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Aesthetics of Art and Life Sciences: Collaborations and Resistance**

Abstract: In this paper, the author pays attention to the actual phenomenon of art and life science collaborative projects. She discusses the orientation of these projects towards the world. In the course of modernity, the fields of art and science have been established as relatively autonomous fields with canonized methods and objectives. The author compares scientific and artistic activities and addresses the question of their objectives. If art and science strive for different objectives, are these art and science projects about harmonizing them, or what is the objective that art follows and perhaps differs much from science? The author emphasizes a certain role of art, which art inherited from Romanticism. Comprehension of art as an avant-garde was extremely important for 19th-century art, particularly in France, where artists considered themselves the avant-garde of the society and also used militant rhetoric. Mallarmé, for instance, said that the modern poet is “at strike against the society”. This romantic attitude of the artists that position themselves rebelliously against the norms and cannons of the majority of population, insisted in the art throughout modernism and expressed particularly strongly in the historical avant-gardes. The author claims that exactly this heritage is crucial for the art that enters the field of science and is engaged with its socially-relevant aspects. The contemporary art projects entering the field of life sciences inherit the tradition of the avant-garde. The modes of collaborations and resistance will be addressed in the paper. Particular relevance will be given to the orientation of art towards the future. That is the comprehension of art as a political agent.

Keywords: bio art; art and science; life sciences; avant-gardes; contemporary art.

During modernity, art and science have been established as relatively autonomous social fields with their own structures, institutions, and rules. At the beginning of the 21st-century collaborations between art and science have become popular. Collectives of collaborators from both fields gather in very interdisciplinary or transdisciplinary projects. This situation calls for reflection upon the question of how art is compatible with science, so that these collaborations are possible and fruitful. Does

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art approach differently to the world and does it work for different goals than science? If art and science strive for different objectives, how are these art and science projects then harmonized? Does this meeting of art with science generate changes or does it require “the change of the state of the art”?

It is important to stress the concept of art, inherited from Romanticism. This heritage is crucial for the comprehension of art that encompasses scientific research and that is engaged with its socially-relevant implications. It means a concept of art as a political agent. It was extremely important for 19th-century art to comprehend itself as avant-garde, particularly at the end of the century in France, where artists considered themselves the avant-garde of the society and also used militant rhetoric. Mallarmé, for instance, said that the modern poet is “at strike against the society”.¹ This romantic attitude of the artists that position themselves rebelliously against the norms and cannons of the majority of population, insisted in the art throughout modernism and expressed particularly strongly in the historical avant-gardes. These artists expressed concrete political affiliations, such as Italian and Russian Futurism, but also Dada. Some artists even got directly politically and militarily engaged. It is significant for these movements that the artists wrote manifestos. Consider, what is a manifesto? A manifesto is a programmatic text that sets foundations for further actions. With practical objectives a manifesto is a plan for the action. It is also an act of intervention, with its concrete political demands into society. It is a strike. Comparing it to a scientific paper, which is a reflection on what has been researched and a presentation of results, which is oriented to past research activity, the manifesto is oriented towards the future.

Jacques Ranciere established that the idea of the avant-garde is accordant with Schiller’s model, and ascertained that it is rooted in the aesthetic anticipation of the future.² Not the artistic innovations, but the invention of sensible forms and material structures for a life to come, this is what gives the concept of the avant-garde meaning in the aesthetic regime of the arts. And this is what the ‘aesthetic’ avant-garde brought to the ‘political’ avant-garde, or what it wanted to bring to it – and what is believed to have brought to it – by transforming politics into a total life program.³

This opening of art towards the future, but also towards society has generated innovative artistic activities, which surprised the world of art of that age and which influenced the forthcoming artistic endeavors and the accelerated experimentations in the art that pushed the boundaries of art far into the domain of everyday life.

By entering the field of science, art was confronted with a challenge: how to operate in the collaborative complex of art and science and yet to be able to overcome the task of science to offer only interpretations of the world?

¹ Matei Calinescu, *Five Faces of Modernity. Modernism, Avant-garde, Decadence, Kitsch, Postmodernism* (Durham: Duke University Press, 1987), 107–108. Interview with Jules Huret in 1891.

² Jacques Ranciere, *The Politics of Aesthetics* (New York: Continuum, 2006), 29.

³ *Ibid.*, 29–30.

I would like to introduce the concept of *projectability* into this discussion in reference to art, in particular to the recent art projects encompassing life sciences. I wish to argue that these projects operate with the mode of projectability in their relationship to the world.

Projectability is understood as an ability to project. The Latin *proicere*, which originates from *proicio* (*pro* – from, for, instead; *icio* – to throw), is the opposite of the Latin *perspicere*, from *perspicio* (to see through something and also to perceive, to distinguish clearly). *Projection* thus stands in opposition to *transparency* and marks the “throwing onwards” instead of “uncovering the existing”. This is not the mode of denoting the world as it is, but an active mode of shaping the world. The mode of projectability is not the mode of explaining the world, but the mode of affecting tomorrow. This feature is to be comprehended as a political dimension.

Among the two scopic regimes in modernity, *perspicere* played an admittedly important role for modern science. It is the regime of transparency or visibility that has supported the logic of a gaze penetrating through surfaces. For the founders of the modern sciences, it was an important principle for gaining knowledge. At present, it still has this importance. Consider the rhetoric that accompanied the announcement that the human genome has been sequenced. The achievement has been discussed as if humans (the scientists) have managed to crack the code of life or have obtained a complete insight into the “The Book of Life” This is the promise of the *perspicere* regime, to assure an insight into the “truth”. *Proicere*, on the contrary, projects ideas into the future. If *reading* the book of life means in-sighting the truth of life as if it is an existing program that has been waiting to be discovered, this is the domain of science – to *discover* what lies there in the universe and waits to be comprehended by man. Remember Thomas Kuhn’s definition of science: it is about doing the puzzles.⁴ The notion “cracking the code” speaks to this same revealing of the truth. But furthermore, if science is the production of knowledge, what does this knowledge then serve to? In my previous work,⁵ I have claimed that science (about body and life) is subjected to the objective to gain power over the subject – the body, life and the social body, i.e. population. With gaining that power we are able to engineer – tissues, organs, “biological” life and what it also means – the social life. The micro-scale of tissue engineering is directly linked to the macro scale of biopolitics. It is the mode of engineering as the mode of technology that has a central role in this social game.

Science is an apparatus. Michel Foucault emphasized the role of the apparatuses in the late capitalist societies, and Giorgio Agamben traced the genealogy of this notion. Foucault’s definition of apparatus is broad and incomplete. In an interview from 1977 he defined apparatus as: “a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral, and philanthropic propositions – in short, the said as the unsaid. Such are the elements of the apparatus.

⁴ Cf. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press), 1962.

⁵ Polona Tratnik, *Conquest of Body. Biopower with Biotechnology*, Springer International Publishing, 2017.

The apparatus itself is the network that can be established between these elements.”⁶ Agamben summarized Foucault’s notion of the apparatus: the apparatus is a heterogeneous set that includes virtually anything; it always has a concrete strategic function and is located in power relations; it appears at the intersection of power relations and relations of knowledge.⁷ Agamben traced the genealogy of apparatus or dispositive back to its Greek origin and the term *oikonomia*, which was later translated as dispositive in Christian theology. *Okionomia* meant the administration of the home (Gr. *oikos*) or more generally, management; for Aristotle *oikonomia* is “the way in which he [God] administers his home, his life, and the world that he created.”⁸ Agamben stressed the process of subjectification, that is inherent to the apparatus – they “must produce their subject.”⁹ Yet at the same time, the apparatuses in this phase of capitalism, act through the process of desubjectification, which is implicit in every process of subjectification.¹⁰ One who lets himself be captured by the “cellular telephone” apparatus, whereat desire has driven him to that, “cannot acquire a new subjectivity, but only a number through which he can, eventually, be controlled.”¹¹ Here and with the stress on captivation within the apparatuses, Agamben refers to the theory of *the Umwelt* of Jakob von Uexküll on the circle of receptors and disinhibitors. Martin Heidegger later discussed the difference between humanity and animality originating from this concept. Within the *Umwelt*, a living being is captured. Agamben accordingly defined apparatus: “I shall call apparatus literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings.”¹² For this discussion on the entrance of art into the apparatus of life sciences, the following Agamben’s conclusion is very helpful. For Heidegger, the break or the interruption of the relationship between receptors and disinhibitors produces boredom in living beings – “that is, the capacity to suspend this immediate relationship with their disinhibitors – and the Open, which is the possibility of knowing being as such, by constructing a world.”¹³ In another work, Agamben focused on *the Open* as a possibility given to human with the descend from the position of superiority, as a human has been considered as essentially different, distinct to animals altogether.¹⁴

This post-anthropocentric stance can help us consider the possibilities for art to resist the apparatuses. Art can be considered as striving for *the Open*, and as such, art has the ability to interrupt the captivation of the subject in the apparatus, or at least to launch the process of becoming Open.

⁶ Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings, 1972– 1977*, ed. C. Gordon (New York: Pantheon Books, 1980), 194.

⁷ Giorgio Agamben, *What is an Apparatus? And Other Essays* (Stanford: Stanford University Press, 2009), 2, 3.

⁸ *Ibid.*, 8.

⁹ *Ibid.*, 11.

¹⁰ *Ibid.*, 20.

¹¹ *Ibid.*, 21.

¹² *Ibid.*, 14.

¹³ *Ibid.*, 16.

¹⁴ Cf. Giorgio Agamben, *The Open: Man and Animal* (Stanford: Stanford University Press, 2004).

Some authors have claimed that art in art and science collaborations serves just as a promotor of science with uncritically transferring the scientific achievements to the world of art and communicating the success of scientists with a wider public. Furthermore, we meet a reproach that art cannot compete with science because of the level of complexity and high technical requirements that art cannot – but science can – fulfill. Science is in this regard in a better position, without question. It is systematically supported by the states, as well as certain lobbies with commercial interests. Exactly for this reason, science works for the apparatus of power. And here art and science do not wear the same shoes. If art is a sole promotor of scientific achievements, then all there is is science, no art. But this is not what we aim for. There are interests in a requirement for art to glorify the promises of science and to take part in the mythologizations of scientific achievements or technological advances. But this is not the subject of my interest here.

There are two principles in art that are both accordant to *proicere* regime, yet different in their character. One is practice closer to what Claude Lévi-Strauss called bricolage and the other is closer to engineering. According to Lévi-Strauss there is a huge difference between the practice of engineers and the practice of bricolage. A bricoleur is a home master who improvises and is inventive and passionate in solving problems that appear to him in his everyday life. The engineering approach is well organized; the activity follows exact plan made in advance. Particularly those art projects that comprise do it yourself science in public provisional laboratories, are closer to what Levi-Strauss called bricolage. For this discussion, however, more interesting to address are projects that get engaged in scientific procedures and encompass engineering approach, yet they do not follow same objectives as science-technology does.

In the project *Maya's Yogurt* (2011) Maja Smrekar has designed a yogurt product by adding her own, the human enzyme to yeast. This is an engineered product that responds to the issue of global food deficit in the context of planet exhaustion and to the political calls for science and technology to find solutions for the survival of humans.

With the series *K-9_topology* Smrekar challenges anthropocentrism by linking biology and culture, in particular addressing the interaction between human and animal species. For the project *Hybrid Family* as a project of the *K-9_topology* series, she nurtured a puppy to address this process as one of becoming, of becoming-animal, becoming-woman and becoming m(Other). The process of becoming (m)Other is a biopolitical statement or an intervention of the artist with the investment of her body with the purpose to re-gain the position of power. This is an act of resistance to bio-power – the exercise of power on and through bodies.

Hege Tapio has engineered and produced human fuel as an alternative power.

Marta de Menezes and Luis Graça have planned and realized a skin transplant that will remain as a scar in their bodies forever, a visible stamp of their mutual affection, but also traversing and molding. Splitting those two condensations into two entities means splitting this course, scaring.

Of course, a contemporary art project that is highly involved in life science could be a deep poetic reflection. Robertina Šebjanič projects the living and moving of the animals into another medium – sound or music. The art project could be a deep cultural reflection on the imaginations of humans, as in the case of Robertina Šebjanič's interest for the cultural, political and biological realities of marine and aquatic environments. The artist thematizes the culturalization of nature and shows the picture of human power over the other species, i.e. the cultural appropriation and mythologization, which direct the politics over these species, their biological life. The project communicates nonscientific representations of the nonhuman species, even if she uses scientific depictions, she tells us about how cultures project the ideologies onto wild animals. This builds the notions of them and the politics over them and the environment.

These projects are serious voices in the discourse on the politics of life. It is not knowledge to which they aspire to, nor is it a functional outcome. They respond to power structures and build resistance. Yet they are not real political programs for overturning the world, grand plans for revolution. They also do not offer knowledge and know-how that could be used for power structures. But they are very much engaged in today and in the world of tomorrow.

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