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Bioethical strategies in the context of bioart

“The world started without a human and it will end without him”

(Levi-Strauss, 2010, p. 173)

1. Introduction

Radicality in the process of redefining concepts as avant-garde artistic and cognitive strategies is the basis for an understanding of bioradicality of bioart in the instrumental treatment of life. Life as a reproducible process, which can be manipulated, freely controlled, changed and used by the artist in the presence of knowledge about the processes taking place in the biology of life. The complex context of nature is a subject in European art that emphasizes the diversity and multi-faceted nature of life and its attributes. Life was understood as the biggest known and unknown (paradox), death as the horizon of life.

Linearity, continuous reproduction of the same pattern of life is usually emphasized. In the face of death, everyone is equal. What we as mankind have to do throughout our lives is to find ways to develop them – make it easier, better and more beautiful (ideas of utilitarianism, good and beauty). At the beginning of the 20th century and later, the approach to human life changed with association of avant-garde movements.

Cultural changes that are a response to current events in history (including art history) of the 20th century are reflected in the process of radicalization of typically human-humanistic concepts. Dehumanization (known very well from the daily life of the labor, concentration and extermination camps of World War II and the anti-Semitic propaganda preceding it) i.e. gradual and consistent

deprivation of human rights, dignity and qualities reserved for the human species, was a catalyst for the radicalization of concepts related to the biological description of life. Through reduction of the complexity, which is associated with the human species, what could be observed was the way in which the dehumanized human became a biological being, subject to the laws of nature. There's no doubt that World War II had an impact on the radicalization of many cultural and artistic but also biological and technological concepts.

Therefore, life in biological terms still remains an autotelic value. The interpretative paths of this concept are subject to change. Biological life is flexible, fertile, ever changing and evolving – biological life as a way of being in time. Extracted units living in the biological sense were moved to the safe space of the laboratory (the figure of the laboratory, as a metaphor for science and a symbol of conducting activities with an unknown result – experiment itself). Life understood in that way is the subject of research in the art@science movement and the main medium of bioart. Bioart projects use narrativity to analyze the alternate emanations of what is living. In this context of bioart, it re-provides the ontological status of the work of art, the artist and their role and the need to institutionalize objects and artistic processes.

2. Bioart – sphere of art and technology

Bioart is a form of art practiced by artists who use biological materials in their works. It focuses like a lens on the most significant problems and challenges that are present in the increasingly technological world, both scientific and artistic. There is an increasing number of artists who have traded their studios for science laboratories and instead of using paints, brushes and easels they paint with colonies of bacteria on Petri dishes using pipettes, tweezers and test tubes.

The idea of *life itself* (Catts, Zurr, 2012, p. 92), which is a crucial component of this art, is simultaneously the area in which posthumanistic performativeness of artistic activities is embodied. The end product of the works results from observations that artists make on the plasticity of the biomaterial, that can be freely manipulated. It is also crucial to embed bioart in an inseparable relation with current biotechnology. Therefore, the main area of interest for bioartists is genetics, often reaching the molecular theory (Żylińska, 2013, p. 103). In addition, animal and human cells, their secretions, their structure and processes gain artists' attention. Specialist knowledge in the field of bioengineering, structure and functioning of cells and tissues is becoming correlated with artistic practice, which in turn is inscribed in a number of popular cultural phenomena, such as parameterization resulting in projectisation of art, meaning that art is being

recognized in a project framework (not all artists will be able to carry out bioart work, because of the high cost of handling laboratory work). The visible bio-cultural turnover emphasizes the complexity of the marriage of art and technology, remaining in this relationship of misalliance rather than partnership.

Biotechnology redefines the subjects and object of art and life in general. It can be argued that bio-artists and art researchers have taken over responsibility in some fields for looking for the answers to these questions. Referring to the question posed by Joanna Żylińska, the bioethics researcher in the context of the new media, we can rightly ask: “Can we talk about biological art without excessive didacticism and moralizing on the one hand, while on the other hand, without determinism or uncritical techno-obsession?” (Żylińska, 2013, p. 212). Are such actions possible without distorting the picture of reality, black PR, which is often spread around bioartistic practices? Just as bioart can be understood as a symbolic field in which science and art meet, the buffer role that regulates this relationship falls to bioethics.

For further consideration I will use new media’s definition of life “Life is a network of material and symbolic forces that operate in the world, shaping our metaphysical as well as technical concepts and paradigms.” (Żylińska, 2013, p. 106). Biological structures of matter are also attributed to their symbolic meanings, which are entangled in a complex network of mutual dependencies. They are the basis for reflections on technology, metaphysics and the existence of paradigms. Bioethics revolves around ethical issues that are “emerging on the basis of biological and medical science” (Kuhse, Singer, 1999). Classical bioethics so far has been inseparably linked with medical science. While bioethics in the context of artistic practices examines life from a biological, political and cultural perspective. Therefore bioartists redefine bioethics, the concept of *life itself* and artistic practices by searching for a common field in audiovisual arts.

3. Bioart in practice

Artists who use biomaterial in their works interact in various ways with bioethic statements. An interesting case study may be the book “Creative Biotechnology” by Natalie Jeremijenko and Eugene Thacker (2004). It contains a number of handy tips for home-based, amateur-hobby biotechnology practices. Each reader can become a bioartist with a proper knowledge of working with biomaterials. As a result, these actions of “transferred performativity” take a critical stance towards the biotechnology industry and suggest a different view on the role of the artist. Thus, anyone, who has a body that can be

used as a material for art, can become an artist. The body does not represent art but becomes its literal medium. Both body and art are present like they have never been before in bioart practices.

This “self-art” redefines the goals and sense of conducting artistic practices, breaking the laboratory’s scientific figure by extending it to other fields of artistic realm. A standard definition of a laboratory is “a room equipped with special apparatus, intended for carrying out scientific research or medical analyses”. The space in which the researcher analyzes a fragment of reality, becomes the place for conducting an experiment. It highlights the “ethics of life-which-we-yet-may-not-know”, (Żylińska, 2013, p. 225) and other possible paths of development of life, which expose the fragile construct of the superiority of the human species to the zoa group that lives in its environment. “Artists are actively and deliberately involved in the construction and dissemination of alternative narratives about life” (Żylińska, 2013, p. 224).

4. What is bioart and who are the bioartists?

As Raymond Tallis points out, non-human animals are an inseparable part of nature, because they have evolved instincts and reflexes through evolution (Nannicelli, Taberham, 2014, p. 27). People, on the other hand, have separated, uncoupled themselves from this natural reality in favor of creating the world around them. This testifies to human uniqueness compared to other living organisms.

The mutual influence of organisms on the construction of their own identity is a topic often undertaken by artists in bioartistic practices. Eduardo Kac in the project “Natural History of the Enigma” (2003-2008), reflected on transgenic organisms. The artist designed a genetically modified flower of petunia and incorporated his own DNA into its tissue. The DNA material was taken from the protein responsible for the proper action of the human immune system - an immunoglobulin, a blood component. These proteins are responsible for recognizing what is specific, and what is foreign, extracorporeal, in order to combat the threat. The human-plant hybrid, called Edunia, expressed human genes that were to be observed as veins stained red on the surface of the petals of the cup. Genetic engineering, together with molecular biology, have become tools for the artist to create works that would never appear in nature.

This example shows the way in which artists use advanced biotechnologies. This artistic hybrid is a border entity from the animal and plant kingdom and is the idea of biological symbiosis raised to the pedestal of art. That which is

alive could be reshaped and submitted to the will of the artist-demiurge. If an artist's role is to search for new forms of expression by creating new entities and new meanings assigned to them, then "Edunia" and bioartists are the avant-garde of postmodern art. Bioartists redefine existing art and enter its new fields. Current technology has enabled the fusion of human and plant tissue. Entanglement of the human and plant worlds is not an idea of the 21st century.

The idea of comparing anatomical similarities of human and plant forms is not the result of posthumanist works, though disseminated by them. Already in the seventeenth century, the concept of such correlations could be met. Julienn Offray de La Mettri (1709-1751), a doctor and a French philosopher, examined those concepts in the "Man-plant" (Gadacz, 2010). In the foreword of this text La Mettri outlines the problem of interest. It presents the richness of biological forms that testify to the diversity of nature and compares them to a human being. The human takes on a plant form, but not in the mythological manner known from Ovid's "Metamorphoses", in which a human being literally becomes part of nature. Nature is here, therefore, the main inspirator of artistic minds, the sower of the imagination, but also the battlefield that La Mettri fights his battle on.

Intermedia departments that adopt interdisciplinary artistic research in their programs are very popular at the Academies of Fine Arts in Poland. "Interdisciplinarity is finding such a new connection between separate categories of life, which will be creative >> integrating many techniques, media, procedures into a coherent artistic statement <<" (Bakke, 2015, p. 138). An artist in such a space is not a demiurge, because they do not create new orders but becomes a bridge connecting the effect of artistic work and the biological world. The artist's role is no longer defined by the fact that they have the exclusive license for creative domination. If Edunia had died before she could express Kac's genes, "The Natural History of Enigma" would not bring the viewer closer to understanding what the essence of the relationship between human and non-human beings is. Simultaneously, the possibility of a failure or failure itself of the conducted research-experiment is an inseparable element of the laboratory practice of bio-artists. The lack of the expected result imposes the application of other tools or making different assumptions, or provides evidence that the work was carried out in inappropriate conditions which require modification. The essence of the experiment is openness to the obtained result of research, regardless of the outcome the researcher-artist gets. In the first part of the project, Kac used bioengineering to extract and separate suitable blood pro-

teins and incorporate them into the plant tissue. Subsequently, he observed the plant that can “accept” human DNA material by expressing its genes, which was visually evidenced by characteristic red venation. In the second part, the role of the artist and his creative domination is separated from the subject that acts. The artist watches Petri dishes, test tubes and other laboratory equipment awaiting the effect of a non-human actant.

The presence and activity of beings that are capable of action, after “indication of the way” by a human has been called the “4th revolution” by Lucian Floridi (Floridi, 2016) and points out the essence of humanity’s achievements at a given cultural and historical moment in the development of civilization. As Floridi says, the process was initiated by Copernicus, who, after his announcement of the heliocentric theory in 1543, denied the dominant, central position of the Earth. After “*De revolutionibus orbium coelestium*”, the Earth would no longer be the center of the universe, understood as the crowning achievement of creation, known from the first books of the Old Testament. The second important step? in the procession of the great revolutions is Charles Darwin’s “*On the Origin of Species*” written in 1859. A human being, as a constantly evolving biological form, is derived from the world of nature. *Homo sapiens* are not a mammal with a privileged position in relation to other organisms. The process of natural selection is the mechanism of the highest degree comprising everything that is alive.

While Darwin broke with the uniqueness of human beings in reference to the natural environment, Sigmund Freud pointed out the inconsistency and complexity of the human psyche construct, which, conditioned by a number of factors, can never be completely recognizable, due to its secret areas, and subconsciousness.

Floridi is also part of the process of great human civilization revolutions, because he indicates the position of man towards non-human actants. These actants have constantly developing cognitive abilities, computational skills or other skills that are secreted by human development in the path of technology development and digitization.

The main role of an artist in this context is “an interactive and symbiotic relationship in creating a co-operative universal work” (Bakke, 2015, p. 153). This work, a result of human and non-human activities seems to be one of the most important axes of interpretation of bioartistic practices. The performative character of bioartists’ activities combines the social sphere and creates a new space of “shared quotidian” (Bakke, 2015, p. 150). The practice of human and

non-human “shared quotidian” with reference to the meaning of the word “culture” has become a focal point of their activity. The etymology of the word goes back to the Latin “colere”, which means nurturing, educating, caring or practicing. Hence, also “cultus agri”, meaning agriculture in the context of bioart, can be a literal representation of the phenomenon, where life itself is subjected to analysis, after the intervention of the human subject and non-human actant. “In the age of biogenetic capitalism and the continuum of nature-culture, *zoa* becomes an infrahuman force, and our entire attention is devoted to the crisis associated with the disappearance of nature” (Braidotti, 2018, p. 223).

The biocultural shift, which in its structure is a combination of three main axes of research and artistic interest, i.e. art, nature and technology, was initiated by an intermedia artist of Brazilian origin, Eduardo Kac and by an Australian artistic duo Oron Catts and Jonat Zurr. Bioartists in their works often analyze the complexity of human beings and the environment in which they live and produce artifacts. They also pose questions on the naturalness of nature and on what is brought by the specification of humans and the area of nature. Nowadays, such a division analyzed from a critical point of view, remains, however, insufficient, because “technologies of modifying life and control of its associated risk, by hybridizing human bodies as well as increasing power of abstract procedures” (Bakke, 2015, p. 30) are not able to exhaust the potential of bioart practices.

Bioart, which explores the field of research, containing references to new media, technologies and artistic strategies, has become a very diverse phenomenon. Bioartists analyze the relationship of a human body with corporality in the context of scientific and technological progress. They also pose a question about their own origins, meaning and goals of their existence, but also of people *per se*. Artistic projects tell micro-histories about the condition of a contemporary human and what the potential paths of our development may be. This development in a post-human time is no longer embedded in the interests of art and culture researchers. This is how the peculiarities of projects performed by artists working with biological material are shaped. Posthumanism in this sense does not appear as a deconstruction of the theory of classical humanities, but a general ethical and political-theoretical program that has been used by modern scientists in their research (Bakke, 2012). The purpose of posthumanism is to develop a new concept of subjectivity, which is to become the answer to the “technological mediation of human life in the anthropocene era” (Braidotti, 2018, p. 15), as well as to contribute to the deconstruction of the classical subject (so far in the history of mankind it was a white, healthy, young, educated man with a privileged economic position).

These theoretical foundations present the current overview and aspirations of researchers¹ and artists to describe and analyze processes relevant in the context of posthumanism, posthuman construct and post-art. “A division into nature and culture briefly, if not seemingly, arranged the space of our lives and is today directly questioned in the significant works of contemporary post-humanist philosophy” (Bakke, 2015, p. 32). Bioart shows the processes of de-naturalization of nature and human dehumanization, included in the peculiar visual practices of contemporary artists. It is also a boundary place, causing a lot of tension - the practice of bioart crosses the boundaries of culture and nature, which is why it is “semantically productive” (Bakke, 2015, p. 32). The effects of bioartistic work are suspended at the boundary of life, the elements that constitute this border, determine what is located in its center, and what occupies border positions.

What distinguishes living organisms from the inanimate world is, firstly, the ability to self-replicate, secondly the ability to conduct autonomic metabolism and the ability to convert energy, and thirdly, sensitivity to the evolution and occurrence of adaptive changes in accordance with the Darwinian principle of natural selection. Interference of the artist using biostylistics in their works can take place within these three categories in varying degrees and intensity. Bioart is also in this sense a certain interference in the existing order, disruption of the existing orders, it is a reactionary art that is coupled with the development of technologies and transformations observed in increasingly digitizing societies.

¹ One of the most important Polish research and exhibition centers has been the Łaźnia Center for Contemporary Art in Gdańsk, together with the Art + Science Meeting project operating since 2011. The person responsible for coordinating the project and the artistic director is Ryszard W. Kluszczyński, who defines the project's activity in this way:

“The transformations that can be observed taking place in the work of artists, a multidirectional hybridization, is increasingly guiding art towards, among other things, wide-ranging areas of research in both the humanities and social sciences, as well as in the direction of those disciplines known as the hard sciences. Today, the leading tendencies in art are multidisciplinary and transboundary. Progressive art is taking up the tasks of cultural studies, a trend most commonly seen in critical theory, as well as in creative dialogues between art and biotechnology, genetics, computer science, nanotechnology, research into artificial life and artificial intelligence, and many engineering disciplines. (...) Today's art, which maintains a close structural relationship with modern media technologies and scientific paradigms, constructs objects of artistic experience in a manner quite different from that of traditional media art. It is historically unparalleled in nature, proposing new strategies for negotiating meaning, and – above all – new and novel means for engaging audiences. The most recent artistic creative work tends to draw on not only the paradigms of art, science and technology, but also the structure of the information and network society, and the determinants of participatory culture, as it endeavours to participate in the processes that are shaping the framework of our future.”, <http://www.artandsciencemeeting.pl/idea/>, (accessed: 31.03.2019).



5. Polish context of bioart

Karolina Żyniewicz, a Polish artist who uses bioart motifs, runs a research laboratory in which she works with organic matter, using natural decomposition and examining processes connected with death. Her work focuses on the contrasts between pleasure and disgust, on what is socially accepted *versus* the sphere of taboos and exclusion. Żyniewicz's interest centers around the relationship between the worlds of nature, culture and technology. In her projects she collaborates with scientists, building an interdisciplinary platform for the exchange of knowledge and experiences.

Two of the most intriguing and famous projects are, *Safe suicide*² (2016-2017) and *Cold breeding*³ (2014). The artist shows the division of reality into two worlds: nature and postnature ("postnature" is defined as a laboratory space, where life has been transferred to and operates in exceptional conditions). These two parallel worlds are the main source of inspiration for further exploration. They are both fascinating and subjected to criticism. The artist performs self-destruction by means of objectification of tissues removed from her own body and forcing certain processes on them. Ritual killing of cells creates a symbolic space of death of the artist's body part. Aesthetic treatment is known from the

² <http://karolinazynewicz.com/gallery/safe-suicid/>, (accessed: 31.03.2019).

³ <https://www.works.io/33998/cold-breeding>, (accessed: 31.03.2019).

famous cycle of eschatological sculptures “Herbarium” by Alina Szapocznikow. The artist created zoo-anthropomorphic sculpture-casts of her own body, as a result of the acceptance of an intruder, which was a recurring tumor, destroying her from the inside. Żyniewicz rested body parts (B-lymphocytes and fibroblasts) in a laboratory grave on Petri dishes - the artist asks about the uniqueness of human life in the context of eschatology, a post-anthropocentric figure of an “artist seeking” new forms of expression (Figure 1).

In the *Cold breeding* project (Figure 2), blood from the menstrual flow of the artist herself served as a nutrient for the controlled growth and development of beans. What is worth noting is the multidimensionality of the project. At a biophysiochemical level, the plant permanently incorporated into its matter parts taken from the nutrient solution. The artist seems to be raising a critical voice about the values of the presence and role of women in society.

In this case, menstrual blood is the literal subsoil for growing and developing the plant, which became a performable artistic object. Isolated, small spaces of laboratory vessels are the stage on which the spectacle of life, controlled by the artist, takes place. Her decision to use her blood is a radical gesture of self-determination about her own body and its products. The cultivation of beans in a sterile fragment of reality – the science laboratory – allows us to discover new forms of artistic expression. Human blood has been used in art in many ways, usually being associated with human pain and suffering. The artists used the symbolic asset of their blood, with each project pushing the boundaries of what was morally allowed or socially acceptable. Żyniewicz with her conscious decision inscribes herself in this discourse. The woman’s body is present here both literally and symbolically⁴. That is why maintaining the balance between nature and the field of culture seems to be the main focus of interest. The process of investigating, hypothesizing and conducting experiments combines bioartists with science in a coherent way. Bioart and bioethics, as a buffer zone of art and science, is an important voice in techno-artistic reflection, which strives to propose a specific solution to the problem of immersion of art and technology. In this context, the concept of “seeking ethics” is significant. This concept was reconstructed by Ryszard Kluszczyński and also concerns the issue of “aesthetics of reason and care”. This specific kind of aesthetics is associated with artistic projects which use biological matter as their medium. The main objective of this aesthetic is interdisciplinary cooperation, hybridity of creation, rationality of

⁴ Compare with art presented at the exhibition “Paint, also known as blood. Women, affect, and desire in contemporary painting”, organized by the Museum of Modern Art in Warsaw (07.06.2019 – 11.08.2019).

action, factors such as empathy, irony, emotionality and the validity of the form. The factor that underlies the others is “creating life rather than depicting it – presentation instead of representation” (Kluszczyński, 2012, p. 91). It is inscribed in the continuous process of cultural changes, still approaching the description of purposefulness practiced by artists of art.

The biological matter that constructs the human body is an example of integrated co-existing entities. Human identity is therefore the sum of non-human organisms that together define the biological scope of human existence: “The number of non-human cells inhabiting the human body is ten times the number of our own cells, thus we can say that we are an ecosystem and not a closed and homogeneous whole” (Bakke, 2015, p. 78).

This complex system exists as a result of typically human biological processes and the activities of non-human perpetrators. The peculiarity of activity in this area of artistic practices has had an intriguing effect. It means that artists, who use such media, create works that present rather than represent to the viewer potentially possible biological realities. In this way, the discourse of new media emerges on the legitimacy of dividing reality into nature and culture, which is entangled in a network of conjoined relations. In the past⁵, such a classification of the world allowed us to place man in a specific context with nature, the world of biological forms from which man derives. “We have evolved from the inhuman world and probably to a non-human (maybe post-human) world we will enter once again - for species do not last forever, but emerge from others and eventually disappear” (Bakke, 2015, p. 80).

In such a complex and ambiguous world it may be good practice for artists to use the achievements of bioethics committees. Artists activity in this field may contribute to the creation of separate institutions whose main task will be the cooperation of bioethical practice and theory in bio-artistic projects. This activity may also prompt existing committees with many years of tradition to implement new internal organizational structures. Their activities would be dedicated to bioethics in the context of non-medical practices. This conclusion has emerged as a result of my own research. The existence of such institutions in the future is crucial from the perspective of development of both bioart and bioethics, which also includes non-medical projects and practices. Traditional biomedic committees and other organizations with a similar profile could be the main place and catalyst for these changes.

⁵ I'm using M. Bakke's classification (2015), where the context of the past is located in pre-modern time, before the dominant discourse of (bio)technology in visual arts.

6.1 Bioethics in the European context

An international organization whose jurisdiction covers almost all the countries of the European Union is the Council of Europe. Its main purpose is to stand guard over the protection of human rights, the rule of law and democracy. One of its specific objectives is to take action on bioethical issues, which are mainly addressed through the prism of medical sciences (these are the following areas: biomedical research, development of the embryo and fetus, genetics, psychiatry, ending human life and transplants). The international organization with the widest range is UNESCO together with 4 regulatory documents: the Universal Declaration on Bioethics and Human Rights of 2005, the International Declaration on Human Genetic Data of 2003, the Universal Declaration on the Human Genome and Human Rights of 1997 and from the same year the Declaration on the Responsibilities of the Present Generations Towards Future Generations.

The last important global organization is CIOMS, or The Council for International Organizations of Medical Sciences. This council has issued three regulatory acts that are important for bioethics: the 1985 International Ethical Guidelines for Biomedical Research Involving Animals, the International Ethical Guidelines for Epidemiological Studies in 2009. In addition, there are regional bioethical institutions operating in different regions of the world (there are 52 in the whole world in different countries), including the majority of EU countries, as well as such countries as the United States, Taiwan, Singapore, Russia, New Zealand, Mexico, Japan, Israel, Canada and Australia).

6.2. Bioethics and the Committee for Bioethics of the Polish Academy of Sciences

Some artistic projects operate on the verge of ethical acceptance and become an issue of ethical debate. In response to the most current needs and challenges of the modern world one of the most important bioethical institutions in Poland, the Committee for Bioethics of the Polish Academy of Sciences, operates. The Committee for Bioethics of the Polish Academy of Sciences was established in 2011. "Its primary duty is to identify and analyze ethical problems born by the development of sciences, especially biomedical sciences, and their implications in the social, political and legal sphere, with particular emphasis on the consequences of scientific progress for the development of the country and our negligence in the practice of scientific and social life"⁶. It is an institution whose

⁶ <http://www.bioetyka.pan.pl/index.php>, (accessed: 26.02.2019).

activity is based on issuing opinions and statements⁷. Since 2011, four statements and one opinion have been issued and publicized on the Committee for Bioethics of the Polish Academy of Sciences' website⁸.

In terms of issuing posts, the Committee has published relevant documents four times. Two statements come from 2012: the first refers to the ethical problems of reproductive medicine and clinical genetics and the necessity for their legal regulation, while the second relates to the issues of preimplantation genetic diagnosis. In 2013, two statements were also issued, of which the first related to the market of private genetic services, while the second concerned the so-called clause of conscience.

The opinion of the Committee for Bioethics at the Presidium of the Polish Academy of Sciences was issued in 2014 and concerned the argumentation on charges presented by the Team of Experts of the Polish Bishops' Conference on Bioethics regarding the so-called *clause of conscience*. A characteristic feature of the Committee's activities is therefore taking stances / issuing statements and opinion-making in relation to current controversial bioethical problems. It also organizes specialized scientific conferences, lectures and seminars, including bioethics schools. In addition, there are academic structures in Poland such as the Interdisciplinary Laboratory of Medical Law and Bioethics at the University of Wrocław. Its main goal is to "institutionalize the existing scientific, didactic and organizational activities in the field in question"⁹.

"A good bioethics committee should be independent of political and ideological pressures. It should be pluralistic and multidisciplinary" – can be read in the document establishing the Committee for Bioethics of the Polish Academy of Sciences.

⁷ The Committees of the Polish Academy of Sciences serve as bodies representing various research circles and disciplines. Their members, elected by the research communities in specific fields (physicists, biochemists, sociologists, etc.) include scientists from the Polish Academy of Sciences of respective disciplines, outstanding research workers from higher education establishments, research centers of the Polish Academy of Sciences, departmental research units and are also from economic and social organizations. They serve in an advisory capacity on issues related to technology, engineering, biology, medicine, Earth sciences, social sciences, humanities, agricultural sciences, etc. They draw up position statements and expert studies for the needs of Polish public administration, and assist in resolving specific science-related issues. They also issue opinions on new legal regulations meant to affect science, its applications, and education. They likewise work to promote broader awareness of research findings and also support the development of specific fields.

The number of committees is not fixed, with new ones being set up in response to problems pertaining to the development of science or of the country, where the voice of scientists may prove helpful in deliberating.

Most of the committees are affiliated with a particular Division, although some – 18 at present – are instead affiliated directly with the Presidium of the Academy. Source: <https://institution.pan.pl/index.php/institution/committees>, (accessed: 19.05.2019).

⁸ <https://instytucja.pan.pl/index.php/komitet>, (accessed: 19.05.2019).

⁹ <https://prawo.uni.wroc.pl/taxonomy/term/753?language=en>, (accessed: 27.02.2019).

The main areas and topics of bioethics are specified by Zbigniew Szawarski in the Committee for Bioethics of the Polish Academy of Sciences' statement¹⁰ on the topic of its activity, role and duties. They include the ethical issues of death and dying, as well as ethical aspects of procreation, moral implications of genetics, justice and the limits of medicine, ethics and public health, aging and dementia, ethics of clinical research, and the problem of trust in people of science, for instance expert ethics. What is worth noting is the fact that most of those aspects of bioethics are also undertaken by bioartists in their works, especially those focusing on the issue of death and genetic research, conducted both on humans, animals and other components of the world's zoa and bios.

The Committee for Bioethics of the Polish Academy of Sciences also states that "bioethics is as much a moral reflection on theoretical and practical aspects of biomedical sciences, especially on the relationship between a doctor and a patient and also on medicine and society in the conditions of accelerated development of medical technologies"¹¹. At the same time, it is worth emphasizing the practical dimension of bioethical reflection. This is the issue of moral behavior, the foundation of which is rational and moral philosophy. It means that the Committee for Bioethics is developing the theory of bioethics while contemporary art is pushing its limits with bioart. The Committee does not seem to be involved in non-medical, especially artistic, practices.



Furthermore, the purpose of institutions dealing with bioethics - such as the Committee for Bioethics at the Polish Academy of Sciences in Poland and in the world referred to in the document focuses primarily on:

“Monitoring the development and practical applications of biomedical sciences in order to identify morally disturbing problems, as well as determining what causes these problems to emerge and what solutions are possible in the light of the existing state of knowledge and dominant ethical views”¹².

This position clearly defines the range of activity of the Committee for Bioethics of the Polish Academy of Sciences - the universalism of this thought is clearly emphasized.

Artists that define peripheral areas of mainstream of the art world, operate outside the center of artistic life of a given country at a given historical moment. Such a placement of art and art practices speaks of what society excludes and labels as abnormal, because it is incompatible with applicable norms. This is how the arbitrary process of normalization works worldwide. It also smoothly shapes the forms of art, which may be a contribution to considerations about the complexity of its perception, entangled in social (norms, customs, morality), economic (discourse of capitalism, mechanisms of art world functioning), philosophical (ethics, bioethics), cultural (globalization and related processes, cultural expressions, new threats and problems) or scientific (cloning, genetic experiments, biotechnological interventions, new dimensions of biological terrorism with bio-weapons of mass destruction) contexts. This system of connected vessels can illustrate a number of challenges for researchers of artistic practices, bioartistic included.

7. Conclusions and implications for future research

Bioart is present in both visual arts and culture, in which it's using biological material as a medium. It has not received much attention from bioethics committees so far, which could suggest that this phenomenon has not yet been noticed.

Artists associated with the biocultural movement move in a very imprecise and vague sphere of bioethical regulations when they attempt to apply such regulations to the process of implementation of their own bioprojects. There's no need to reinvent the wheel – all it takes to realize that critical projects on the border of bioart and bioethics are possible is to critically approach the achievements of researchers and artists, if only in western European. A good example of such an approach is the project called “Trust me, I'm an artist: Displaying Resistance”¹³. It is a platform

¹² http://www.bioetyka.pan.pl/images/stories/Pliki/KOMITET_BIOETYKI_-_program.pdf, (accessed: 26.02.2019), own transl.

¹³ <http://trustmeimanartist.eu/about/>, (accessed: 30.07.2019).

to exchange experiences, where art practice meets critical theories of bioart. It was created as a response to the controversy associated with bioart.

“The aim of “Trust Me, I’m an Artist” is to investigate how artists and cultural institutions can best engage with biotechnology and biomedicine in order to drive innovation in artistic production, ways of presenting artworks, and developing new audiences in Europe”¹⁴.

The main duty of biocultural artists is to stimulate a new recipient of visual arts. Through their actions they indicate areas which require development and can be a model for countries that do not have any institutions of a similar nature.

“The main goal is to provide artists, cultural institutions and audiences with the skills to understand the ethical issues that arise in the creation and exhibition of artworks made in collaboration with biotechnology and biomedicine”¹⁵.

Artistic bioprojects point to a number of changes that currently shape the field of contemporary art socially involved in the problems of border areas of technology and culture. This is how the leading artist of the “Trust me ...” project, Anna Dumitriu, speaks about an artist’s new role in the new bio-art-technological world:

“Artists tend to work at the forefront of innovation and push boundaries, whilst engaging in ethical and philosophical challenges that resonate through society around new technologies, and this project has the potential to situate them at the forefront of the latest research. Our high impact outputs will prompt new ways of thinking about how art, biotechnology and biomedicine can intersect, and bring together diverse stakeholders and audiences to create new ways of working at the cutting edge of art, science and technology”¹⁶.

International deontological documents that cover the scope of use of human material and the construction of hybrid and chimeric entities on its basis can certainly be helpful for bioartists.

Deontology, which has a specific historical outline, may be a guideline in artists’ practices, especially bioartists, but also for emerging bioethical institutions dedicated to non-medical activities. A bioartist-deontologist is therefore someone who embraces in their projects their value and moral aspect¹⁷. Deontology is one

¹⁴ <http://trustmeimanartist.eu/about/>, (accessed: 30.07.2019).

¹⁵ <http://trustmeimanartist.eu/about/>, (accessed: 30.07.2019).

¹⁶ <http://trustmeimanartist.eu/about/>, (accessed: 30.07.2019).

¹⁷ <https://oxfordre.com/internationalstudies/view/10.1093/acrefore/9780190846626.001.0001/acrefore-9780190846626-e-141>, (accessed: 30.07.2019).

of the ethical theories that, among others, analyzes the validity of deeds, indicates various dimensions of the concept of justice and gives moral principles a special place because they result from the existence of the value (and its hierarchy) and the idea of good. Bioart could use many existing guidelines for troublesome or uncertain issues. At this point, however, the question should be asked, if it is appropriate to assess bioart, art that is avant-garde and beyond the limits of modern morality and ethics, against the already existing achievements of ethics and bioethics? This can only be a surrogate act, a scientific and conceptual base for new solutions that will occur in the near future.

Abstract:

The paper discusses topics such as bioart, in the perspective of a cultural phenomenon, present in contemporary Polish and world art. The space of contemporary art, which as a material of expression uses specialist knowledge in the field of bioengineering and tissue culture along with living material, has been a challenge for artists and analysts of art, culture, science and ethics for years. The activity of Eduardo Kac is recalled as well as the Polish bioartist, Karolina Żyniewicz. In her projects, the artist collaborates with scientists, building an interdisciplinary platform for the exchange of knowledge and experiences. These deliberations are supplemented with literature on bioethics: positions, opinions and other regulatory documents (The Committee for Bioethics PAS, the Council of Europe, CIOMS, UNESCO) in the context of non-medical and artistic activities.

The paper is an attempt to find answers to questions about the way in which new bioethical regulations should be updated and formulated. What bioethical strategies should be taken in this historical moment of our time, where an artwork is both artistic and also strictly scientific?

Keywords: bioart, contemporary art, biotechnology, bioethics, art and science movement

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