of scientific tools and apparatus, drawing heavily from the images produced in the course of research, and using methods and procedures developed in research labs – something like scientific rituals. All of this, however, was done in order to widen the autonomous spectrum of art, to expand art's own formal and discursive possibilities. For this reason, I called this type of relationship between art and science "science for art", because art was the sole beneficiary of these unions. On the second level, art offers viewers experiences whose structure also includes scientific knowledge and, above all, science's horizons – visions of reality shaped by scientific research, making them a subject of critical reflection. It usually does so, though not necessarily, using props that we can find in the first level. The experience offered by a work of art embodying this kind of union with science is adaptive in character, inscribing the viewer into a reality whose present and (even more so) future is being shaped largely by science. The meaning of such works is negotiated by their audience, helping viewers find their place in the techno-scientific world: how to understand it and how to cope with its challenges. This type of relationship I define as "art for reality

⁹ See: T. B. Mooney, S. Minett, *If pigs could fly, should they? A sketch of utilitarian and natural law arguments against life-science art*, "Ethical Perspectives: Journal of the European Ethics Network 13, No. 4, 2006, pp. 621-645.

¹⁰ R. W. Kluszczyński, *Art@science. About Relations between Art and Science*, [in:] *Towards the Third Culture*, op. cit., pp. 32-42.

shaped by science". Finally, there is the third level, where the tendencies in the two previous levels are organized in such a way that they can effectively participate in the processes of producing knowledge. In calling this level "art for science's sake", I emphasize that here we are dealing with actions and resulting products that are characteristic of scientific research, yet they do not represent an abandonment of artistic aspirations, remaining part of the world of art. As a form of artistic research exploration, they propose a new vision of art and its transdisciplinary references to other realms of social practice.

I want to reiterate here the aforementioned conceptual model in order to draw attention to the fact that the artistic projects of Ionat Zurr and Oron Catts combine all three levels of communication between art and science identified above. There is the bringing into the gallery space of laboratory apparatus, making it an essential component of the works presented. The equipment is not subordinated to formal, purely aesthetical aims, but rather offers viewers hybrid experiences, opening them up to a world reconstructed on scientific principles, embedding them in a postbiological biotechnosphere. They also initiate cognitive discourses – which can be regarded as an inevitable culmination or permanent foundation of each of their works – in order to reconstruct the existing definition and taxonomy of life. From this characterisation emerges a specific aesthetic, which now, at the conclusion of my present consideration, I would like to reconstruct, singling out its most important properties.

1. Cooperation

An emphasis on cooperation is one of the most important characteristics of the aesthetic of Ionat Zurr and Oron Catts' creative work. This primarily involves interdisciplinary collaboration, characteristic of all forms of bioart, as it develops between the worlds of art and the life sciences, involving both artists and scientists. It is also seen in the growing cooperation between different fields of art, between various scientific and engineering disciplines, in the collaboration between artists and their semi-living works, and finally, between the latter and the public. In the case of Catts and Zurr, interpersonal collaboration is not limited to their own, shared work, which is usually realised with laboratory support from collaborating scientific institutions. It also applies to the actions performed by one or both of them within their collaboration with the artistic and

scientific laboratory SymbioticA. With a changing team of participants, SymbioticA carries out transdisciplinary projects that build a broader context for Catts and Zurr's own work. Among the projects carried out at SymbioticA, one of the earliest is worthy of particular attention – *Fish and Chips* – presented at the Ars Electronica festival in Linz in 2001 and later continued (with the parameters of the works and the construction of the theoretical references varying somewhat) in subsequent projects undertaking similar challenges, including: *MEART* – *MultiElectrode Array ART*, also known as *Semi-living Artist* (2004), and also *Silent Barrage* (2009). Both *Fish and Chips*¹¹ and *MEART*¹² were realised with the participation of Catts and Zurr. I will return later in this discussion to *Fish and Chips* as a very eloquent example of the aesthetics being analysed here.

2. Interdisciplinarity

The next feature of the aesthetics proposed by Catts and Zurr appeared in the commentary above on the issue of cooperation: interdisciplinarity. One could simplify the issue and say that both of these properties constitute, in fact, one common attribute – interdisciplinary cooperation (this is a simplification because sometimes cooperation develops within a single discipline, as well). Interdisciplinary dialogue and collaboration between art and science are a primary factor in the aesthetics being analyzed here. Interdisciplinarity is also found within each of these areas considered separately (among disciplines of science as well as artistic genres).

3. Hybridity

Hybridity emerges directly from the practices described above, as a product of interdisciplinary collaboration. This applies to both creative practice and – most importantly – to the products of these practices. It also characterizes the discursive sphere of their projects, the problems they take up, and their meta-artistic references. We can find this attribute in all the artworks made by Tissue Culture and Art Project. An excellent, very eloquent example of hybridization in the work produced by Oron Catts and Ionat Zurr and the hybrid aesthetics of their creative output is also the previously mentioned SymbioticA project *Fish and Chips*.

¹¹ www.synapse.net.au/projects/fish_and_chipsmeart

¹² web.mit.edu/shkolnik/www/meart

Fish and Chips is a colony of cells isolated from fish neurons grown on a silicon substrate (chips), fitted with microelectrodes and connected to one another via a digital network. Linked in this way, the neurons were then combined with a prosthetic robotic arm adapted to make drawings. The wetware/software/hardware system thus created became a semi-living artist, performing creative activities in response to external stimuli influencing the work's system. Through this project, participants reflected on, among other things, new dimensions in art, creativity, and the evolving concept of the artist. In *Fish and Chips*, the vision of hybrid aesthetics emerges, in which a combination of living cells and digital technology emerges, endowed with the power to create and with its own artistic creations. As a result of the extensive meta-artistic dimension of the work, it leads us to reflect critically on the place of humanity in the world of creative practices and on the sources of aesthetic values, and on the concept of art and the artist in the context of biotechnological culture, as well as to engage in aesthetic and ethical reflection on the consequences of the use of living tissue in the context of creative practices (of any kind).

4. Rationality

Rationality is introduced into the aesthetics of Catts and Zurr by the scientific perspective present within it. It accompanies the scientific apparatus present in their projects as the internal logic of its structure. Although it is realised in part through artistic means, it forms one of the most important aspects of this aesthetic. It is largely responsible for the projects' discursive dimension, legitimizing their cognitive aspirations and providing one of the most important reasons for which Catts and Zurr's artistic works can be considered a method for constructing knowledge.

5. Empathy

Empathy, in turn, emerges as a result of the ethical orientation of Ionat Zurr and Oron Catts' projects. It is clearly evident, particularly when the artists reflect – as in *Disembodied Cuisine* or *Victimless Leather* – on the attitudes of members of the human race towards other living creatures, and when they focus attention on the exploitive nature of these attitudes.

6. Emotionality

Empathy is often accompanied by emotional tones. These are especially visible in those cases where strong contrasts and tensions are evident in the structure of the work. They accompany the rituals of feeding and especially killing semi-living art forms performed publically in the exhibition spaces. They are also found in the discussions the works generate due to the specific construction of their discursivity.

7. Irony

Irony creates a counterbalance or complement to empathic and especially emotional attitudes. It accompanies the discourses initiated, preventing them from sinking into seemingly easy solutions, and also helps to visualize the complex status and situation of modern science, which is increasingly being subjected to the pressures of commercialization. It characterizes the distance that appears in discursive spaces, and in conjunction with empathy takes on the properties that Richard Rorty associated with irony.

8. Creating life rather than depicting it – presentation instead of representation

The fact that Catts and Zurr present cultivated works instead of constructed artefacts, and that these are cultivated during their exhibition, results in these works lacking the character of representation that are typical of the visual arts. Their works do not represent life. They themselves are alive. And they also die. They make reference to life only on the discursive layer, analysing it, deconstructing it, carrying on a public debate about it.

9. Form

Ionat Zurr and Oron Catts' works are characterized by a specific formal care, not only in the construction of the facilities, and in the sculptures they construct and cultivate, but also in relation to the architecture of their exhibitions. In its structure, it combines the properties described in the list above; it is built on the principle of contrast, the pairing of rationality and empathy, emotionality and irony, dead matter and living tissue, construction and cultivation, it is interdisciplinary and hybrid in character, emerging from collaborative work. It is immersed in discursivity, through which it does not lean in the direction of aesthetic autonomy, but rather towards Brechtian self-demasking

constructions. It is not bestowed with a particular interest in the concept of beauty, favouring rather the notion of the sublime (yet with ironic references).

10. Participation

The last of the properties that indicate the aesthetics featured in the creative work of Ionat Zurr and Oron Catts is participation. The artists' works anticipate various forms of involvement by the audience. Sometimes this approaches interactive aesthetics, as in the case of *Semi-Living Worry Dolls*. Sometimes it leads in the direction of performance or a happening, as with *Disembodied Cuisine*. Most often, however, they primarily expect discursive engagement, a debate about the changing forms and parameters of life, and its possible future scenarios.

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